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THE ECOLOGY OF HUMANNESS: A SPECULATIVE INQUIRY THROUGH MOOMIN PHILOSOPHY

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Abstract
What if the reductionist view of humanness lies at the root of ecological degradation, emotional alienation, and failing systems? This inquiry explores humanness as an ecological phenomenon — a dynamic, relational system embedded in emotion, community, and nature. Many global crises stem from fragmented understandings of the self. Reframing humanness through an ecological lens may reveal new modes of care, resilience, and sustainability. Systems science, with its emphasis on relationships, feedback, and emergence, is well suited for this exploration. If humanness is a system, it must be studied as co-produced by inner, social, and environmental forces.

The Moomins, created by Finnish-Swedish author Tove Jansson, are gentle, philosophical creatures living in harmony with nature and each other. Their stories offer rich, imaginative models of emotional ecology, seasonal adaptation, and value systems rooted in simplicity and interdependence.

The speculative use of Moomin philosophy serves as both a metaphorical system and a narrative thought experiment. It offers intuitive models of autonomy-within-community, emotional ecosystems, and value systems rooted in "enoughness."

This is a speculative systems inquiry, drawing from narrative ecology, soft systems methodology, philosophical reflection and pattern recognition, and conceptual mapping.

The inquiry suggests that Moomin philosophy models a human ecology grounded in emotional openness, adaptive rhythms, minimalism, and mutual respect. Systems of resilience and care are reflected in the emotional ecosystems of Moomin stories. Change, uncertainty, and melancholy are not problems to solve, but patterns to move with.

The results are conceptual: a reframing of humanness as a system of co-regulation with self, others, and nature. From this approach may follow: more holistic models of identity in social systems, a values-based template for designing human environments, and a meaningful bridge between systemic and narrative thinking in systems sciences.

Keywords
Ecology of humanness, Systems thinking, Narrative inquiry, Moomin philosophy, Emotional ecology

1 | Introduction

This paper begins by recognizing that many contemporary global crises — ecological, social, and psychological — stem from a fragmented understanding of what it means to be human. In late-modern societies, the self is often imagined as autonomous, rational, and separate from its surroundings. This mechanistic conception of humanness contributes to environmental degradation, emotional alienation, and social systems that undervalue interdependence. To address these fractures, we ask: What kind of wisdom can help reimagine humanness as embedded, interconnected, and ecologically situated?

We propose that human identity can be understood as an ecological phenomenon: a dynamic relational system embedded in nature, emotion, and community. Reconstructing humanness through an ecological lens may offer new modes of resilience, care, and sustainability, reorienting the human condition from isolation toward participation in living systems.

Systems science (Checkland, 1999; Meadows, 2008; Mitchell, 2009) provides a conceptual foundation for such an inquiry. It frames phenomena in terms of relationships, feedback loops, adaptation, and emergence, principles equally relevant to the ecological and emotional dimensions of human life. If humanness itself is systemic, it should be studied not only through psychology or sociology, but through the interactions by which inner, social, and environmental processes co-produce the experience of being human.

In this study, the Moomin philosophy of Tove Jansson is approached as both a metaphorical system and a narrative thought experiment. The stories of Moominvalley offer intuitive models of emotional ecosystems, seasonal change, autonomy-within-community, and value systems grounded in "enoughness." Through this speculative systems inquiry, we seek to illuminate how narrative can serve as a lens for understanding humanness as a living ecology — relational, adaptive, and deeply interwoven with the more-than-human world.

This inquiry and its findings are by no means comprehensive. A more extensive investigation could yield deeper insights into the systemic and narrative dimensions of ecological humanness. Nonetheless, the use of Moominvalley as a model world opens an imaginative space for inquiry: What might human systems look like if they were designed with this kind of logic? What values would guide them?

1.1 | Ecology of humanness

The ecology of humanness concerns the interwoven relationships among human identity, culture, behavior, and the natural and built environments that sustain life. It calls for a shift from viewing humanness as an isolated psychological or social category toward understanding it as a systemic phenomenon: a web of feedbacks linking emotion, community, and ecology. Gregory Bateson (Bateson, 1972/1999) argued that "the unit of survival is a flexible organism-in-its-environment" (Bateson, 1972/1999, p457) framing mind and self as processes distributed across relational networks rather than contained within individuals. This systems view dissolves the false dualism between people and nature, suggesting that cognition, ethics, and culture evolve as ecological patterns of interaction.

Donella Meadows (Meadows, 2008) extends this understanding through the language of systems dynamics, showing how living systems (including social and emotional ones) depend on feedback loops, adaptability, and balance for their resilience. Applying this logic to humanness reframes well-being not as individual achievement but as the emergent property of healthy relational systems. In parallel, Robin Wall Kimmerer (Kimmerer, 2013) offers an indigenous ecological perspective that grounds human flourishing in reciprocity and gratitude toward the more-than-human world. Her work embodies an "ecology of humanness" as a practice of relational care: to know the world is to be in respectful conversation with it.

Within the contemporary systems sciences, this theme has gained renewed attention. The 69th Annual Meeting of the International Society for the Systems Sciences (ISSS 2025) defines ecology of humanness as the study of "the complex interplay between human identity, culture, behavior, and the natural and built environments in which people exist," emphasizing how individuals and communities flourish through harmony between social, psychological, and ecological well-being. This framing situates humanness not apart from ecology, but as one of its emergent expressions — a living system of relationships that, when understood systemically, may guide more sustainable and compassionate ways of inhabiting the world.

1.2 | The Moomins

Tove Jansson (1914-2001) emerged as one of Scandinavia's most beloved creative voices, celebrated worldwide as the creator of the Moomins yet equally a painter, illustrator, and writer of adult fiction.
Born into a Swedish-speaking artist family in Helsinki, she grew up amid a rich interplay of love, art-making, and nature — experiences that would deeply inform her imaginative universe. (Westin, 2014)
The Moomin stories (written 1945–1970, starting with *Småtrollen och den stora översvämningen* 1945, *The Moomins and the Great Flood*) (exhibit 1) "love and work," and to creative freedom unbound by genre or expectation.

Tove Jansson's creation of the Moomins arose during a period of personal and historical upheaval. As Boel Westin (2014) recounts, the first sketches of the round, snouted creatures appeared in the margins of Jansson's notebooks during the Second World War, a time when Finland was marked by conflict and uncertainty. The Moomins began as a private act of resistance: a way to imagine gentleness, humor, and safety in a world defined by instability. The earliest Moomin, originally called "Snork," took shape in satirical drawings Jansson made for the magazine Garm, where she also published anti-fascist caricatures. From this origin, the Moomins evolved into a full fictional ecosystem: a family of small, hippopotamus-like beings who live in the idyllic yet changeable Moominvalley, a place suspended between dream and nature.

As Westin (2014) observes, Moominvalley functions both as a domestic landscape and as a metaphoric ecology of care. The Moomin family (Moominmamma, Moominpappa, and Moomintroll) anchor a world that values freedom, curiosity, and hospitality. Around them move a cast of wanderers, philosophers, and eccentrics: the nomad Snufkin, the fierce individualist Little My, the quiet winter philosopher Too-ticky, and the melancholy Groke, among others. Each character embodies a distinct emotional or ethical disposition. Moominworld is therefore less a single setting than a mode of being — an imagined system where emotional, social, and natural life intertwine. The weather, seasons, and light of the valley are not backdrops but active participants, reflecting the moods and transformations of its inhabitants.

Through this integration of inner and outer worlds, Jansson created what might be called a relational cosmos: one that resists moral absolutes and celebrates the delicate balance between solitude and belonging. The Moomins (exhibit 1), in Westin's reading, became Jansson's lifelong exploration of how to live kindly amid uncertainty — a vision that continues to blend art, philosophy, and ecology in quietly radical ways.

Exhibit 1. Book cover of *Småtrollen och den stora översvämningen* (1945).

2 | Methodology

This study approaches Tove Jansson's Moomin stories as living systems of meaning, where emotional, social, and ecological processes intertwine. The inquiry follows a speculative systems methodology,

integrating four complementary lenses. From narrative ecology (Donly, 2017; Iovino & Oppermann, 2012), the stories are treated as relational ecosystems in which characters, environment, and emotion form mutually constitutive wholes. Drawing on soft systems methodology (SSM) (Checkland, 1999), Moominvalley is examined as a "soft system": a world of dynamic interrelations, feedback loops, and emergent understandings rather than fixed structures. Through philosophical reflection and pattern recognition (Rousso, n.d.), recurring motifs of ecological wisdom, emotional logic, and relational ethics are traced across Jansson's work. Finally, conceptual mapping (Novak & Govin, 1984) is used to identify structural correspondences between narrative themes (such as seasons, solitude, and enoughness) and systemic principles (such as adaptation, homeostasis, and renewal). Together, these approaches support a speculative systems inquiry (Zwick, 2024), one that values imaginative synthesis over reduction, and reads fiction as a mode of systemic thought.

2.1 | A speculative systems inquiry

Speculative systems inquiry treats complex systems as open, evolving networks of possibility rather than fixed present entities, inviting inquiry into the latent configurations and emergent relations that might reshape future realities. Systems inquiry uses systems thinking to ask "what could be" by mapping how agents, environments, and norms might recombine in alternative systemic arrangements, thereby revealing hidden potentials and stimulating transformative action. The approach foregrounds imagination and scenario-building alongside analysis, framing systems practice as both exploratory and generative rather than purely diagnostic. (Zwick, 2024)

2.2 | Narrative ecology

Narrative ecology treats stories as dynamic systems in which characters, environments, and affective patterns co-constitute meaning rather than standing as separate story elements, story form itself can register ecological relations and multispecies agency. This approach is exemplified by the "eco-narrative," which argues that narrative structure should compose with nonhuman actors (not only represent them) so that plot and conflict reflect interdependent life-worlds. The approach matches material ecocriticism's emphasis on matter, agency, and models of narrativity, which read landscapes and material bodies as active participants in narrative dynamics. (Donly, 2017; Iovino & Oppermann, 2012)

2.3 | Soft systems methodology

Soft systems methodology (SSM) is Peter Checkland's interpretive framework (Checkland, 1999) for tackling complex, human-centered problem situations where goals, values, and perspectives are uncertain or in conflict. Rather than treating organizations as machines to be optimized, SSM views them as fluid systems of purposeful activity in which meaning and action are continuously negotiated. The approach unfolds through an iterative learning cycle: exploring real-world situations, building conceptual models of purposeful systems, and comparing these to reality to stimulate reflection and change. In his 30-year retrospective, Checkland emphasizes that SSM's greatest contribution lies not in producing solutions, but in structuring inquiry and dialogue so participants can learn their way to improvement. Thus, SSM redefines systems thinking as a participatory and interpretive practice grounded in human understanding rather than technical control.

2.4 | Philosophical reflection and pattern recognition

Philosophical reflection and pattern recognition in systems inquiry emphasize the interplay between reflective thinking about system assumptions (ontology, epistemology, ethics) and the recognition of recurrent structural or relational patterns within and across systems. By engaging philosophical reflection, practitioners become aware of underlying world-views, values, and metaphors that shape system design and interpretation. By complementing this with pattern recognition, they identify persistent configurations, feedback loops, and relational dynamics that signal deeper systemic coherence or dysfunction. Together, these processes support deeper meaning-making and meta-understanding of how systems generate, maintain or shift patterns of behaviour and structure. (Rousso, n.d.)

2.5 | Conceptual mapping

Conceptual mapping offers a visual approach to representing knowledge by arranging concepts as labeled nodes and linking them with phrases that express their relationships, forming meaningful propositions within a structured network. According to Novak and Gowin (Novak & Govin, 1984), effective concept maps are hierarchically organised so that more inclusive, general concepts appear toward the top and more specific ones toward the bottom, enabling learners to integrate new concepts into existing cognitive frameworks. By externalising the structure of a learner's understanding, these maps serve both as a tool for reflection and as a framework for facilitating meaningful learning, rather than typical memorisation. The approach thus foregrounds the interconnectedness of ideas and supports metacognitive insight into how knowledge is organised, developed and revised.

3 | Analysis

The following sections present the results of this inquiry through four emergent themes: relational wisdom, living with change and uncertainty, emotional and social ecology, and philosophy of enoughness. Each theme is developed as a relational pattern observed across multiple Moomin narratives, illustrating how Jansson's work models ecological forms of understanding, resilience, and care.

3.1 | Relational wisdom

Tove Jansson's Moomin stories often articulate a quietly radical understanding of humanness as ecological and relational rather than autonomous. Her characters live within porous boundaries where emotion, landscape, and community form interdependent systems of meaning, e.g. exhibit 2: picture of the Moomins and their living environment in the Moominvalley). In *Näkymätön lapsi* (Jansson, 1962/2010) (*Tales from Moominvalley)*, the story *Vilijonkka joka uskoi onnettomuuksiin* (*The Fillyjonk Who Believed in Disasters*) dramatizes this through the Fillyjonk's obsessive attempts to control an unpredictable world; only when her anxieties are realized, does she recognize the futility of mastery and the necessity of living through change. Similarly, in *Muumipappa ja meri* (Jansson, 1965/2003) (*Moominpappa at Sea*), the family's relocation to a desolate island becomes a study in relational humility: Moominpappa's initial desire to "conquer" the sea transforms into a capacity to listen to its rhythms. The sea, like a sentient actor in its own right, reflects Moominpappa's inner restlessness, teaching him that meaning arises not from domination but participation. Across these narratives, human identity is inseparable from the ecological context that sustains and mirrors it. Emotional life and natural cycles such as storms, tides, silences are woven into a single field of experience. Jansson's relational wisdom lies in this recognition: to be human is to dwell in conversation with the more-than-human world.

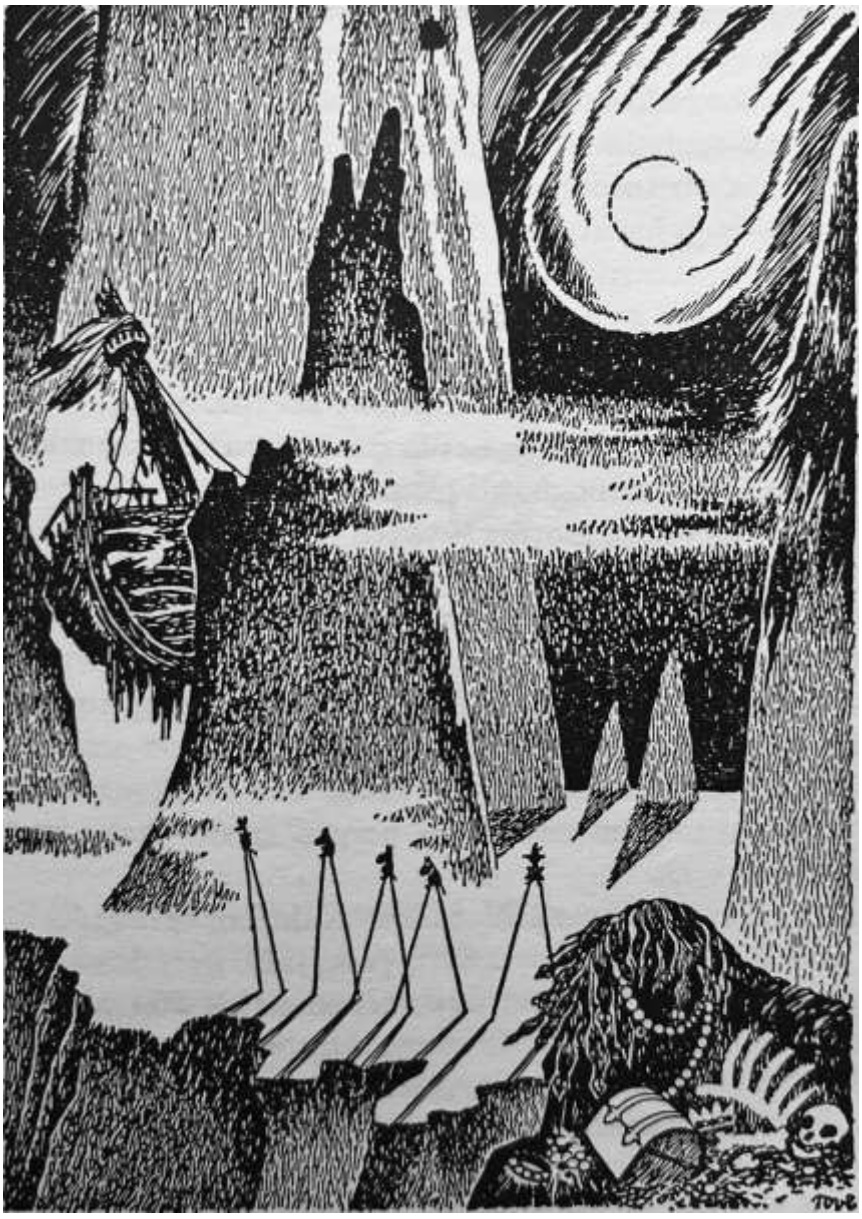
Exhibit 2. Picture from *Småtrollen och den stora översvämningen* (1945): the Moomins and their living environment in the Moominvalley.

3.2 | Living with change and uncertainty

Ecological thought begins from the premise that stability is illusory and that all systems exist in flux. Jansson's fiction repeatedly embodies this insight, portraying change not as catastrophe but as the condition of life. In *Comet in Moominland* (Jansson, 1946/2011), the cosmic event threatening Moominvalley embodies both existential danger and awakening; the characters' journey toward the approaching comet becomes a rehearsal for living ethically amid uncertainty (exhibit 3). *Moominsummer Madness* (Jansson, 1954/1971) translates this lesson into domestic comedy: a flood displaces the Moomin family, yet their adaptability — making tea, staging a play on a floating theatre — transforms crisis into creativity. Likewise, *Taikatalvi* (Jansson, 1957/2010) (*Moominland Midwinter*) turns seasonal change into an inner pilgrimage. When Moomintroll wakes alone while his family hibernates, he must learn to see winter not as the absence

of regular life, but as another mode of presence. Guided by Too-ticky, he discovers that cold and darkness hold their own beauty, requiring attentiveness rather than resistance. In all these tales, impermanence is not a defect of the world, but its essential rhythm. Jansson's ethos of resilience echoes ecological principles of adaptation, regeneration, and cyclical renewal.

Exhibit 3. Picture from *Comet in Moominland* (Jansson, 1946/2011): the comet approaching and Moomintroll and his friends making their way on dried seabed.

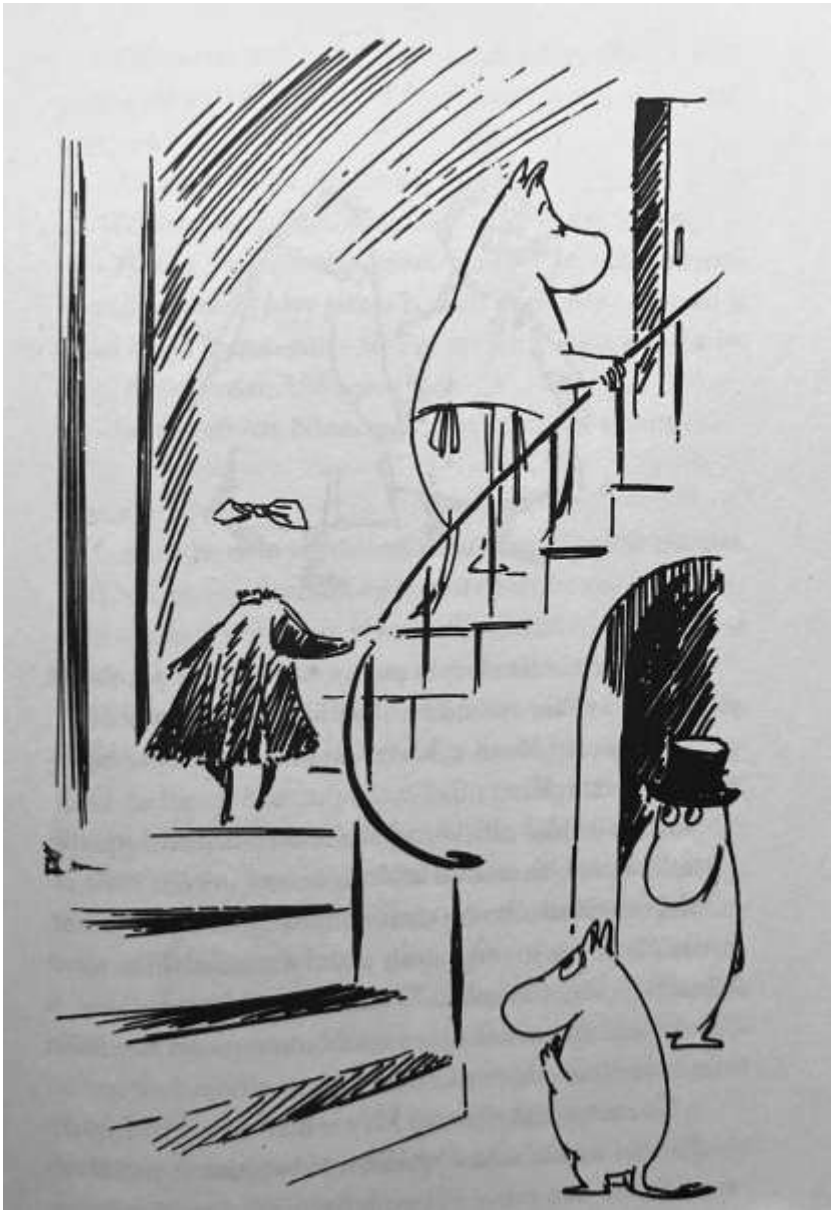


3.3 | Emotional and social ecology

The emotional landscapes of the Moomin stories form their own kind of ecology: diverse, interdependent, and sustained by care. In *Näkymätön lapsi* (Jansson, 1962/2010) (*Tales from Moominvalley*), the story *Näkymätön lapsi* (*The Invisible Child*) crystallizes the power of attention as an ecological force: Ninny's invisibility, born of neglect, is reversed through gentle hospitality and care (exhibit 4). Emotional

recognition becomes a process of re-emergence, paralleling how ecosystems recover through nurture and time. *Snufkin Leaves Moominvalley* in *Tales from Moominvalley* (Jansson, 1962/1973) extends this understanding by affirming the need for both solitude and connection: Snufkin's departures are acts of renewal, not rejection, highlighting the need for balance within social life. *Muumilaakson marraskuu* (Jansson, 1970/2008) (*Moominvalley in November*) deepens the motif by removing the Moomin family entirely, leaving a group of visitors to inhabit their home and make meaning in their absence. Each character, Hemulen, Fillyjonk, and Toft, struggles with loneliness and longing, yet gradually they form a provisional community. Their emotional interdependence mirrors the dynamic equilibrium of an ecosystem, where difference and tension sustain vitality. Jansson thus portrays emotion as neither private nor chaotic, but relational — a shared medium through which life adapts and endures.

Exhibit 4. The Invisible Child in *Näkymätön lapsi* (Jansson, 1962/2010).



3.4 | Philosophy of Enoughness

If modernity is characterized by accumulation and control, Jansson's Moomin world offers a philosophy of sufficiency. Her stories present contentment not as passivity but as attunement to limits — the ecological virtue of "enough." In *Näkymätön lapsi* (Jansson, 1962/2010) (*Tales from Moominvalley*), *Kuusi* (*The Fir Tree*) inverts the consumerist spectacle of Christmas: the Moomins, awakened from hibernation, misunderstand the holiday as a fearful obligation, only to realize that simple gratitude is the true celebration. *Muumipappa ja meri* (Jansson 1965/2003) (*Moominpappa at Sea*) continues this inquiry on a more existential level. Confronted by the austerity of the island they chose to move to, each member of the family learns to live with less: less certainty, less possession, less comfort — and in doing so discovers a deeper serenity, as Moominmamma in exhibit 5. By the novel's end, Moominpappa's restless striving gives way to quiet participation in the island's cycles, echoing ecological principles of balance and sustainability (exhibit 6). *Muumilaakson marraskuu* (Jansson, 1970/2008) (*Moominvalley in November*) distills this further: the characters, deprived of the Moomin family, find solace in small rituals: lighting a fire, making coffee, sitting together in silence. Jansson's "enoughness" is an ethics of presence and restraint, a recognition that well-being depends on harmony with the finite conditions of life.

Exhibit 5. Moominmamma discovering serenity in the austerity of the island in *Muumipappa ja meri* (Jansson 1965/2003).

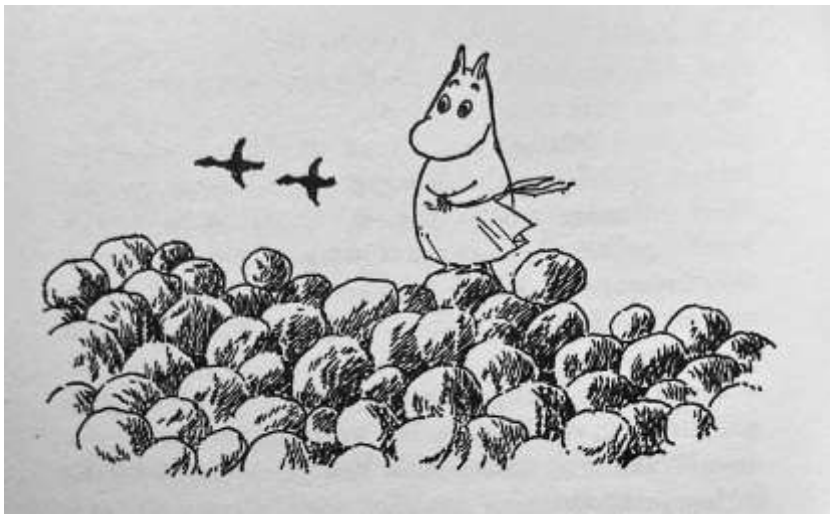
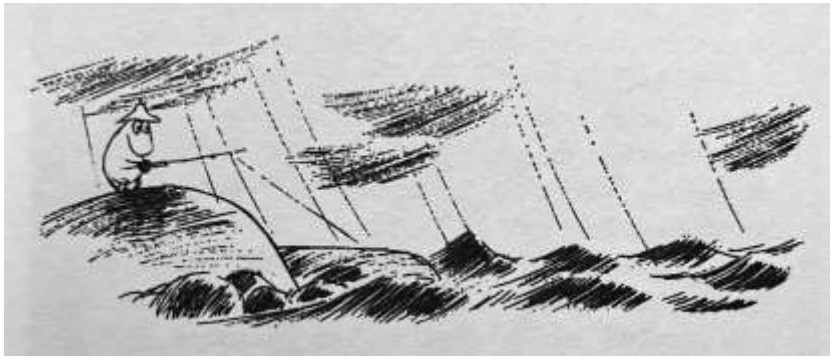


Exhibit 6. Moominpappa finding balance in *Muumipappa ja meri* (Jansson 1965/2003).



5 | Discussion

This inquiry into Tove Jansson's Moomin stories reveals a pattern of wisdom that redefines humanness not as an isolated state but as an ecological condition. Across the four themes — relational wisdom, living with change and uncertainty, emotional and social ecology, and the philosophy of enoughness — Jansson's narratives present humanness as a relational process co-produced by environment, emotion, and community. The ecology of humanness that emerges from these stories invites a shift from thinking about human nature to thinking with the systems that sustain it. Each theme illuminates a distinct systemic quality: relational wisdom maps interdependence and feedback between beings and their environments; living with change mirrors ecological adaptation and resilience; emotional and social ecology corresponds to the self-regulating complexity of ecosystems; and enoughness articulates a principle of equilibrium and homeostasis within ethical and affective life.

From the perspective of systems science, these narrative patterns can be read as intuitive demonstrations of systemic principles of adaptation, feedback, emergence, and co-evolution translated into the emotional and moral registers of story. Systems thinking offers an integrative framework for understanding humanness as a dynamic relational system, where psychological, social, and ecological processes interact continuously. If ecosystems sustain balance through diversity, interdependence, and feedback, so too do the Moomin characters sustain their moral and emotional worlds through reciprocity, reflection, and care. Moominvalley becomes a soft system in Checkland's sense (Checkland, 1999): an interpretive environment in which values, purposes, and meanings evolve through interaction rather than prescription. Jansson's simple, quiet stories create emergent narratives of social change. This perspective positions narrative not as a static cultural artifact but as a living model of systemic thinking, one that reveals how imagination and affect can illuminate complex, adaptive relationships that formal systems theory often abstracts.

The speculative use of Moomin philosophy in this study thus serves a dual function: it operates as a metaphorical system and as a narrative thought experiment. Within its gentle yet profound ecology, one can observe intuitive models of self-organization, renewal, and ethical equilibrium — what might be called emotional ecosystems. The Moomin characters enact ecological principles in miniature: Snufkin embodies adaptive autonomy, Too-ticky models seasonal attunement, and Moominmamma sustains homeostasis through care rather than control. Through these relational logics, Jansson's world demonstrates that resilience arises not from domination or certainty but from sensitivity, empathy, and participation in shared cycles of change. Reconstructing humanness through this ecological lens suggests new forms of wisdom, wisdom grounded in connection, balance, and belonging. Such wisdom aligns with the deepest insights of systems science: that life, in all its forms, thrives through relation, feedback, and openness to transformation.

5 | Conclusions

This speculative systems inquiry has explored how Tove Jansson's Moomin stories model a human ecology grounded in emotional openness, adaptive rhythm, minimalism, and mutual respect — qualities deeply harmonious with systems principles of balance, feedback, diversity, and sustainability. Through narrative ecology and soft systems thinking, the inquiry revealed that the emotional and social patterns of Moominvalley resemble living systems: adaptive, relational, and self-regulating. In this world, resilience is not a heroic stance but a quiet responsiveness to change; care is not control but attunement. Characters such as Too-ticky and Snufkin exemplify different relational modes, contemplative stillness and independent detachment, yet both contribute to the system's overall coherence. Change, uncertainty, and melancholy are not pathologies to fix but natural rhythms to move with.

Moomin philosophy, when viewed through the lens of systems science, becomes more than charming children's literature. It offers a subtle form of ecological wisdom: an intuitive understanding of humanness as embedded, relational, adaptable, and emotionally honest. The results of this inquiry are conceptual rather than empirical, they reframe human identity as a system of co-regulation with self, others, and nature. This perspective encourages more holistic models of identity and well-being within social

systems, suggesting that values such as reciprocity, empathy, and moderation can serve as templates for designing more ecologically attuned human environments, educational, communal, and emotional alike.

In the end, to reintegrate humanness into ecological thinking may be less about innovation than about remembrance: recovering older, slower ways of being that honor interdependence and enoughness. The Moomin stories quietly remember these ways for us. They remind us that wisdom is not found in mastery or excess but in the capacity to live gently within a living world. If human systems were designed according to this logic, guided by values of connection, adaptability, and care, they might begin to reflect the same equilibrium that sustains Moominvalley itself: a world where complexity coexists with calm, and where being human means belonging well.

This inquiry demonstrates how narrative and speculative approaches can enrich systems thinking by expanding its interpretive and affective scope. While systems science traditionally models processes of feedback, emergence, and adaptation in quantitative or organizational terms, the Moomin stories reveal how such dynamics also operate in emotional, ethical, and imaginative domains. Integrating narrative ecology with systems methodology allows for a deeper understanding of human systems as lived, storied, and value-laden rather than merely functional. This narrative-systems synthesis offers several directions for future research: first, exploring the worlds of stories as soft systems that make complex feedback relations tangible; second, developing conceptual tools for mapping emotional or ethical resilience alongside ecological and social resilience; and third, using speculative fiction as a participatory mode of systems inquiry that cultivates ecological imagination. In this way, literary and artistic perspectives do not stand apart from systems science but extend its capacity to reflect on meaning, care, and interdependence — qualities essential for designing more sustainable futures.

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