

# Designing [Im] Material Inventories of Nomadic Belongings

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# **ABSTRACT**

In response to this year's conference theme of why design and the recognition of instability and uncertainty as factors influencing the future of the field, our workshop "Designing [Im]Material Inventories of Nomadic Belongings" revolves around the experiences of being a nomad in our [im]material world of various entanglements. In this space, we will share our stories through the belongings and technologies we carry and discard, problematising nomadism and impermanence as possibilities for resilience and growth. Through the use of various design methods -including collaborative inventorying, somatic noticing and material fabulations- we will unpack together our experiences of mobility in academia, speaking about the objects and affects we embrace and leave behind, the role of technology in the construction of our changing identities, and possible futures we envision for nomadism.

#### CCS CONCEPTS

• Human-centered computing  $\rightarrow$  Interaction design.

# **KEYWORDS**

Interaction design, uncertainty, nomad, body, impermanence, belonging

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## 1 INTRODUCTION

Our relationship with our belongings is not trivial, speaking of the attachments we build around others [23]; for this reason, how

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nomads relate with objects, technologies, and people differs from those who have settled down. Being subjected to constant relocations shapes our attachments, making us more strategic regarding what we keep, discard, or even desire. Under this scenario, the workshop <code>Designing</code> [Im]Material Inventories of Nomadic Belongings problematises our consideration of objects and technologies as part of the construction of our dynamic and moving identities. We ask: <code>How do we relate with and design to promote our sense of belonging under scenarios of impermanence? How do we bring to the fore the nomad's resilience and dynamism in fabulating futures where settling down might no longer be possible?</code>

Beyond the literal relocation of bodies and affects, being a nomad can be understood as being a non-unitary and multi-layered subject; a dynamic and changing entity [5] shaped by the objects and cultures they inhabit. As -we- nomads constantly relocate, the objects we keep with us are as important as the ones we choose to discard. Rescuing these notions, this workshop centres around the co-creation of an [im]material inventory of nomadic belongings, questioning the notion of *belonging* traversing ephemeral objects and identities. Through the use of soma design methods [18] and fabulations [30], we aim to critically examine — from conceptual, affective, and material perspectives— the frictions emerging between nomadism and belonging. By building this inventory collaboratively with other self-identified nomads during the workshop, our goal is to start defining qualities of belonging that would support designing technologies for nomadic and impermanent lifestyles.

Although nomadism and migration have played an important role in our human history since ancient times, we have seen a rapid increase in global mobility during the last decade [2]. The pandemic temporarily interrupted the flow of movement, but so far, it is still difficult to assess the real impact it will have on the way people mobilise [21]. The reasons for leaving one's country of origin are varied, including the search for better economic prospects, education and displacement due to conflict [2]. Taking these perspectives into account motivates us to use our designers' lenses to explore the phenomenon of nomadism from two angles: (1) As a present reality, through examining the impermanence of our material attachments, and (2) as a possible future where stability becomes a luxury.

#### 2 MOTIVATIONS AND SIGNIFICANCE

Although significant and urgent, the exploration of nomadic lifestyles and belonging remains relatively uncharted as a design space. Beyond nomadism, the world is changing rapidly. Conflicts, global warming and economic instability are forcing people to modify their lifestyles. Even if remaining in one place, many might need to rethink their relationship with objects, places and affects. In interaction design, most existing research that relates to the needs of nomads is situated within the design space of remote communication. More concretely, research engaged with diverse ways of connecting families and friends living at a distance, for example, by understanding their conversational behaviour [12, 14, 16], by creating connected artifacts and systems [6-8, 13, 28, 29, 34], such as wearables [3, 4], and by designing for social connectedness and unconnectedness [15]. While being separated from our loved ones is part of being a nomadic subject, this workshop aims to extend the scope of possibilities, examining impermanence as a quality of transformation, creativity, resilience, and growth [32]. In addition, nomadic practices have been proposed as a situated way of engaging in design as an alternative to dominant human-centric perspectives [33]. The way we examine nomadism is relational, yet in this workshop, we will focus on concrete [im]material practices associated with nomadism and belonging, the impact they generate in our bodies, and how they influence how we use technologies and objects.

This workshop builds on previous preliminary work, particularly a workshop that gathered five designers who self-identified as foreigners or nomads. This session self-organised as an intimate and relatively spontaneous conversation where we generated an inventory of objects of personal significance, including those fitting within the duality of keeping/discarding, which we capture in the notion of [im]material. This implicitly underscores the nomad's selective approach to possessions, motivating our search for understanding the material qualities of belonging. Through our discussions, we discovered that the materiality of the objects we leave behind (or that become "immaterial") is sometimes as strong as those we keep. Along with discussing the notions of keeping/discarding, we plan to explore and expand on: ghost items (objects we have given up, but we still think about them, "haunting" us), guilt items (objects we dislike but keep out of guilt -such as gifts from family), and objects that never were, (but that we desire, shaping our ambitions).

# 3 BACKGROUND

# 3.1 Nomadism and design

Constantly relocating brings a series of challenges associated with impermanence, impacting family planning and dismantling rituals while repositioning and reshaping our bodies and understanding of culture [24]. Particularly prevalent in academia, mobility assumes that researchers are disembodied, detached, and available to relocate worldwide according to work demands [22]. In many cases, nomadism is associated with being a foreigner, which can be defined as a state of mind or not belonging to a particular place or group [11]. It can also refer to things or concepts that are unfamiliar or not native to a specific culture or context, such as a sense of feeling like an outsider. In previous design approximations to the

topic, we suggested that foreignness has specific affordances that make the state of being at home adaptable to changes yet still tied to the ability to build safe ties with selected artefacts and people [25]. As a result, objects that inspire a strong sense of belonging end up being small and, therefore, less prone to abandonment [25].

Some designers have also explored foreignness from the standpoint of in-betweenness or the sensation of being split between two cultures. Koulidou et al. [20] have materialised some of those tensions of feeling "in transition" through two pieces of digital jewellery representing the need for comfort and stability. This in-betweenness leads to a heterogeneity of perspectives, shaping design practice [1]. In addition, some have touched upon the phenomenon of reverse culture shock, or the feeling of being an outsider to the country of origin. For example, Núñez-Pacheco and Frid [24] designed a prototype that uses narratives and haptic touch to bring audiences closer to how earthquakes feel on the body while reflecting on how the connection with the land is strongly somatic and shaped (and sometimes fractured) by culture.

# 3.2 Belonging[s]

Although the process of self-identification with objects and practices can profoundly shape our integrity, belonging is a dynamic, changing process [35]. This changing process is even more evident for nomads, who adapt part of their emotional attachment and self-identification process to the new spaces they inhabit. However, we see belonging as not only associated with *being part of* but also with objects and technologies themselves. According to the Cambridge Dictionary, the term *belonging* refers to "the things that a person owns, especially those that can be carried" <sup>1</sup>.

Possessions, like objects, memorabilia, digital tools, and archives, constitute not only a notion of belonging, but also outline our personality. Miller demonstrated that by using objects as means to portray people through the notion of "personal inventories" [23]. In the workshop, we intend to adapt this view to the context of nomads by collaboratively formulating an inventory that consists of both, material and immaterial elements. Thereby, we want to explore various ways of grasping *belonging* that are not limited to permanent living situations, and at the same time inquire into what shapes nomads' ways of being.

# 4 OUR METHODOLOGICAL APPROACH: INVENTORYING OUR AFFECTIVE AND [IM]MATERIAL TEMPORALITIES

This workshop explores the notion of belonging from two perspectives: (1) the present through examining the affective qualities inspired by our [im]material belongings, and (2) the future through material explorations and fabulatory tactics, helping us envision creative and resilient futures for nomadism. These temporalities will inform the creation of new themes for our evolving collective inventory of [im]material object qualities.

4.0.1 Examining the present through affective explorations. We approach this dimension through the lenses of soma design [18], a methodology involving a slow and careful examination of first-person perspectives through design methods that place somatic

 $<sup>^{1}</sup> https://dictionary.cambridge.org/dictionary/english/belongings$ 

experiences at the centre of the design process [18]. By adopting this lens, we want to acknowledge the overlooked centrality of our bodily selves in matters involving mobility, nomadism, and impermanence. When we arrive in a new environment, our bodies are materially affected by changes in weather, food (and therefore our gut bacteria), sensibility to natural events [24], different approaches to socialisation [19], et cetera. These dimensions in everyday life are sensory and palpable, requiring specialised methods to articulate how qualities of belonging "feel" –such as Focusing [26], body maps [9] or other evocation techniques.

4.0.2 Speculating nomad futures through material fabulations. Once we have accessed qualities of belonging, we use material explorations [17], bridging previously unarticulated feelings and thoughts to presence. Our approach to exploring materiality is future-looking, grounded in *fabulations* as a tactic to craft narratives linking our experiences with the future. Fabulations are a narrative approach borrowed from STS (Science and Technology Studies) and feminist technoscience intended to explore critical alternative futures and world-making [30]. By sharing our present experiences with other participants, we aim to discuss, feel, speculate, and materialise future qualities of fragility and impermanence [31], of durability and ephemerality [10], among others. Our focus will be placed on devising nomad futures infused with creativity and resilience.

# 5 WORKSHOP GOALS AND EXPECTED OUTCOMES

This workshop aims to gather design researchers and practitioners who have an interest in the topic of nomadism and its impermanence to examine the following possibilities critically:

- Generate an inventory of nomadic [im]material and affective belongings, contributing to uncovering some of the challenges of designing for mobility and impermanence.
- Reflect on how the sense of belonging is shaped through objects and technologies.
- Define some of the qualities in objects and technologies that foster a sense of belonging amidst impermanence. These will be instrumental in informing ways of designing for nomadic lifestyles.
- Reflect on practices associated with detaching from personal possessions. This involves the generation of guidelines on design for ephemerality, impermanence, portability, and gifting.
- Devise future ways of relating to nomadism, speculating together about objects and future technologies responding to the particular affordances of impermanence.

By engaging critically with these themes, we aim to set the foundations for the establishment of a design program [27] for the design of technologies better affording impermanence, uncertainties and possible nomadic futures.

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#### REFERENCES

- Yoko Akama. 2017. Kokoro of design: Embracing heterogeneity in design research. Design and Culture 9, 1 (2017), 79–85.
- [2] Jeanne Batalova. 2023. Top Statistics on Global Migration and Migrants. (2023). https://www.migrationpolicy.org/article/top-statistics-global-migration-migrants
- [3] Janne Mascha Beuthel, Philippe Bentegeac, Verena Fuchsberger, Bernhard Maurer, and Manfred Tscheligi. 2021. Experiencing Distance: Wearable Engagements with Remote Relationships. In Proceedings of the Fifteenth International Conference on Tangible, Embedded, and Embodied Interaction (Salzburg, Austria) (TEI '21). Association for Computing Machinery, New York, NY, USA, Article 95, 13 pages. https://doi.org/10.1145/3430524.3446071
- [4] Janne Mascha Beuthel, Lisa Hofer, and Verena Fuchsberger. 2022. Exploring Remote Communication through Design Interventions: Material and Bodily Considerations. In Nordic Human-Computer Interaction Conference (Aarhus, Denmark) (NordiCHI '22). Association for Computing Machinery, New York, NY, USA, Article 54, 13 pages. https://doi.org/10.1145/3546155.3546650
- [5] Rosi Braidotti. 2014. Writing as a nomadic subject. Comparative Critical Studies 11, 2-3 (2014), 163–184.
- [6] Margot Brereton, Alessandro Soro, Kate Vaisutis, and Paul Roe. 2015. The Messaging Kettle: Prototyping Connection over a Distance between Adult Children and Older Parents. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (Seoul, Republic of Korea) (CHI '15). Association for Computing Machinery, New York, NY, USA, 713–716. https://doi.org/10.1145/2702123.2702462
- [7] Yunan Chen, Jing Wen, and Bo Xie. 2012. "I communicate with my children in the game": Mediated Intergenerational Family Relationships through a Social Networking Game. The Journal of Community Informatics 8, 1 (2012).
- [8] Wei-Chi Chien and Marc Hassenzahl. 2020. Technology-mediated relationship maintenance in romantic long-distance relationships: An autoethnographical research through design. *Human-Computer Interaction* 35, 3 (2020), 240–287.
- [9] Karen Anne Cochrane, Kristina Mah, Anna Ståhl, Claudia Núñez-Pacheco, Madeline Balaam, Naseem Ahmadpour, and Lian Loke. 2022. Body Maps: A Generative Tool for Soma-based Design. ACM International Conference Proceeding Series. https://doi.org/10.1145/3490149.3502262
- [10] Tanja Döring, Axel Sylvester, and Albrecht Schmidt. 2013. A design space for ephemeral user interfaces. In Proceedings of the 7th International Conference on Tangible, Embedded and Embodied Interaction (Barcelona, Spain) (TEI '13). Association for Computing Machinery, New York, NY, USA, 75–82. https://doi. org/10.1145/2460625.2460637
- [11] Verena Erlenbusch. 2018. Being a foreigner in philosophy: A taxonomy. Hypatia 33, 2 (2018), 307–324.
- [12] Azadeh Forghani and Carman Neustaedter. 2014. The Routines and Needs of Grandparents and Parents for Grandparent-Grandchild Conversations over Distance. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (Toronto, Ontario, Canada) (CHI '14). Association for Computing Machinery, New York, NY, USA, 4177–4186. https://doi.org/10.1145/2556288.2557255
   [13] Azadeh Forghani, Carman Neustaedter, Manh C. Vu, Tejinder K. Judge, and
- [13] Azadeh Forghani, Carman Neustaedter, Manh C. Vu, Tejinder K. Judge, and Alissa N. Antle. 2018. G2G: The Design and Evaluation of a Shared Calendar and Messaging System for Grandparents and Grandchildren. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (, Montreal QC, Canada.) (CHI '18). Association for Computing Machinery, New York, NY, USA, 1–12. https://doi.org/10.1145/3173574.3173729
- [14] Verena Fuchsberger, Janne Mascha Beuthel, Philippe Bentegeac, and Manfred Tscheligi. 2021. Grandparents and Grandchildren Meeting Online: The Role of Material Things in Remote Settings. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (, Yokohama, Japan,) (CHI '21). Association for Computing Machinery, New York, NY, USA, Article 478, 14 pages. https://doi.org/10.1145/3411764.3445191
- [15] Verena Fuchsberger, Janne Mascha Beuthel, Dorothé Smit, Philippe Bentegeac, Manfred Tscheligi, Marije Nouwen, Bieke Zaman, and Tanja Döring. 2020. Designing for Tangible (Un-)Connectedness. In Companion Publication of the 2020 ACM Designing Interactive Systems Conference (Eindhoven, Netherlands) (DIS' 20 Companion). Association for Computing Machinery, New York, NY, USA, 409–412. https://doi.org/10.1145/3393914.3395916
- [16] Yumei Gan, Christian Greiffenhagen, and Stuart Reeves. 2020. Connecting Distributed Families: Camera Work for Three-Party Mobile Video Calls. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (, Honolulu, HI, USA,) (CHI '20). Association for Computing Machinery, New York, NY, USA, 1–12. https://doi.org/10.1145/3313831.3376704
- [17] Camilla Groth and Maarit Mäkelä. 2016. The knowing body in material exploration. Studies in Material Thinking 14, 2 (2016), 1–11.
- [18] Kristina Höök. 2018. Designing with the Body: Somaesthetic Interaction Design. MIT Press, Cambridge, MA, USA.
- [19] Thomas P Kasulis. 2002. Intimacy or integrity: Philosophy and cultural difference. University of Hawaii Press.

- [20] Nantia Koulidou, Jayne Wallace, and Neil Smith. 2018. The self between two places: Finding connections through digital jewellery. *Making Futures* 5 (2018), 1–14.
- [21] Lin Lerpold, Örjan Sjöberg, and Karl Wennberg. 2023. Migration and Integration in a Post-pandemic World: Socioeconomic Opportunities and Challenges. (2023).
- [22] Maya Manzi, Diana Ojeda, and Roberta Hawkins. 2019. "Enough Wandering Around!": Life trajectories, mobility, and place making in Neoliberal Academia. The Professional Geographer 71, 2 (2019), 355–363.
- [23] Daniel Miller. 2008. The comfort of things. Polity.
- [24] Claudia Núñez Pacheco and Emma Frid. 2023. Sharing Earthquake Narratives: Making Space for Others in Our Autobiographical Design Process. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (Hamburg, Germany) (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 685, 18 pages. https://doi.org/10.1145/3544548.3580977
- [25] Claudia Núñez-Pacheco. 2022. Dialoguing with Tangible Traces: A Method to Elicit Autoethnographic Narratives. In Sixteenth International Conference on Tangible, Embedded, and Embodied Interaction. 1–14.
- [26] Claudia Núñez-Pacheco and Lian Loke. 2022. Focusing for Interaction Design: An Introspective Somatic Method. In CHI Conference on Human Factors in Computing Systems (New York, NY, USA). ACM, New Orleans, USA, 1–18. https://doi.org/ 10.1145/3491102.3501978
- [27] Johan Redstrom. 2017. Making design theory. MIT Press.
- [28] Hooman Aghaebrahimi Samani, Rahul Parsani, Lenis Tejada Rodriguez, Elham Saadatian, Kumudu Harshadeva Dissanayake, and Adrian David Cheok. 2012. Kissenger: Design of a kiss transmission device. In Proceedings of the Designing Interactive Systems Conference, DIS '12. Association for Computing Machinery, New York, NY, USA, 48–57. https://doi.org/10.1145/2317956.2317965
- [29] Xiaoyan Shen, Maggie George, Stephan Hernandez, Agatha Park, Yang Liu, and Hiroshi Ishii. 2019. Mole Messenger: Pushable Interfaces for Connecting Family at a Distance. In Proceedings of the Thirteenth International Conference on Tangible, Embedded, and Embodied Interaction (Tempe, Arizona, USA) (TEI

- '19). Association for Computing Machinery, New York, NY, USA, 269–274. https://doi.org/10.1145/3294109.3300990
- [30] Marie Louise Juul Søndergaard, Nadia Campo Woytuk, Noura Howell, Vasiliki Tsaknaki, Karey Helms, Tom Jenkins, and Pedro Sanches. 2023. Fabulation as an Approach for Design Futuring. In Proceedings of the 2023 ACM Designing Interactive Systems Conference (<conf-loc>, <city>Pittsburgh</city>, <state>PA</state>, <country>USA</country>, </conf-loc>) (DIS '23). Association for Computing Machinery, New York, NY, USA, 1693-1709. https://doi.org/10.1145/3563657.
- [31] Vasiliki Tsaknaki, Marisa Cohn, Laurens Boer, Ylva Fernaeus, and Anna Vallgårda. 2016. Things Fall Apart: Unpacking the Temporalities of Impermanence for HCI. In Proceedings of the 9th Nordic Conference on Human-Computer Interaction (Gothenburg, Sweden) (NordiCHI '16). Association for Computing Machinery, New York, NY, USA, Article 141, 3 pages. https://doi.org/10.1145/2971485.2987680
- [32] Vasiliki Tsaknaki and Ylva Fernaeus. 2016. Expanding on Wabi-Sabi as a Design Resource in HCI. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (San Jose, California, USA) (CHI '16). Association for Computing Machinery, New York, NY, USA, 5970–5983. https://doi.org/10.1145/ 2858036.2858459
- [33] Ron Wakkary. 2020. Nomadic practices: A posthuman theory for knowing design. International Journal of Design 14, 3 (2020), 117.
- [34] Torben Wallbaum, Andrii Matviienko, Swamy Ananthanarayan, Thomas Olsson, Wilko Heuten, and Susanne C.J. Boll. 2018. Supporting Communication between Grandparents and Grandchildren through Tangible Storytelling Systems. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (, Montreal QC, Canada,) (CHI '18). Association for Computing Machinery, New York, NY, USA, 1–12. https://doi.org/10.1145/3173574.3174124
- [35] Nira Yuval-Davis. 2006. Belonging and the politics of belonging. Patterns of Prejudice 40, 3 (2006), 197–214. https://doi.org/10.1080/00313220600769331 arXiv:https://doi.org/10.1080/00313220600769331