Embracing Multispecies Justice in Türkiye: Deconstructing Human-Centric Urban HCI through Design Tools

Sena Cucumak*
Özge Subaşı*
scucumak21@ku.edu.tr
ozsubasi@ku.edu.tr
Koç University
İstanbul, Turkey

CCS CONCEPTS

• **Human-centered computing** → *HCI design and evaluation methods.*

KEYWORDS

Multispecies justice, Urban HCI, Community animals, Design tools

1 INTRODUCTION

The marginalisation of nonhuman animals within urban environments is a pressing concern for designers and design researchers. This marginalisation emerges from adopting anthropocentric approaches in design disciplines due to the division of nature and culture. The anthropocentric agenda, particularly evident in urban design, has prioritised human needs and desires, causing environmental and social issues such as biodiversity loss, resource shortages, diverse vulnerabilities, social inequalities, and limited access to essential services [1]. Recognising the unsustainability and injustice inherent in these anthropocentric design paradigms prompts researchers and designers to embrace greater inclusivity in their practices.

An alternative for reversing the marginalisation of nonhuman animals within urban environments, cohabitation with multispecies in the smart city necessitates a justice-based approach that decenters the human. The smart city agenda starts to come to terms with issues of vulnerable target groups, such as supporting housing affordability, digital inclusion, and social justice [6]. One of the marginalised actors in the city, who is nonhuman animals, must be considered in the smart city agenda.

---

*Both authors contributed equally to this research.

To learn how to include nonhuman animals in design and research, we conducted a literature review analysing academic pieces that work with animals with an equity perspective [3]. In that study, we presented preliminary findings regarding pursuing equity-oriented participation for nonhuman animals within the design field, outlining three strategies to foster equal inclusion. These strategies entail leveraging nonhuman-based communication techniques, fostering intrinsic motivation among interactants, and employing tools that facilitate more direct forms of communication. Each of these strategies was devised to promote the equitable engagement of nonhuman animals. However, upon revisiting the primary causes of nonhuman animal marginalisation in urban areas, it became evident that a shift in human perspective is also imperative. Consequently, this research situates its ethical and philosophical framework within the Multispecies Justice (MSJ) concept, which mainly aims to decentre the human perspective. MSJ's term was first introduced by Donna Haraway, a feminist technoscience scholar and cultural critic known for her contributions to the fields of science and technology studies, feminist theory, and animal studies [7]. Celermajer et al.'s interpretation of the MSJ framework acknowledges deeply entangled and dependent relationships between

Figure 1: A 4-photograph anthology selected from the theme "experiencing surfaces and materials" displays the preferences of animals for various textures and how they relate to the city with two L-shaped frames.

human and nonhuman systems by inviting humans to reposition themselves [5]. Thus, we aim to decentre humans in an urban environment by adopting a framework emphasising relationalities between humans and nonhumans.

As fieldwork, our studies are placed in Türkiye, a country known with animals who legally reside on the streets without an owner (from now on, we call them community animals). Community animals refer to animals who live outdoors in a community environment, often without a single owner, and may be fed or cared for by multiple individuals.

Based on Celermajer et al.'s MSJ approach and design strategies identified in our literature review, we conducted two fieldwork studies. Both studies concentrated on urban-scale interactions between humans and nonhuman animals in Türkiye. In our former paper, we explored social interactions and caregivers' practices for community animals in neighbourhoods [2]. Later, a photo-visual exploration of the tangible and embodied interactions between community animals and urban actors in selected urban and peri-urban environments in Türkiye [4]. We observed and clustered the existing interactions to discuss how human-centred urban spaces can be redesigned for/with community animals in order to build equitable cohabitation together. In the pictorial, we incorporated viewfinders, represented by two L-shaped frame corners, into the photographs, as shown in Figure 1. Rather than analysing the photographs through annotations, scaling, or cropping, we allowed the interactions to convey their message naturally within their authentic context. Five themes identified in the photo-visual study are experiencing surfaces and materials, implementations of human-made objects, acting collectively, stray animals' ergonomics, and contacting nature in culture. By adopting Multispecies Justice (MSJ) as the conceptual framework of our research, the conception of equity has evolved beyond mere equal inclusion and participation of animals in design. Instead, it has shifted towards designing cohabitation, informed by insights compiled from the interactions observed among animals. Therefore, our research mainly questions the co-creation of just cities; we ask, "How can design and technology take a role in collaborative city-making by focusing on relationalities between humans and community animals?"

Continuing our exploration by researching answers for developing tangible tools aimed at decentring the human perspective within urban environments. Building on the insights gained from our literature review and photo-visual study, we aim to foster equitable cohabitation between humans and community animals. Building on the viewfinders that were used to define the interaction within a more extensive composition, we plan to develop tangible tools functioning with a similar task. These tangible tools are envisioned as catalysts for shifting human-centric attitudes and promoting a deeper understanding of the interconnectedness between human and nonhuman actors in urban ecosystems. By leveraging nonhuman-based communication techniques and incorporating principles of multispecies justice, our aim is to design tools that empower urban dwellers and designers to actively engage with and contribute to the wellbeing of community animals. Through participatory design processes, we endeavour to co-create just cities where humans and nonhumans coexist harmoniously, fostering mutual respect and empathy. As we embark on this journey of collaborative city-making, we remain committed to advancing the principles of equity, inclusivity, and multispecies justice in the design of urban spaces.

2 CONCLUSION

In our research, we address a part of the injustices that occur in urban environments by advocating for a justice-based approach that decenters the human perspective and embraces inclusivity through the Multispecies Justice (MSJ) framework. Using Türkiye as a case study, we emphasised decentring the human perspective and fostering equitable cohabitation with community animals. By identifying strategies for equity-oriented participation and developing tangible tools informed by insights from literature reviews and empirical studies, we aim to design towards reimagining urban spaces.

REFERENCES

[1] Hafedh Chourabi, Taewoo Nam, Shawn Walker, J. Ramon Gil-Garcia, Sehl Mellouli, Karine Nahon, Theresa A. Pardo, and Hans Jochen Scholl. 2012. Understanding Smart Cities: An Integrative Framework. In *2012 45th Hawaii International Conference on System Sciences*. 2289–2297. https://doi.org/10.1109/HICSS.2012.615
[2] Sena Cucumak, Pinar Apaydin, and Ozge Subasi. 2021. Decentralizing Carer-Stray Cat Interactions in Local Neighborhoods. In *Short Paper Proceedings of the Workshop on Designing for/with/around Nature: Exploring new frontiers of outdoor-related HCI (CHItaly 2021)*. CEUR Workshop Proceedings, Bozen-Bolzano, Italy, July 11-13, 2021, 8–15.
[3] Sena Cucumak and Özge Subaşı. 2022. A Critical Literature Review for Equal Participation in Human-Animal Interactions in Design. In *Companion Publication of the 2022 Conference on Computer Supported Cooperative Work and Social Computing* (Virtual Event, Taiwan) *(CSCW'22 Companion)*. Association for Computing Machinery, New York, NY, USA, 45–49. https://doi.org/10.1145/3500868.3559467
[4] Sena Cucumak and Ozge Subasi. 2023. Stray Animals-City Entanglements: Exploring the Potentials for Equitable Coexistence In Urban Türkiye. In *Proceedings of the 2023 ACM Designing Interactive Systems Conference* (Pittsburgh, PA, USA) *(DIS '23)*. Association for Computing Machinery, New York, NY, USA, 1472–1484. https://doi.org/10.1145/3563657.3596031
[5] Lauren Rickards Makere Stewart-Harawira Mathias Thaler Petra Tschakert Blanche Verlie Danielle Celermajer, David Schlosberg and Christine Winter. 2021. Multispecies justice: theories, challenges, and a research agenda for environmental politics. *Environmental Politics* 30, 1-2 (2021), 119–140. https://doi.org/10.1080/09644016.2020.1827608 arXiv:https://doi.org/10.1080/09644016.2020.1827608
[6] Marcus Foth. 2017. The next urban paradigm: Cohabitation in the smart city. *it - Information Technology* 59, 6 (2017), 259–262. https://doi.org/doi:10.1515/itit-2017-0034
[7] Donna Jeanne Haraway. 2008. *When Species Meet.* University of Minnesota Press.