Decentralizing Carer-Stray Cat Interactions in Local Neighborhoods

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Abstract

In this paper, we introduce a design fieldwork study on carer-stray cat interactions in local neighborhoods. While previous work on Animal-Computer-Interaction concentrated on animal participation, we aim to explore the limits to equal participation of interactants beyond human-centrism using Actor-Network-Theory (ANT). Prioritization of human practices is indicated according to the initial results in this interaction. It is unclear how the observed interactions and objects relate to the cat's practices, well-being, or comfort in several cases. The future of Animal-Computer-Interaction in terms of anthropocentrism is questioned by mapping the findings to theories beyond humans. This study can inspire Nature HCI researchers -and the broader HCI communities- to create less centralized interactions and technologies emphasizing human and non-human interactants more equitably.

Keywords

animal-computer interaction, Actor-Network Theory, human-centrism, more-than-human

1. Introduction

Animal Computer Interaction (ACI) uses the technology for/with animals by putting animals at the center as users, stakeholders, or contributors [1]. Previous work was with different species such as cats [2, 3], dogs [4], birds [5, 6], or elephants [7, 8] to analyze, understand and develop the conditions and tools for/with non-humans [2, 3, 4, 5, 6, 7, 8]. Interactive devices to enhance the relationships between humans and animals during playing [4, 8, 3], tracking [2], and understanding their language [7, 5] are improved, and inclusion of non-human animals as participants is stressed [9, 10, 7]. However, the majority of the studies and daily practices that existed for/with/around animals are still criticized to be dominantly anthropocentric [4].

Recently, other disciplines started to question the displacement and disempowerment of non-human animals in addition to human beings. These studies illustrated how animals (non-humans) have been historically disregarded through urban gentrifications [11], educational practices [12], and disempowered in their roles in cohabitation [13], and participatory design [14]. More-than-human studies aim to bridge this gap with disciplines like design [4, 2], sociology [15], and anthropology [16].

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In a more-than-human ecosystem, animates (animals, plants, other living creatures), inanimates as non-living artifacts (e.g. computers), and nature-made surroundings (e.g. water) are equal parts of the ecosystem. Anthropocene considers humankind as the most important component of nature [17, 18]. Anthropocentrism considers humankind as the most eminent entity in the universe [11]. Anthropomorphism is an attribution of human character, appearance, and features to non-human others such as gods, animals, or objects [19]. Cerulo suggests that non-human others play a more significant role in social interaction than acknowledged and we should be aware of possible inequalities that come from, e.g.: the relative power of interactants, their associated command of resources, social differences of interactants, and their social profiles or physical characteristics [15].

ACI integrates a variety of methods for the participation of animals [3, 2, 7, 5]. Some methods aim to tackle the inequalities of participation. As an example, Haraway's "becoming with" can be thought of as an ecology; where we learn our positions in nature through our bodies, not through abstract thinking [20]. Westerlaken and Gualeni [4] embraced "becoming with" as a conceptual framework for human-animal interactions. Further, they also benefited from Actor-Network Theory (ANT) as ANT considers both human and nonhuman participants equally as interactants associated with a social network [4]. ANT method, as pointed out in some studies [4, 6], discusses non-human relations merely as actants.

We aim, by using ANT, to understand the networks of different actors and the role of design in (de)centralizing humans in human-nonhuman interactions. Looking into the overlooked existence of non-human animals (stray cats) can help us rethink the placement of animals from an equity perspective. According to ANT, non-humans is an umbrella term that comprises anything except for humans, supernatural entities, composition entities of humans, and non-humans [21]. Interactants can be anything/anyone that participates in an action. ANT regards that if an interactant is involved in an action, that actant is equally important as any other interactant in the same action. Therefore, using ANT in design fields specifically provides advantages [22]. ANT abandoned subject/object dichotomy and that enables justice towards many interaction types [22].

2. The Study

In light of the previous work, we conducted a design fieldwork study for 12 weeks using the ANT framework for researching the social interactions of humans and stray cats (non-human animals) in Turkey. ANT acts as a tool to track the ways actors react and abuse the design objects and environments by providing a structure for each actor in the network to be considered on the same ground without division [22]. Our study shows interactants through three engagements: cat-human interaction, human-cat-human interaction, and cat-non-humans (animal) interaction. All actors that seem independent from each other are intertwined circles that affect each other due to taking part in the same network. Our insights can be contextualized within the research fields that discuss the interaction between people and animals in HCI, animal-computer interaction (ACI), and human-centered studies for nature.

We used observation and chit-chat methods in two different neighborhoods (urban city vs. small province) where the first author has continuous access. We focused on particular living

areas of stray cats that include interaction instruments of caregivers, tools, and approaches. Initial actors of our observations were stray cats, human feeders, and the non-human mediums (e.g. cat foods, food containers, cat houses) of this interaction. Later we extended the list of animal actors with dogs, birds, insects. Repeatedly looking into the same locations allowed us to examine closer networks and human-human relationships shaped by the stray cat-human interaction routines. Human actors were whoever interacted with cats in the chosen environments. We also updated our notes and extended our human interactants to invisible others such as opposers of caring, veterinarians, and participants of the feeder community.

3. Sample Results from the Field Study: Stray cats' daily routines and human-led interventions

We started our study by spotting areas where humans and stray cats interact. Sheltering and feeding-related interactions were the most visible ones among the observed interactions. We examine these related interactions in two subcategories:

3.1. Cat shelters as actors in social contexts

In this section, we share a summary from observations, desk research, and chit-chats around the topic of cat shelters.

Observation of artifacts: Each neighborhood observed included multiple human-made cat shelters (cat houses) actively used by cats. In terms of the material preferences of cat houses: wooden, cardboard, polystyrene, plastic versions have been observed in neighborhoods. Some of the shelters look like tiny houses designed for humans. They have doors, windows, and gable roof architecture, the most traditional aspects of a human residence. Other significant examples were cat shelters made from upcycled materials and human trash such as left wheels or shoe cabinets.

Extending the artifact knowledge: Further desk research of alternative objects showed that Miniature Safranbolu Houses and Ottoman architecture (regional architecture practices) were

Figure 1: Cat house examples placed in local neighborhoods. Photographed by Sena Cucumak. 2020

also embedded for fitting cat houses to the local scene of the observed neighborhood.

Observation of human actions and chit-chat: The neighborhood community and municipality decide on the locations of cat houses. Cat houses placed by individuals do not need municipal approval. The cat house providers want to protect stray cats from possible external effects. The most common sites to place the basic needs of animals are street corners, next to trees, parks, in front of houses, and next to garbage containers in streets. The living spaces are decided through human-human interactions.

3.2. Feeding relations in social contexts

Feeding practices and locations include various interactions between people, animals, and materials. This section focuses on feeding units and their locations as actors around observed areas. Observations of different interactions were discussed concerning the context.

Observation of cats and feeding practices: Cat foods are placed in various containers such as plastic yogurt cups, plates, waste containers, or directly on the ground; and environments such as parks, street corners, in front of houses, and next to garbage containers. However, since the ecosystem consists of many animals, food is shared sometimes. We have seen that ants, dogs, and birds can benefit from cat food in our observation areas. Some natural hierarchies were observed such as not eating from the same source of food at the same time as other species. If the source is the same, the act of nutrition is performed one by one.

Observation of human actions and chit-chat: The will to feed stray cats far from people leads to placing cat feeding units next to the trash, leading to unhealthy food for cats. On the contrary, the neighbors who do not want the cats to be fed around their doors are in disagreement with the neighborhood community about the random placement of feeding units. Locations of nutrition practices have been offered to cats side by side in the streets. One of the carers said that she does not prefer to leave cat food for a long time because of the ants. Consequently, she was feeding the stray cats with small amounts of food when the cats asked for more of her food. In this dialogue, she did not mention the cat's preferences or whether cats were disturbed by the existence of ants or other animals on their plate.

Our study showed, humans decide where the cats should live, and humans also decide on the shape, style, location of the shelter. Humans -sometimes- decide which cat should take which place, and impose a special form of shelter in alignment with their human home aesthetics.

Figure 2: Feeding relations of stray cats with other species. Photographed by Sena Cucumak. 2020

Humans determine the location, timing, and frequency of feeding, what the feeding unit will be, and which non-humans can benefit from them. These observations can conclude that humans are the ultimate decision-maker for social interaction, and stray animals are kept away from the human territory by a determined invisible border. We observed contrasting attitudes among species in the same ecosystem towards animals.

4. Discussion and Conclusion

Previous works [4, 5, 7, 2, 8, 6, 3] considered animals as the main and active agents rather than passive agents. Constructing our study with ANT enabled us to consider multiple and underrepresented networks and take such components into account equally. Who/what is the interactant dichotomy disappears in the contexts and that prepares an appropriate ground to examine the existence of entities through relations rather than characteristics (object/subject, human/animal) [15]. Focusing on the dynamic relations around actors rather than interactants' static position allows us to discuss centric approaches among actants more effectively.

Our work showed that continual human domination/privilege in our interactions and academic realms leads to an incomplete understanding of such interactions. In some cases, we observed positively intended practices caused an unexpected adverse outcome due to the lack of communication between species e.g. feeding stray cats on the ground rather than putting the food into a container or vice versa. As we discussed in cat house examples, caregivers/communities may underrepresent the standpoints of animals in various contexts. The production of these houses according to the local architectural features points to the aesthetic dominance of humans. Existing shelters supply the essential needs of stray cats such as sheltering, sleeping, and feeding; however, the under-researched issue is the core mindset of the community while designing and placing these facilities that contain anthropocentric and anthropomorphic views.

Designers from HCI have an opportunity to use their knowledge in more-than-human literature to improve the existing human-animal interactions. New tools can be developed that organize human life and non-human cohabitants' life equally. Examples can be apps for shared feeding practices that find the optimum conditions with stray cats' participation in the design process. We can design IoT-based public food containers that send notifications to their users at feeding requests of cats. Do-it-yourself smart cat houses can be developed with instructions obtained from the cat's participation in the design process, or neighborhood tools for building care infrastructures could have improved the negotiation process between neighbors.

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