Interspecies Design

Imagination Lancaster

Welcome to interspecies design. We offer these guidelines as a simple starting point for meaningful change.

Interspecies design is for those who want to make speculative design for greatest number of species.

These guidelines are the result of hundreds of hours of Research and reflection on our relationship with nonhuman animals. Still, we have a lot of work to do before these practices are our everyday routine. Until then, we're inspired to share and improve in partnership with all species, and with you.

- Imagination Lancaster

The case for interspecies design

Let's face it, as speculative designers, we often generate and evaluate ideas based on what we know and the limits of our imagination. We strive to explore complex social, cultural and political issues and design for possible futures.

But here's the problem: If we use our own abilities as a baseline, we make things that are easy for human animals to use, but difficult for all other nonhuman animals.

There are 8.7 million species in the world. Our ambition is to speculate on designs that are physically, cognitively, and emotionally appropriate for each of them. It starts with seeing species diversity as a resource for better designs.

Who we design for

If we use our abilities and biases as a starting point, we end up with artefacts designed for and with animals of a specific species, language ability, tech literacy, and physical ability. Those with specific access to culture, technology and politics.

Who gets excluded

When it comes to animals, there's no such thing as "similar". The interactions we design with technology depends heavily on what they can see, hear, say, and touch. Assuming those senses and abilities are the same or simular to human animals creates the potential to ignore much of the range of animality.

Why it matters

Speculating on inclusivity not only opens up our Research and experiences to more species with a wider range of abilities. It also reflects how culture really is. All species are growing, changing, and adapting to the world around them every day. We want our designs to reflect that diversity.

Every decision we make can raise or lower barriers to participation in culture to other species. It's our collective responsibility to lower these barriers through inclusive speculations, designs, artefacts, and experiences.

Interspecies design defined

Interspecies design: A design methodology that enables and draws on the full range of nonhuman animal diversity.

Most importantly, this means including and learning from nonhuman animals with a range of perspectives.

Interspecies design doesn't mean you're making one thing for all animals. You're designing a diversity of ways for different species to participate in an experience with a sense of belonging.

Many nonhuman animals are unable to participate in aspects of society, both physical and digital. Understanding why and how nonhuman animals are excluded gives us actionable steps to take towards interspecies design.

Accessibility defined

Accessibility: 1. The qualities that make an experience open to all. 2. A professional discipline aimed at achieving No. 1.

We get many questions about the difference between accessibility and interspecies design. An important distinction is that accessibility is an attribute, while interspecies design is a method. And while practicing interspecies design should make your products more accessible, it's not a process for meeting all accessibility standards. Ideally, accessibility and interspecies design work together to make experiences that are not only compliant with standards, but truly usable and open to other species.

The principles of interspecies design

Recognize exclusion
Learn from other species
Design with one, speculate for many

1

Recognize exclusion

Exclusion happens when we solve problems using our anthropocentric biases

Almost from the moment that Interactions first published Clara Manini's *Animal-Computer Interaction (ACI): a manifesto* (2011), we've evolved our understanding of designing for and with other species. Further work called for Speculative Design to reflect on the interactions between nonhuman animals and technology. Today when we talk about designing for and with other species we draw on a range of research methods to design for other species and explore our anthropocentric biases. We explore mismatches between nonhuman animals and their technological environments, domestic situations, and culture as a whole.
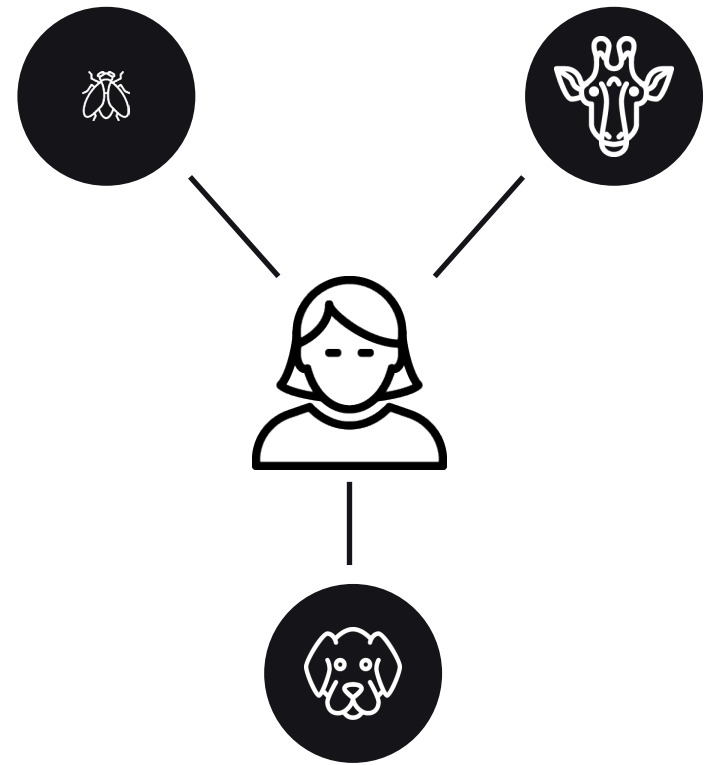
1985

Today

Human animal as design subject

"Design is an art of thought directed to practical action through the persuasiveness of objects and, therefore, design involves the vivid expression of competing ideas about social life."

- Buchanan (1985 p7)

All animals as design subjects

"anthropocentric bias denies the reality that human animals are just one species in the family of animals. Interaction environments are rarely limited to just the human species. Nonhuman animals at varying scales (including microbes, mosquitoes, and horses) influence many aspects of our culture, practice, and behaviour."

- North (2016 p50)

Animality happens at the points of interaction between a nonhuman animal and human animal culture. Physical, cognitive, and social exclusion is the result of a cultural anthropocentric bias.

As designers, it's our responsibility to use our design methods to address cultural bias and tackle social, cultural and political assumptions.
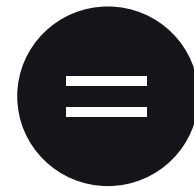
Points of exclusion help us generate new ideas and interspecies design. They highlight opportunities to frame problems with utility and elegance for all species.

Animal

≠
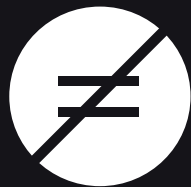
Cultural Resource
and
Food

Animal

=

Legitimate User
and
Design Contributer

Sometimes exclusion is structural

The abstracted interfaces and reliance on formal language to interact with computers through anthrpocentric technology means that nonhuman animals are often excluded from interactions because of the structures of technology

Sometimes exclusion is technological

New technologies allow for a wider range of interactions with computers and the environment where communication does not have to be linguistic and human and nonhuman animals can communicate through touch, gesture, movement, biometric data, position and play.

2

Learn from other species

Human animals are the real experts in adapting to diversity.

Interspecies design puts nonhuman animals at the center from the very start of the process. You need fresh, diverse perspectives to make it work. Nonhuman animals have amazing capabilities to adapt to different situations if their needs and agency is taken seriously, and understanding these capabilities instead of anthropomorphizing them is key to real insight.

The insight is in the adaptation

When experiences don't serve nonhuman animals the way they should, nonhuman animals adapt. Sometimes in astonishing ways that the designers never intended. We can try to imagine how a nonhuman animal with a given set of attributes would use an experience, but we can't imagine their emotional context, what gives them joy or frustrates them. We may never gain insight into why nonhuman animals use designs in particular and peculiar ways.

Increased technologically mediated environments

=
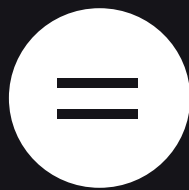
Increased othering of nonhuman animals

"if we allow anthropocentric technology to drive a wedge between us and those who made us who we are, we will not just lose them, we will lose ourselves too."

- Mancini (2013 p7)

Empathy is an important part of many different forms of design. When building empathy for nonhuman animals, it's misleading to rely only on quantitative and positivist research methodologies. Learning how nonhuman animals adapt to the world around them means spending time understanding their experience from their perspective and 'becoming with'.

When done well, we can recognize more than just the barriers that nonhuman animals encounter. We also recognize the motivations that all species have in common.

3

Design for one, speculate for many

by focusing on one nonhuman animal user and abstracting

There is no universal way that all species experience the world. All species have unique attributes, but also not all nonhuman animals of the same species experience the world in the same way. There is no universally abstractable 'ideal user' for any species. In designing for other species, we need to work with one individual nonhuman animal and find ways to apply what we learn from our encounters to create more universal speculations on the experiences of particular species.

Enjoys playing

Enjoys playing

Enjoys playing

The beauty of constraints

Designing for other species with differing cognative and physical abilities can seem like a significant constraint, but the resulting designs can actually benifit a much larger number of species. By identifying physcial, bodily and cognitive simularities between species we can design artifacts for one species that can be used by a wide range of human and nonhuman animals.

It is important to be mindful and respectful of the different ways that nonhuman animals experience the world and that, although there might be simularities between species, the differences are often more complex and difficult to navigate without abstracting their experiences or anthropomorphizing the nonhuman animals.

Has four limbs and claws
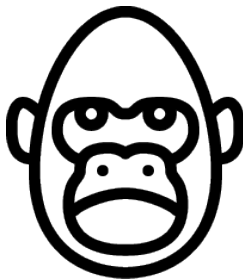
Has four limbs, hands and
can walk on two legs

Has four limbs, hands, only walks on
two legs and has opposable thumbs

Different species benifit

"Animal Computer Interaction could expand the horizon of user-computer interaction research by pushing our imagination beyond the boundaries of human-computer interaction"
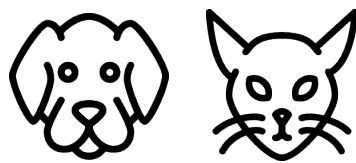
- Manicini (2011 p73)

Understanding different user interactions can help feed into the development of more innovative artifacts for human animals as well as increasing interspecies understanding and creating a more inclusive culture that understands nonhuman animals as important cultural and political agents

There are 66 million human animals in the UK

There are 9 million domestic canines
and 11 million domesticated felines in the UK
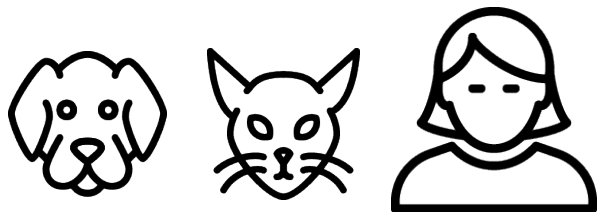
49% of the UK human animal population cohabit
with one or more domesticated nonhuman animals as "pets"

More species benifit

We cohabit with a wide range of domesticeted and non-domesticated animals which live with, around and in us. It is important that we consider the lived experience of these nonhuman animals that we have a social responsability to design a more inclusive domestic situation. As our domestic situations become more technologically enriched, we need to consider how this effects the nonhuman (and human) animals that we cohabit with.

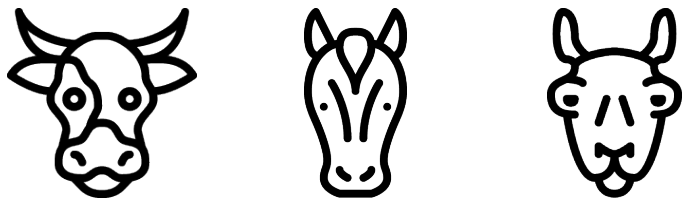Source: *People's Dispensary for Sick Animals (PDSA) UK survey. www.pdsa.org.uk/*
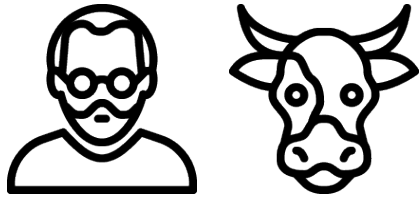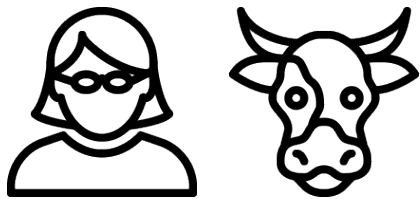
Human

Domestic

Live Stock

Captive

Wild

The Persona Spectrum

There are a number of cultural categories for nonhuman animals that helps to describe their relationship to human culture. It would be convienent to try and consider these as easy catagories for developing design personas, but we need to design for the individual nonhuman animal and then find ways to expand the design principles to wider contexts to include more design subjects. All nonhuman animals have a complex relationship with human animals, human culture and technology which we need to be mindful and respectful of.
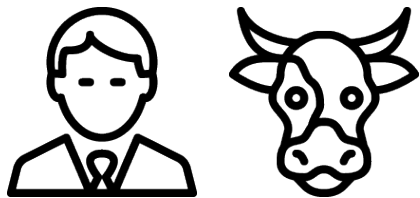
All nonhuman animals are individual.

Farmer

Animal Wellfare

Consumer

The Persona Network

Just as no animal (human or nonhuman) exists in isolation, neither does the Persona Spectrum. The Persona Network addresses the many levels of cultural entanglement that we have with nonhuman animals and respects the complexity of our relationships.

We aim to build experiences that unify species and embrace individuality. These experiences are rooted in interaction with nonhuman animals and artefacts in the world around us. Seeing nonhuman animals differently and understanding exclusion helps us extend a solution from one species to many species.

From speculating to making

We've come to see interspecies design as a set of perspectives and practices that champion species diversity and consider the nonhuman animal as a cultural, political and social agent. Take a moment to consider the complex social and cultural entanglment that you have with different species. Consider the wide range of species that yuo knowingly and often unknowingly have with nonhuman animals at different scales. Observe how nonhuman animals with different circumstances and abilities are excluded from participating or anthropomorphized.

Being inclusive starts with changing our perception.

Now it's time to put this mindset into action. It's time to create new ways of making. Let's get started.

Interspecies design

Tools

Methods

Mindset

Nonhuman Animal centered
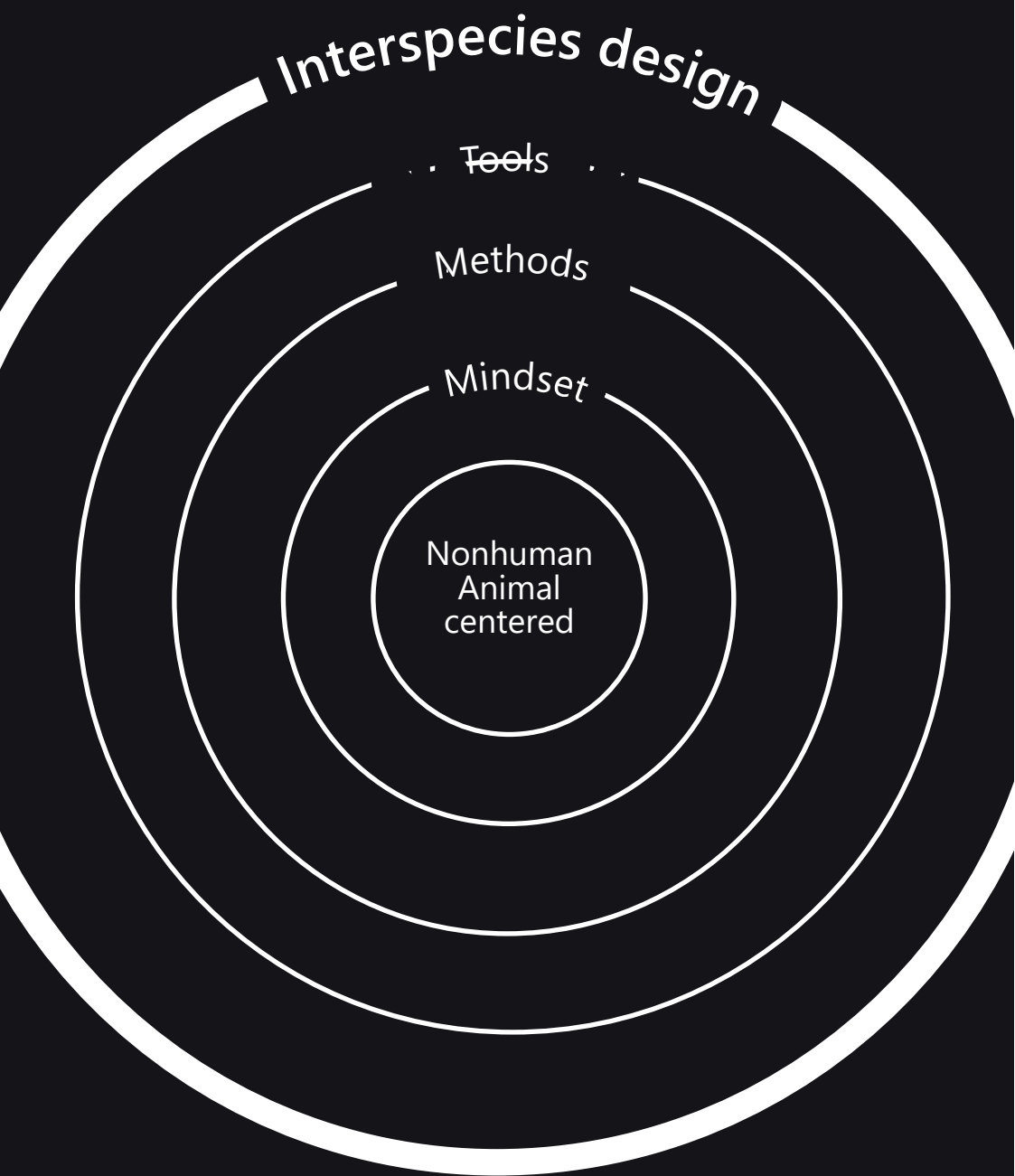
Traditional user-centred design has many techniques to clarify human animal needs, from personas to scenarios to usability testing. But, we need tools that reintroduce other species back into the design process.

We need ways to check, balance, and measure the species inclusion of our designs.

Benifits of interspecies design

Technology that's designed through in interspecies practices pays off in many ways including:

1. Increased access
2. Shared experiences
3. Understanding nonhuman animals

The impact of interspecies design is more than just the products that nonhuman animals use. It's also the shift in our mindset, methods and behaviours. What we design is a byproduct of how we design. Measuring the benifits includes measuring the shift in our culture and ourselves to a less anthropocentric, more inclusive culture that engages with posthumanism in direct and tangable ways.

The toolkit

This set of guidelines is part of Interspecies Design: An Imagination Lancaster Design Toolkit. The toolkit is made to work within an existing design process. It's based on three principlies:

• Recognize exclusion

• Learn from other species

• Design with one, speculate for many

We can use this toolkit to evaluate our existing processes, and develop new practices. It will continue to evolve as we learn through experience.

The toolkit in practice

Most design processes are iterative and heuristic. The interspecies design toolkit aims to complement, not replace, the many existing types of design process. There are great human animal-centred design methods and other inclusive design frameworks available from multiple sources. Like a chef's recipe, your own design process should be the primary direction for your design. The elements of this toolkit can be added, like ingredients, to improve the inclusivity of your process. How and when you integrate them is up to you.

Resources

1. **Activities:** Please download the PDF labeled "Activities" to dive in. Go to: cryptoludology.com/?page_id=938
2. **Contrast:** This project explores the political and rhetorical similarities and tensions between Inclusive Design and Interspecies Design.

As designers, it's our responsability to understand the power of the interactions we design for human and nonhuman animals. We design to embrace the things that make us human animals. It's what drives us to create a world that makes all lives better, not just human animal lives. The result is technology that's inclusive, inter and multispecies.

For more information, contact
a.hook@ulster.ac.uk or *a.hook1@lancaster.ac.uk*

Acknowledgments