Animal Cities: Post-Human Urban Wildness

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“Life and the environment are one thing, not two, and people, as all life, are immersed in the one system” -Daniel Botkin

This thesis contends that architecture should be designed in a way to foster closer human-animal relationships. Cities are typically designed solely with the human in mind, and over time, animals have been pushed out of the city, decreasing biodiversity. Peoples’ tendency is to separate themselves and domesticate animals, resulting in sterile and tame urban centers. This is a result of the different attitudes humans have cultivated towards animals; dirty/clean, pleasant/annoying, useful/useless, harmless/dangerous, awe/disgust, etc., and utilizing architecture as means of filtering the presence of those that are beneficial to us, rendering animals as an afterthought. In a way, humans have utilized architecture to isolate themselves from a larger natural system.

The ‘post-animal’ condition, as Catherine Ingraham refers to, alludes to the moment when humans become ‘modern’ and define themselves as something other than animal. Until the eighteenth century, animals were thought of to hold magical powers, even psychological powers, and these dissipate as the ‘modern’ human discovers ‘history, taxonomy, Darwin, ecology, biology, architectural modernism, metal, certain kinds of space, deep time, theories of organic organization, mechanization, computation, gravity, and Homo sapiens.’

Humans’ inclination to simply asking an animal to a category (pest, pets, livestock, wildlife) in a given scenario results in series of unimaginative strategies for mediating between humans and animals. By ditching the (uneducated?) preconceptions that come with each animal, this ‘post-human’ relational model proposes that each animal is approached individually and carefully, the way that human spaces are.

“The eyes of an animal when they consider a man are attentive and wary. The same animal may well look at other species in the same way. He does not reserve a special look for man. But by no other species except man will the animal’s look be recognized as familiar. Other animals are held by the look. Man becomes aware of himself returning the look” - John Berger

This awareness that John Berger talks about is what differentiates humans from animals, and while this could be reason enough to totally disregard other animals and their place in modern life, doing so would be ignorant and a waste of this awareness.
JING YI HUANG

![Vitruvian Man diagram](image-url)
JING YI HUANG
ANIMAL CITIES
post-human urban wildness

Jing Yi Huang
Advisor: Janette Kim
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SETUP
“Life and the environment are one thing, not two, and people, as all life, are immersed in the one system”

-Daniel Botkin
This thesis contends that architecture should be designed in a way to foster closer human-animal relationships. Cities are typically designed solely with the human in mind, and over time, animals have been pushed out of the city, decreasing biodiversity. Peoples’ tendency is to separate themselves and domesticate animals, resulting in sterile and tame urban centers. This is a result of the different attitudes humans have cultivated towards animals; dirty/clean, pleasant/annoying, useful/useless, harmless/dangerous, awe/disgust, etc., and utilizing architecture as means of filtering the presence of those that are beneficial to us, rendering animals as an afterthought. In a way, humans have utilized architecture to isolate themselves from a larger natural system.
Currently, architecture mediates the relationships between human and animals, these relationships are:

**PESTS**  *Animal as enemy*

**PETS**  *Animal as companion*

**LIVESTOCK**  *Animal as capital*

**WILDLIFE**  *Animal as spectacle*
PESTS
- GENERAL ENCLOSURE
- GRANARIES
- HAY LOFTS
- INSECT SCREENS

PETS
- FORGED ENVIRONMENTS
- SECONDARY CIRCULATION
- ENTRY CONDITION
- ENCLOSURE WITHIN THE HOME

LIVESTOCK
- ENVELOPE FOR MASS PRODUCTION
- SHELTER + FREE RANGE
- LIVESTOCK HANDLING SYSTEMS
- CLOSED/OPEN LOOP ECOLOGIES

WILDLIFE
- CAPTIVE & ON DISPLAY
- FORGED ENVIRONMENTS
- IMMERSION IN THEIR ENVIRONMENT
- CONSERVATION

The Villa Savoye as a cow shed with hay, ca. 1950s
Cat Condo by Bob Walker & Frances Mooney
Penguin ramp, London Zoo
PESTS
PETS
LIVESTOCK
WILDLIFE
“The animal, what a word! The animal is a word, it is an appellation that men have instituted, a name they have given themselves the right and the authority to give to another living creature [a l’autre vivant]”

-Jacques Derrida
The Animal That Therefore I am
WHY LOOK AT ANIMALS?

Scientifically, humans are animals, specifically mammals, Homo sapien.
“Zoos, realistic animal toys and the widespread commercial diffusion of animal imagery, all began as animals started to be withdrawn from daily life.”

-John Berger
The remainder of what animal life exists in cities and urban centers has been masked by the mass of consumerist image of what animals are.
“To the same degree as man has raised himself above the state of nature, animals have fallen below it: conquered and turned into slaves, or treated as rebels and scattered by force, their societies have faded away, their industry has become unproductive, their tentative arts have disappeared; each species has lost its general qualities, all of them retaining only their distinct capacities, developed in some by example, imitation, education and in others, by fear and necessity during the constant watch for survival. What visions and plans can these soulless slaves have, these relics of the past without power?”

- John Berger
“What visions and plans can these soulless slaves have, these relics of the past without power?”
“The interior of the house comes to stand as a metaphor for the interior life of the human - it makes metaphoric, in some sense, the space of interiority that the human psyche claims, for itself when it leaves the surrogate interior of the house. To be permanently “outside a house” is, at the same time, a pathological life, a homeless life.”

-Catherine Ingraham
The ‘post-animal’ condition, as Catherine Ingraham refers to, alludes to the moment when humans become ‘modern’ and define themselves as something other than animal. Until the eighteenth century, animals were thought of to hold magical powers, even psychological powers, and these dissipate as the ‘modern’ human discovers ‘history, taxonomy, Darwin, ecology, biology, architectural modernism, metal, certain kinds of space, deep time, theories of organic organization, mechanization, computation, gravity, and Homo sapiens.’

The ‘interior versus exterior’ here is not talking quite so literally about the interior of the home versus the exterior, but rather articulates the interior as things and creatures that we keep on the interior of our lives and minds, and the exterior refers to those we tend to ignore or separate ourselves from.

Our attitudes towards other animals influence which ones we keep close to us and we also control how we keep them close to us (sometimes not physically, but virtually).
INTERIOR
POST-HUMAN CONDITION
“As architects, we are operating in a landscape of shifting ecological and cultural values. We must not only develop strategies for incorporating diverse habitats into the spatial and built environment, but we must also take on the challenge to radically rethink the spatial and visible dimensions of animals and urban organisms.”

-Joyce Hwang
Humans’ inclination to simply assign an animal to a category (pest, pets, livestock, wildlife) in a given scenario results in sets of unimaginative strategies for mediating between humans and animals. By ditching the preconceptions that come with each animal, this ‘post-human’ relational model proposes that each animal is approached individually and carefully, the way that human spaces are.

Promoting this shift from an anthropocentric view of the urban environment to one that encourages co-habitation, results in themes such as:

- Curtain wall/building envelope as habitat
- Urban infrastructures as habitat
- Animal as utility
- Animals and technology
Humans are not the only animals that are able to construct their own environments. These environments range in function from providing protection from predators and extreme temperatures, to traps for prey, to forms of communication between animals of the same species. It is commonly found that the structures that these animals exhibit intricate features such as ventilation, structural strength, thermoregulation, multiple escape routes, separated chambers for different purposes, etc.
*Cat Furniture by Space Int’l*

*Pig City by MVDRV*

*Hybrid Muscle by R&Sie*
There are an increasing number of projects that start to address post-human issues and the question of animals’ place in modern urban life, by trying to redefine the way we view and interact with animals.

MVRDV’s ‘Pig City’ addresses the issue of increasing global pork consumption along with decreasing amounts of space in the world (increase in population). ‘Either we change our consumption pattern and become instant vegetarians or we change the production methods and demand biological farming.’ While it is unfathomable to think of the entire world’s population becoming vegetarian or vegan, the idea of placing animals in skyscrapers based on the amount of space we think a pig needs as a response to the growing urban fabric and diminishing area of open land is too easy and simply, not much different from typical intensive pig farms.

R&Sie’s Hybrid Muscle is an example of bringing back the idea of utilizing animals as utility, in this pavilion that is powered by a water buffalo. Though the idea of subjecting another animal to their usefulness may seem to be going against the ethics of animal rights, some may argue ... well, what else would they do?
Magic Mountain by cero9

Bat Bridge by MVRDV

Amphibious Architecture by Natalie Jeremijenko
Bat Bridge by NEXT Architects, Magic Mountain by cero9 are examples of incorporating environments that are meant to host other creatures, such as bats and insects, into urban infrastructures, such as bridges and building envelopes.

Natalie Jeremijenko’s ‘Amphibious Architecture’ combines technology with the way we experience and interact (or not) with other creatures, in this case, fish. A set of interactive, floating tubes with sensors below the water that monitor water quality and the presence of fish, and lights above water that respond to these sensors, they create a ‘two-way interface’ between humans and fish.

The utopian version of this thesis could contend that everyone become vegetarian or vegan and everyone could live happily together ever after… the truth is that humans are stubborn.
“The eyes of an animal when they consider a man are attentive and wary. The same animal may well look at other species in the same way. He does not reserve a special look for man. But by no other species except man will the animal’s look be recognized as familiar. Other animals are held by the look. Man becomes away of himself returning the look”

-John Berger

Why Look At Animals?
This awareness that John Berger talks about is what differentiates humans from animals, and while this could be reason enough to totally disregard other animals and their place in modern life, doing so would be ignorant.
SUBJECT: PIG

I AM THE FIRST PIG TO FLY.
The pig is an example of an animal where all relationships apply (its a pest in the way that it costs agricultural industries millions of dollars in damage, pets in the way that people keep them in their households as they would dogs, livestock in the way we industrially farm and process their meat which creates capital, and wildlife in that they do exist in the wild).
Feral and wild pigs can cause severe damage to agricultural crops by eating or crushing them, destroying roots of plants or farm equipment (i.e. irrigation systems and infrastructure). They also have been found to prey on livestock such as newborn lambs, goats or calves, as they are drawn to birthing grounds by the scent of fetal tissue.

Strategies that people use in order to minimize the pest-ful effects of feral and wild pigs include: baited trapping, fencing, poison, aerial culling.
Attracted to the idea of a miniature pig as a pet, “teacup pigs” (also known as “micro pigs” or “pocket pigs”) became a popular and appealing companion to keep. Breeders saw this as an opportunity to scam others of their money via false advertisement of a pig that stays the size of a teacup, charging them anywhere from $750 to $3,500. In reality, their advertisement describe the pig at the time that they are sold to people as pets.

Despite the promise of a dinky, hand-holdable creature that will forever remain as such, that will be the perfect addition to your family, is very clean, extremely smart, and play well with others... Well, some of that is true. It is true that pigs are not as dirty as most perceive them to be, are incredibly intelligent and are very sociable. It is also true that they are gluttonous and due to that and their genetic make up, they will not stay teacup-sized.

Realizing that these pigs eventually grow out of their teacup size, these miniature pigs end up suffering from malnutrition as a result of their human owners feeding them less so as to keep them mini.
The primary reason why people are so inclined to adopt a ‘teacup’ pig as a pet is similar to why we keep dogs and cats as pets, and actually more specifically puppies and kittens. Teacup pigs exhibit qualities that would be simply put as ‘cute’: small, chubby, furry. The teacup pig as a consumerist item, and the ‘cute’ qualities they possess “is one of massive human chauvinism” (Harris)
automated feeding system

large warehouses that can house from 300 to 300,000 pigs

located away from urban centers, the vast amount of trees prevent smell from travelling

waste removal
In order to satisfy the meat consumption of today’s current populations, intensive farming allows for quick and efficient breeding of pigs. These piggeries are typically large warehouses that house these pigs so that they can be monitored to reduce fatalities and increase efficiency. These warehouses are typically well ventilated, to eliminate the pigs’ need to wallow in order to regulate their body temperatures. To deal with waste, metal slatted floors are typically used, so that the pig manure can flow out into shit lagoons. In highly industrialized farms, automated feeding systems are employed. All of these combined eradicate the need for any interaction between humans and the pig (if any, a singular person would monitor up to 300,000 pigs in one warehouse).
1. Sow Gestation Crate

- metal slatted flooring

2. Farrowing Pen

- protection from sow sitting on and crushing piglets

3. Fattening Pen

- minimal space to move around
1. Sows kept in sow stalls or gestation crates while pregnant for around sixteen weeks. Their movements are restricted to standing up and lying or sitting down, if any movement, a few inches forwards and backwards. In response to their instinctual needs to forage, or to find something to do, they end up gnawing at the bars that contain them.

2. After giving birth, the sow and piglets are moved into farrowing crates which are designed in a way to prevent the loss of piglets due to sows accidentally lying on them, once again restricting the sow’s movements. The piglets can find their way to her when they want, but she is not able to move towards them.

3. After four months with their mother, piglets are removed from the farrowing pens into fattening pens, where they are grown and fattened for pork, bacon or ham.
outdoor area for grazing and wallowing

‘hoop house’ allows maximum light into pig shelter

group pens as opposed to individual crates

deep soil flooring, no slats
Extensive farming operations are done in attempt to provide more natural and spacious environments for pigs. Typically employed by those that sell organically raised pigs, with the belief that pigs that are raised in less confined spaces produce better meat.
1. Herding
2. Stunning & Bleeding
3. Scalding & Dehairing
4. Skinning & Evisceration
5. Splitting & Washing
6. Refrigeration
1. Herding
2. Stunning & Bleeding
3. Scalding & Dehairing
4. Skinning & Evisceration
5. Splitting & Washing
6. Refrigeration
1. Herding

The chute depicted is an example of a livestock handling system design that allow for efficient handling of the pigs. The use of curves correlates with their natural tendency to go back to where they came from. This is in order for the pigs to move through easily and in a calm manner. There are 3 rules to designing an effective handing facility: 1. crowd pen must always be level, 2. if the system includes a ramp, it should be located within the single file chute, 3. An animal standing in the crowd pen must be able to see 2 to 3 body lengths up the single file chute before it curves as this will facilitate entry into the chute.

2. Stunning and Bleeding

At the beginning of the assembly line of the slaughtering process for pork, is stunning. Most countries have regulations that require that animals are made unconscious by a ‘humane’ method prior to bleeding. These include a direct blow to the skull, slaughtering mask, bullet, and electrical stunning.

The purpose of bleeding are the kill the pig with nominal damage to the carcass and to remove as much blood as possible, as quickly as possible to prevent the growth of bacteria. The most hygienic system of bleeding is to chain the pig onto a moving rail instantly after stunning.
3. Scalding and Dehairing

After the blood has been entirely drained, the hairs on the pigs are removed by scalding in water at around 60 degrees celsius for about 6 minutes, loosening the hair in the follicle.

Dehairing can be done manually with a bell scraper or knife, or by dipping the pig in a bath of hot resin adhesive which is peeled off, taking the hair with it, after the resin is partially set.

4. Skinning and Evisceration

Hide removal is carried out on the carcasses, still hanging from the rails, operators have to be careful not to let the outside of the hide or the hands that was in contact with the outside of the hide touch the skinned surface of the carcass.

Evisceration is the removal of the internal organs of the carcass, and care must be taken that the organs are not punctured and must be identified by veterinary inspection. After inspection, the viscera is chilled on racks.
5. Splitting and Washing

When splitting, the operators split from the back of the carcass, splitting it down the backbone with a saw or cleaver from the pelvis to the neck. The head is usually kept intact.

The purpose of washing the carcass is to remove any visible soiling and blood stains on the carcass to improve its appearance after refrigeration. The water that is used must be clean and the soiled carcasses must be sprayed straightaway after splitting, reducing the time for bacterial growth.

6. Refrigeration

After weighing, the carcasses must go into the cooler, with the temperature set between 0 and 1 degrees celsius, as quickly as possible, and as dry as possible. Refrigerating the carcasses slows down the growth of bacteria and extends its shelf-life. They must hang on rails, never touching the floor.
Though pigs are generally very adaptable to different habitats and can live in a range of climates, pigs’ natural habitat are typically woodland areas with dense shrubbery, as they spend 6-8 hours a day foraging, grazing, rooting for food. An important element of a pig’s habitat is the presence of water, as their bodies do not have thermoregulating functions, and need bodies of water to wallow in to prevent from overheating. As social animals, they travel together in groups, and due to their exploratory nature they can travel large distances.
PUTTING LIPSTICK ON A PIG

delight vs. disgust
[Tools of separation]
Things that generate the feeling or delight and disgust in humans, directly correlate with whether we keep them interior or exterior to our lives. Today, rather than keeping animals physically close to us, we find other means of doing so: fiction, consumerism, and the virtual.
[delight]
[disgust]
“Children in the industrial-ized world are surrounded by animal imagery: toys, cartoons, pictures, decorations of every sort. No other source of imagery can begin to compete with that of animals… it was not until the 19th century that reproductions of animals became a regular part of the decor of middle class childhoods”

- John Berger

In fiction, these pigs are personified, whether a real pig is made to talk English, or a cartoon pig stand on two legs. This deformation to the true image of the pig produces delight in humans.
When we first think of pigs in the lens of food consumption, we think about the salty, fatty goodness that is the flesh of the pig. Fast food chains, food corporations, restaurants, etc. usually display images of pork dishes, sizzling and steaming, falling from the heavens onto the sandwich (or rice, or lettuce) that is the vessel for the pork.

As for the characters that advertise meat products to us, it is rarely another human being, rather a cute representation of the animal that you are eating. In some cases, the animal is anthropomorphized (these animals are usually wearing human clothes, standing on two legs like a human), and it is pretending or mimicking to be someone who is serving themselves to us.
“Until the 19th century, anthropomorphism was integral to the relation between man and animal and was an expression of their proximity. Anthropomorphism was the residue of the continuous use of animal metaphor. In the last two centuries, animals have gradually disappeared. Today we live without them. And in this new solitude, anthropomorphism makes us doubly uneasy.”

- John Berger
The Piip Show

Modern Farmer - Ham Cam

HamCam
Thanks to technologies such as the television and internet, we are able to keep animals close to us through these means. Live streams such as ‘The Piip Show’ or ‘HamCam’ allow us to observe them from anywhere in the world, not in physical touching distance. This distance, and not distance, creates a sense of comfort in humans. A mentality of ‘I can see them, but I don’t need to touch or smell them’
Pink Floyd's 'Animals' album cover
WHEN PIGS FLY

post-human scenarios
how do we design spaces/objects for pigs, the same way that we do for humans in relation to the human body? (Virtuvian man/Vitruvian swine?)

how can I do that for the pig when I myself am not a pig and cannot talk to a pig? if I can’t talk to a pig... is it enough to just observe their lifestyles/ habits?

can the pig design for itself (in a similar way that humans design their physical environment)? what if the pig designed for us?

ergonomics... for a pig?

which direction is this heading... dystopic?
dining room [grazing area]

bathroom [wallowing area]

[ pig spaces ]
APPENDIX
In this project, the architects “proposed harnessing the latent heat emitted from a power generator to create an environment for a garden of flowers that would festoon the industrial site” while creating habitats for animals such as birds and butterflies. “The goals were to reconsider the appearance of nature in the city, advance the emergence of nature in unusual contexts, and introduce natural sensations - from robust odors to color - into the urban infrastructure”
Located on a river that is an important migration route for bats, this piece of urban infrastructure serves as a crossing for pedestrians and cyclists, as well as a roosting spot for bats.
R&Sie designed a study and exhibition room intended to produce its energy itself. Rather than using equipment such as solar cells, they proposed that a buffalo be the generator of electricity for the room.
Precedent: *Amphibious Architecture, Natalie Jeremijenko, NYC*

Situated at sites in the Bronx and East Rivers, these networks of floating interactive tubes made up of sensors below water and lights above. “The sensors monitor water quality, presence of fish, and human interest in the river ecosystem. The lights respond to the sensors and create feedback loops between humans, fish, and their shared environment. An SMS interface allows citizens to text-message the fish, to receive real-time information about the river and to contribute to a display of collective interest in the environment”
Precedent: *Farmland World, Design with Company*
WUNDERKAMMER


that’s all, folks!
(for now)