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Beyond the 5 Domains: Designing for Resilience

The Point:

Zoo design is a lot like being a parent & setting up a situation in which to raise fully competent & confident off-spring who can flourish & rebound from difficulties or failure.

It is about more than creating inspiring settings, close encounters, keeping animals busy, "wow" or even education.

It's about acknowledging that building in what animals "need" & experiences that give them confidence in themselves is more than merely "enrichment", it's about creating a framework for "a life worth living".

What is “Resilience”

- *The capacity to “bounce back” & recover quickly from challenging experiences.*
- *The process of adapting well to unanticipated change.*

Key characteristics include:

- *Strong problem-solving skills.*
- *Curiosity & openness to new experiences.*
- *Ability to self-soothe / self-regulate reactions in a manner consistent with species-specific natural behaviours.*

Adapted from “Building Resilience”,
WayAhead Mental Health Association NSW, 2015.

RESILIENCE

... & Why is It Important?

- We all – animals & humans - live in increasingly constrained circumstances, whether we call it “economic circumstances”, “urbanization” ... or “captivity”.
- Our ability to make sense of & deal with evolving stressors determines our ability to lead rich & fulfilling lives ... regardless of our circumstances.
- We all have jobs to do & parts to play, & we do them best when we can recover from difficulties & retain our emotional & physical fitness to greet another day.
- We can help our animals – by providing free choice & control, exercising personal agency, & training – live rich & fulfilling lives.

“Our aim is to ensure that the life experience of a zoo animal approximates the experience of an individual living in the wild in quality, repertoire and in relation to its species’ natural history.”

Taronga Conservation Society’s Animal Welfare Charter, 2012

INFLUENCES



Taronga Conservation Society Australia
Animal Welfare Charter

Taronga accepts the agreed international definition of animal welfare from the World Organisation for Animal Health (OIE):

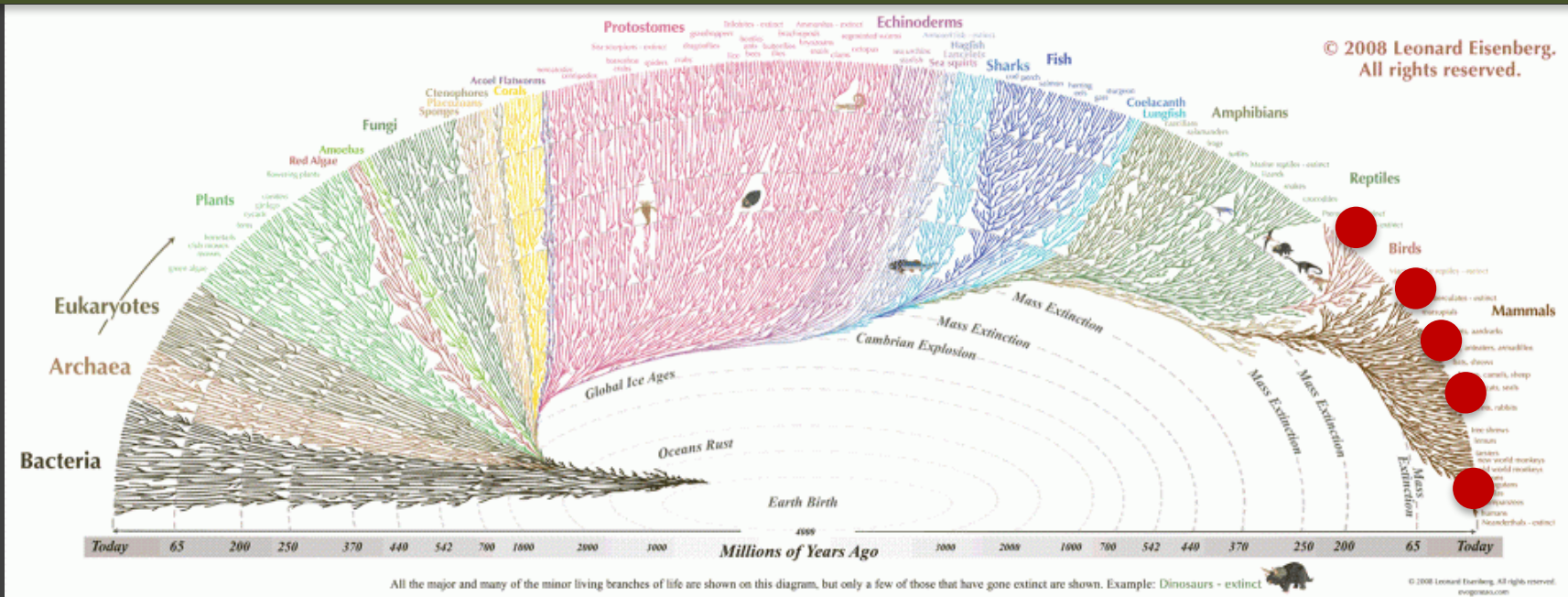
Animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear and distress. Good animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter/killing. Animal welfare refers to the state of the animal; the treatment an animal receives is covered by other terms such as animal care, animal husbandry, and humane treatment.

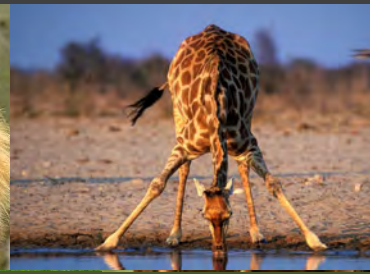
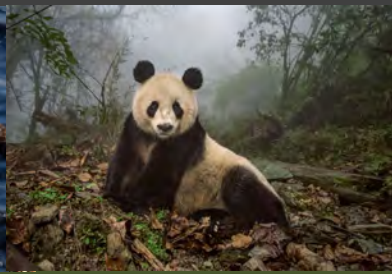
INFLUENCES

“Conservation is our mandate; welfare is our license to operate.”

- Dr. Jake Veasey, communication

The Arc of Evolution: Where Did We Start in Our Concern for Welfare?





A Long History of Defining Standards of Care for Animals Of-Service to Us:

INFLUENCES

- Pythagoras: "Animals have souls ..." 530 BCE
- Shariah Law: "The rights of livestock and animals upon man ...", 1200's
- Ill Treatment of Horses & Cattle Bill, UK 1822
- Cruelty to Animals Act, UK 1835
- First German Animal Protection Society: Tierschutzgebund 1837
- Loi Grammont, France 1850
- RSPCA, UK, 1824 / ASPCA, US 1866
- Protection of Animals Act, UK 1911
- Tierschutzgesetz, Germany 1933
- Brambell Committee Report, UK 1965
- Animal Welfare Act, US 1966
- The Five Freedoms, The Farm Animal Welfare Council, UK 1979
- Animal Welfare Act, UK 2006
- Cambridge Declaration on Consciousness, UK 2012
- The Five Domains, NZ 2015
- Quality of Life: A Life Worth Living, NZ 2016

INFLUENCES

The Five Freedoms:

- Freedom from Hunger & Thirst
- Freedom from Discomfort
- Freedom from Pain & Injury
- Freedom to Express Normal Behaviours
- Freedom from Fear & Distress

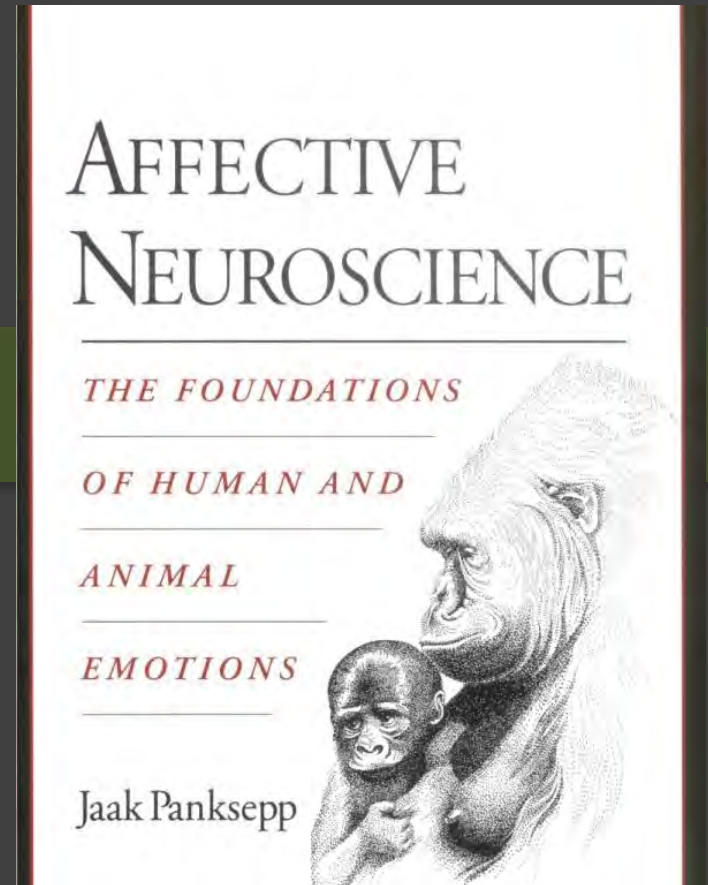
However ...

*These are **experience goals** & there was an absence of consideration that some negative stressors are necessary for & contributors to creating situations & learning that leads to animals seeking the best quality of life for themselves.*

INFLUENCES

The “Big Seven” Emotional States:

1. Seeking
2. Play
3. Lust
4. Care
5. Grief
6. Fear
7. Rage



1998

Jaak Panksepp, Neuroscientist & Psychobiologist,
Washington State University

“This system makes animals intensely interested in exploring their world & leads them to become excited when they are about to get what they desire. It eventually allows animals to find & eagerly anticipate the things they need for survival. In other words, it helps fill the mind with interest & motivates organisms to move their bodies effortlessly in search of the things they need, crave & desire.”

Seeking??!



INFLUENCES

The Five Domains: A Way of Assessing & Thinking about Welfare



David J. Mellor & NJ Beausoleil:
“Extending the ‘Five Domains’
Model for Animal Welfare
Assessment to Incorporate
Positive Welfare States, 2015

INFLUENCES

Moving Beyond the “Five Freedoms” Towards a “Life Worth Living”:

“Overall, the objective is to provide a range of opportunities for animals to experience comfort, pleasure, interest, confidence & a sense of control ... to feel positively about life.”

David J. Mellor: “Updating Animal Welfare Thinking: Moving Beyond the “Five Freedoms” Towards “A Life Worth Living”, *Animals*, 2016

OPPORTUNITIES

1. *“Variable environments with a congenial balance between predictability & unpredictability; “*



OPPORTUNITIES

2. *“Access to preferred sites for resting, thermal comfort & voiding excrement;”*



3. *“Environmental choices that encourage exploratory food acquisition behaviours which are enjoyable;”*



OPPORTUNITIES

4. *“A variety of feeds - & smells - having pleasurable tastes & textures;”*



OPPORTUNITIES

5. *“Circumstances that enable social species to engage in bonding & bond affirming activities;”*



OPPORTUNITIES

6. *“Other affiliative interactions such as maternal, paternal or group care of young, play behavior & sexual activity as appropriate.”*



CONCERNS

1. How do we enable negative experiences that stimulate seeking behaviours without contributing to negative welfare.
2. How do we provide challenges that result in enhanced resiliency to deal with the day-to-day challenges of life.
3. How do we minimize human agency & dependencies which result in a depression of the “seeking” mode.
4. How do we disable “over-protective husbandry” that results in coddled animals that are divorced from the difficulties of day-to-day choices & challenges.
5. How do we develop supportive leadership that welcomes the challenges of providing animals with a life worth living.
6. How do we welcome the public into a discussion & understanding of welfare & resiliency that extends beyond the boundaries of the zoo.

So, How Does This Fit Into Zoo Design??

- Zoo designers have to continue to bring more to the table: to deeply understand the behavioural & cognitive needs of both the animals & the humans that they design for, & deliver designs that are flexible & adaptable into the future.
- 21st Century animals can handle 21st Century solutions.
- Behaviourists, prototyping, engineering & fully integrated husbandry, maintenance & operations expertise are our friends.

What would happen if all animals could roam with purpose?



What would happen if, instead of protecting them from the weather, we helped them celebrate recovering from it?



What would happen if they could experience a seasonally “flooded forest” that changed the way they used their environment?



What would happen if social carnivores could regularly cooperate in obtaining food?



What would happen if you had to work to get water?



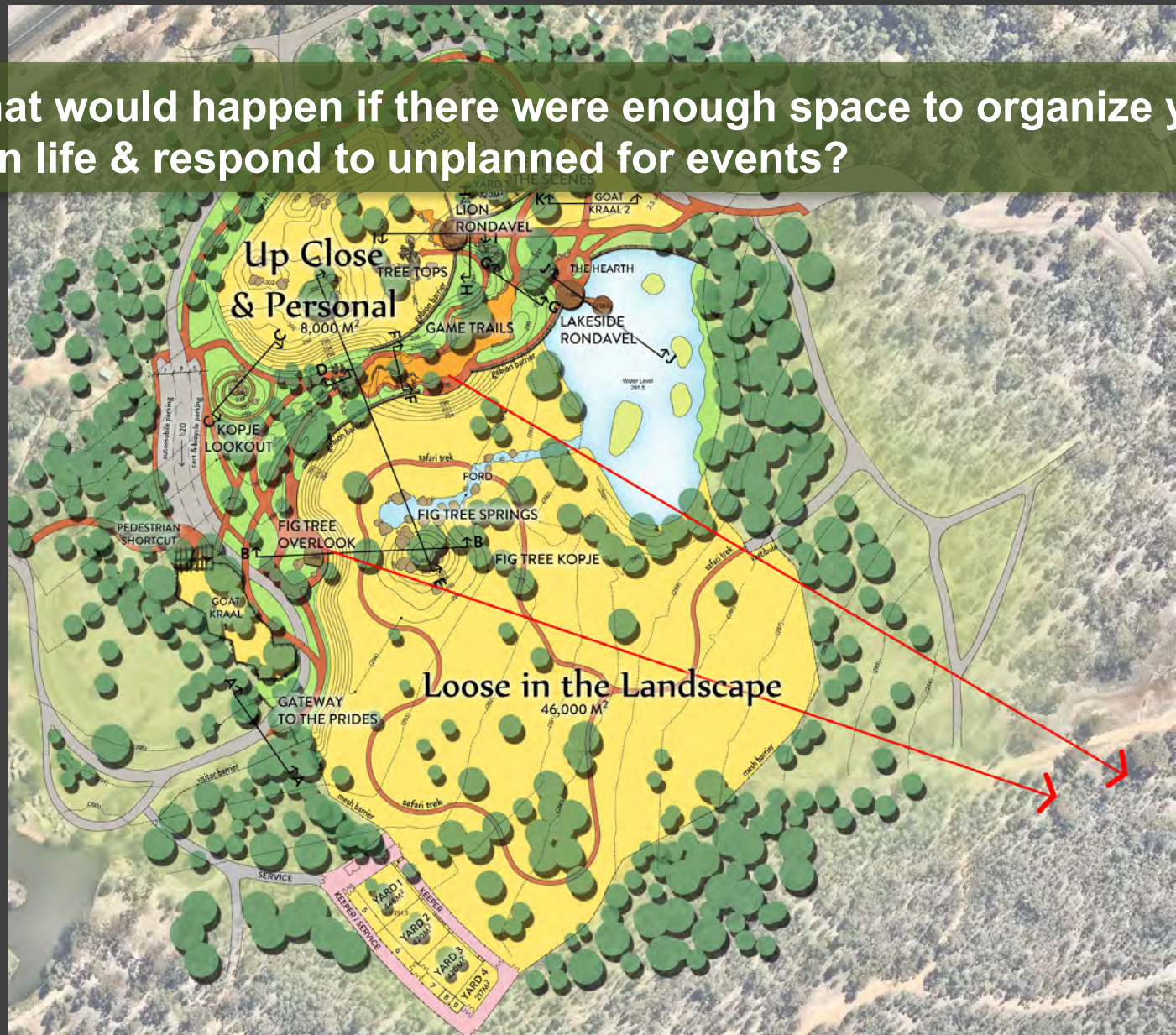
What would happen if paying attention paid off?

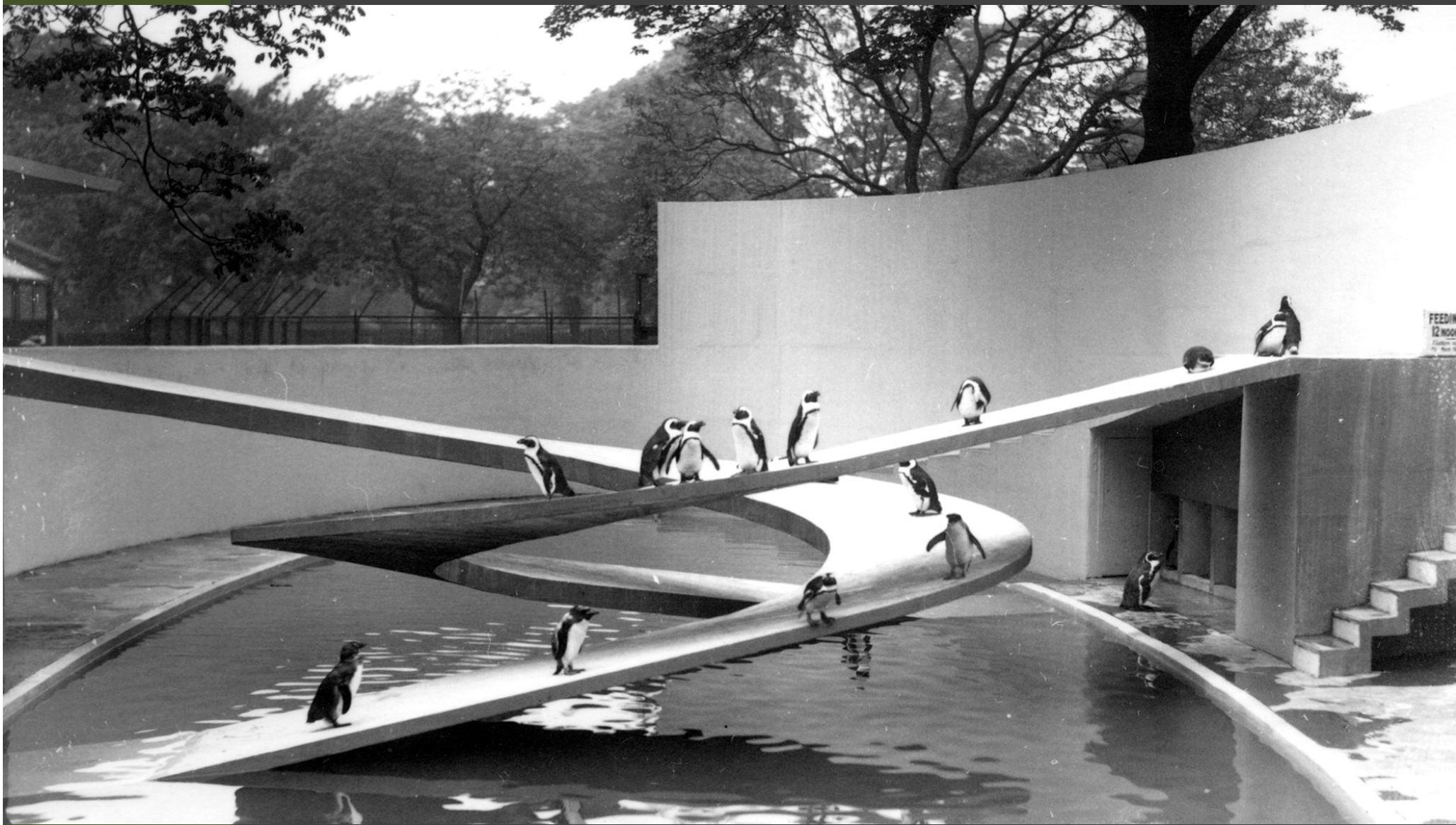


What would happen if complex boundaries & perceived threats helped lead to more social cohesion?



What would happen if there were enough space to organize your own life & respond to unplanned for events?





And that we jointly seek to never create such permanent abstracted art pieces at the expense of the animals ever again.



Thank You