

Environmental enrichment as the sprinkles on top

What do we mean by environmental enrichment? As with anything, it is always good and helpful to understand where things came from. Environmental enrichment was born from something that the words reflect: enriching the environment.

Not long ago, and even today, animals in all kinds of systems can find themselves in environments that are not enriching, which are lacking in stimuli, in opportunities, complexity, and therefore a lack of choices and control and ability to exercise one's agency. Some of these areas are still very much lacking, think for example of the back of house areas animals can spend many hours in. Whether in zoos, aquariums, research laboratories, with farm animals, or animals in shelters and at home, we came to the realisation that we need to enrich the environment by adding structures (flexible, fixed, soft, hard, etc.), vegetations, substrates, considering their social needs, hiding places, places as viewpoints, shade, or spaces large enough to rest, play or sleep together. In the laboratory world, we often speak of environmental refinement, pointing to the fact that environments are not yet as good as they can be, or should be. Every time thinking and reviewing at how we can make things better.

Environmental enrichment should spring from always wanting to make things better, especially as captive environments can easily become static and monotonous over time. I think there are 2 main approaches and viewpoints we tend to currently find in facilities today: 1) enriching the environments to make them better - more biologically and ecologically relevant, and/or 2) enriching animals lives in general, making it fun, safe, engaging, and enriching regardless of whether what we do or provide is natural or not. These two can be complementary, overlapping and or in conflict with each other. I will review them both and propose and combined approach to which we should be moving.

Enriching an environment

This goes back to parts discussed in the introduction, the realisation that many of the environments animals find themselves in are not optimal and do not afford the animals many of the opportunities they encounter in the wild, benefitting from their capacities and capabilities. Enriching an environment tend to revolve around making the environment closer to life in the wild, biologically and ecologically relevant. Interestingly, however, many of the 'negative' stimuli are often still missing (e.g., predators, lack of food, challenging weather), as most of making things better revolve around promoting optimal and positive wellbeing.

But what if we are trying to preserve a species for future generations, and potentially reintroduce them into the wild? It would mean that we need to include focusing on their whole behavioural repertoire, including negative aspects, and other aspects which are part of successfully surviving in the wild such as e.g., a physiologically and psychologically prepared individual in relation to whatever social context. To what extent do we then need to include these aspects into the process of 'enriching' the environment? And doing this in ways that challenge the animals but also allow them to cope with the situation and build

resilience. This holds true for many aspects of an animal's life and has been a long-discussed topic however not many implications and applications can be found, apart from animals in reintroduction programs mainly.

Enriching environments may include anything from the physical environment, as well as food, social, cognitive and sensory aspects. These changes can enrich, aka make better, an animals life, or it may not. All these changes, additions, or taking things away, change them around, are all part of animal care - the things we do for animals. It is then up to us to understand how the animal perceives the type of care received. Enrichment is still often something we do when we have time and many of the things 'filed' under enrichment are really part of good care in the first place. Having a place to hide for a prey species is not 'enrichment' (perhaps the types and locations can be but these should be available as part of good care, providing what species need.

Enriching an animals life

I have this 'rule' which really applies to both approaches, 'you are not allowed to call it enrichment unless you know it is enriching as perceived by the animals'. We have to be careful when using the words enrichment and enriching in that they do not trick our brain into thinking we have checked the 'good' animal welfare boxes and that we do not assume that things are well. That we feel good about having done something and ticking that box of daily duties of our checklist. We need to check if it is indeed enriching for them.

Enrichment and enriching an animals life from this perspective can literally mean anything and anything the animals enjoy and it does not need to be natural or part of living in the wild at all. Because not all we can encounter in life is fun and enriching, a lot of things are very scary and even lethal, while others are painful. A life like the one in the wild is not all moonlight and roses as they say.

Animals may enjoy looking at videos, going through old phone books, hanging in firehose hammocks, and pushing red boomer balls around. They may like to paint, interact with guests (nothing wild about that!), use a plastic and metal electronic puzzle feeder. and They may invent behaviours not seen in the wild, have different behavioural repertoires and time budgets than their conspecifics in the wild, but they might enjoy all these things and differences.

Joy, curiosity, relaxation and other animal-based indicators of good wellbeing all contribute to enriching and the enrichment of an animal's life. So, there is a lot to think about and it seems to me that we need to deeply think about the why which will dictate the how and onwards. Different whys call for different approaches.

If our why is about caring for animals for their whole life, those who stay in human care and while they might be part of a breeding program will never be reintroduced to the wild, the how will be different from those animals who are part of programs where they will be going (back) to the wild.

These different whys influence and affect how we look at enriching environments and enriching lives. There is so much more to say about this and soon I will share an extension on my thinking but for now, I would like to conclude with this shortcut.

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Environmental enrichment as we know it today in zoos should be on its way out. The time of 'nice to do if we have time or money' approach, of throwing in the boomer ball without seeing how this is perceived by an animal, designing the barren back of house environments, and this overdependence on animal care staff needs to come to an end. Of course, we constantly have to rub this up to reality. We will not be able to build all-new, spend millions, and more, but there is a lot we can do to make things better today. It certainly needs to be at the core when we build anew, and or refurbish.

We know captive environments will have an element of deprivation, and this is where the concept of 'controlled deprivation' from Professor Gordon Burghardt (1999) comes in. "Recognizing that all captive environments deprive animals of some natural stimuli and that these restrictions have varying, and often unpredictable, consequences on the welfare of captive animals." Knowing that there will be deprivation and differences, which do not necessarily need to be a welfare concern, we should focus on controlling the deprivation and increasing the opportunities. Environments of today and looking forward, are those that are meaningful to animals, are similar in quality to reflect a 24/7 across lifespan approach for all areas they spend time. It revolves around environmental design and habitat management so that animals be agents of their own lives, make meaningful choices and have control over the what, when and other aspects to an extensive degree.

Environmental enrichment would then be the sprinkles, the cherries on the cake as Dr David Shepherdson said many years ago, the changes animals can face as they are resilient, adaptive, and engaged. Let's continue the conversations and global collaborations and actions for animals together!

Download the free environmental enrichment storybook via

<https://animalconcepts.mykajabi.com/storybooks>

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