

## THE FLEXIBILITY OF ELEPHANTS

*Learning Goethean Science at Elephant Nature Park*

I began looking into Goethean science because I felt frustrated in university while studying life sciences. I felt like I was being drawn away from the world and into mathematical formulas, data analysis and unnatural things that were meant to tell us about nature. No matter how much I studied it, I never felt any closer to the natural world around me. I learnt theories, equations, did computer simulations, analyzed results with graphs and figures and statistical tests that were based on generalized formulas, but we only left the classroom or lab to study outside in nature about 3 times in 4 years. I felt like I was moving down a dark tunnel becoming figuratively blind to all things natural around me that I loved and wanted to understand. Mostly we focused on physical, correlation-based causes of natural phenomena, not the phenomena themselves. Working out underlying mechanisms was interesting, but I felt they got more credit than they deserved. They were supposedly an explanation for natural phenomena, but they are only one part. Where are all the others? As Craig Holdrege puts it:

*"How can a phenomenon be explained by something that is supposed to underlie it and that is always less than the phenomenon itself? What am I doing by leaving the phenomenon in order to explain it?"*  
(Holdrege, 2005; p 27)

Answers felt empty and the theories seemed abstract. I felt like the things we were learning were made more complicated than they actually were by the way we were trying to explain them and I often didn't even know what I was studying. For example, I could do pages of mathematical calculations, while not knowing what they represented and still get full marks. There seemed to be little relevant, real-life meaning to the things we studied. I can explain to you using a series of chemistry mechanisms why leaves are green, but I'm not sure what it means to have green leaves. As well as the limiting direction this over reliance on reductionism can bring, there is also the issue of an over-emphasis on the physical through materialism. "Science", as I

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experienced it, dealt only with certain aspects of life. Because it couldn't quantify other, mostly non-physical aspects of life, they were ignored, not taken into consideration during investigations and left for another field to study, such as psychology or phenomenology. This is frustrating because to me it makes life science research somewhat pointless. It surely works for mechanical science, especially technology, but it just didn't seem to have the answers when it came to biology. This is the study of life and non-physical things such as emotion and the constant changing of nature and natural things cannot be disregarded - they are also a part of life. We need a way to see all aspects of a natural phenomenon together as one, not separately as physical and non-physical aspects.

Goethe's Method offers a new broader perspective that can help us incorporate both quantitative science and qualitative, experiential based science into our current investigative methods. This would help us to see natural phenomena in relation to the whole, to avoid isolating phenomena from their contextual background and in turn to prevent objectification of natural things. I believe that incorporating this method into our current popular methods in science will not only broaden the scale of our understanding of nature but make us, the investigators, a part of nature as opposed to outside observers. From this perspective we become responsible for it and so I also believe these methods could have huge benefits in improving ethical standards and conservation efforts. It would start by creating a more understanding, involved and responsible community.

### Elephant Nature Park (ENP)

The following is an investigation into Goethean style methods implemented at Elephant Nature Park (ENP) in Chang Mai, northern Thailand. Elephant Nature Park is an elephant rescue and rehabilitation centre. The woman interviewed is Jodi Thomas, a staff member at



*Left: Jodi (the woman taking the photo), is able to differentiate between an elephant saying "Hello!" to her out of recognition or a curious elephant that might cause trouble by reading their body language, a skill they have developed over time. This one she knew was only saying hello so she allowed her to come right up to us and run her trunk all over Jodi before she glided off again to join her family.*



*Left: Here you can see the sensitive lip at the end of the trunk that can smell, touch and act as a delicate, mechanical tool showing the versatility and adaptability of the elephant.*

*Right: This picture shows the versatility or flexibility in choice of food. The elephant can reach high or low, so a lot of strength is needed to pull down a branch and delicacy is needed to strip the bark off it. The wide range of food available then makes for a greater range and flexibility between habitats and digestion.*



*Left: Two elephants stripping bark from a tree branch using delicate accuracy made possible by the tip of the trunk.*



*Above right: This photo shows the matriarch system of group care for the sick and young that sees ever changing roles in the life of an elephant. As matriarchs die and new babies are born or reach maturation they take on new roles as care givers or receivers.*

*Right: Here is baby Doc Mai playing football. He's 5 years old and was born in the park so has never had his spirit broken. Breaking an elephant's spirit is the Thai term for beating or torturing an elephant into submission so that they can be used in tourist camps for logging or other human gain.*



*Above: Here are pictures of the whole family trying to play football. As Holdrege described, the elephant never ceases to stop being flexible in their ways and at any age and after much trauma, they will invest in some fun play time.. Especially if there's water nearby!(below left).*



*Above: The older elephants joining the youngest to play.*



*Above right: This elephant is blind from beatings, hooks used for riding and previous abuse before she came to ENP. She got a fright from a human that wandered a little too close on his way to the dog sanctuary and started stomping around with her tail in the air, making a trumpeting sound by banging her trunk on the ground. Her adopted family soon came running to calm her down.*

ENP for almost 13 years at the time of the interview. Mostly it was her job to figure out what was best for the elephants and make sure that was what was happening, she works closely with the animals and write blogs about them and the work and philosophies of the founder of the park, LekChailert. She was also responsible for educating the volunteers in how elephants work and how to behave at the camp in the elephants' best interest. What makes this park great is its opposition to Phajaan which is a method of "breaking an elephants spirit" also known in English as "elephant crushing". It involves separating elephants from their families at a young age, keeping them confined in a cage and beating them and torturing them until they are submissive to humans. This usually takes around 3-6 years and is used to domesticate wild elephants for use in circuses, tourism, street begging, logging and other work. This, as I see it is a problem resulting from human disconnection with nature that can occur as a result of our outside observer position when studying them. Instead of seeing elephants and ourselves as part of the same animal kingdom, we see them as something separate and different. It then becomes harder to empathize with them, to see them as living beings with feelings, emotions and basic rights to a life free from torture. We have objectified them. Many people do not realize that it is not in an elephants' nature to let a human ride on their backs or tell them what to do, it is not in their nature to work everyday of their lives for human benefit. Such people don't even question how the elephants they see in tourist camps ended up doing these unnatural things. They pay to have an experience with them and so they are indirectly paying to have them broken without even knowing it. They are seeing the elephant as something useful for humans, something entertaining or helpful, not as animals in their own right with their own way of Being and relating. This is part of the reason that a new methodology in science that allows for active participation in nature by both person studying and 'thing' to be studied is so necessary. We need to start seeing animals for what they are, not what we want them to be,

in order to overcome worldwide problems of animal cruelty and to help conservation.

I told Jodi about Goethean science and she agreed it sounded very close to the methods that she uses to understand the elephants and spread that understanding.

Then I asked if she carries out any experiments to learn about the elephants. And she responded:

*"No, not so much experiments in the sense that they're not planned out experiments but we do positive reinforcement target training. In a way that's an on-going experiment because your using a special theory of training that has very specific rules and guidelines and then each animal is going to respond at a different speed, in a different way."*

I thought this was a nice description of an open-ended approach in which the process itself is crucial and on-going. It's still guided with rules and guidelines, but it allows for different outcomes, which is very much in line with Goethe's method of investigation. She continued to say why they need positive reinforcement training, which was purely for medical treatments and husbandry. The elephants were not being taught entertaining tricks and they were not being trained for work or for riding. They were allowed to be elephants and nothing more or less. They allowed no negative re-enforcement and it was the choice of the animal to engage or not engage for a reward of food.

*"Even right now, Hope (teenaged male, born in the camp, never broken) has clogged temporal glands and is in full musk and is very aggressive and unpredictable and in a very explosive state he still chooses, because it's a choice, to cooperate, to line up and allow the area to be touched so it can be washed and cleaned."*

*"..it creates a mutual trust and co-operation based relationship."*

This shows the mutualism and respect that Holdrege described as necessary for delicate empiricism (*Zarte Empirie*), a mutual, trust-based relationship is crucial for avoiding objectification of the thing being studied. Jodi then described the process of positive reinforcement training using food as the reinforcement for desired behaviour. The elephant is lead to the enclosure wall, for the safety of the vet on the other side, using snacks

as encouragement. If the ear is needed for a blood sample for example then Chris or Jodi point to the part of the body they need and show them how they want them to turn using their own body language. They wait for the elephant to mimic them, or offer them the body part required and when he or she does, they're given more re-enforcement in the form of snacks. Chris is another full time employee at ENP who specializes in Positive re-enforcement target training. She has worked with many different animals in different situations.

*"You bring the elephant up, over time he's learnt to read your body language just like you are reading their body language."*

This shows the emphasis on the time required to gain such a level of understanding with an animal as well as the active participation required to get the elephant involved - you have to get involved. Again, it's open-ended in terms of how the outcome will look and it shows a huge amount of respect for the animal and what they want to do.

When I asked Jodi what senses she uses most in studying the elephants, she responded:

*"All of them! intuition included, observation skills are the most important though, watching subtle movements, watching body language, posturing, listening for vocalizations, getting a feeling for what that means based on the situation so all of them I would say."*

This is a very Goethean approach. Intuitive observation is most important for "getting a feeling" for the essence of the thing based on its context. It is also in line with Goethe's *Zarte Empirie*, as Jodie is focusing on, not only the physical aspects she can observe, but their relevance to everything else, their context and meaning, she's using qualitative and quantitative science.

Something really interesting here is her artistic way of investigating this meaning. In order to help her understand the phenomenon being studied she has to try to describe it, repeatedly in different ways, and in a sense from different perspectives, similar to Holdrege, she constantly refers back to the question:

*"What is their essence? What is it that makes that elephant that elephant? How can I capture that in my drawing, like with a line, with an image. So*

*usually along with writing about them, following them, watching their interactions, I draw them, I paint them, I photograph them in order to best capture their essence."*

*"When I'm drawing them its like I'm meditating on them as well, because I'm just sitting there and I'm completely connected with that animal, by the time I'm done drawing them I feel like we've had a deeply personal experience and that I really know them. Even though I try to focus on less detail and more the essence I notice the way the depigmentation starts to loosen up, I notice that this eyelid is droopier than the other one and you just really start to get so much more of a feel for who they are because you've spent this time completely focusing on them. You need a lot of intuition."*

Here Jodi not only describes her own reality of a direct firsthand experience, drawing away from analyzing the details and focusing on the whole, but also describes the way the essence of the thing, the thing itself you could argue, is present in the parts as Bortoft argues (*Bortoft, 1971*), and Holdrege (2003), you can see the whole in each of the parts. It's in the depigmentation of the ears, and the eyelid droops. But, also, that this takes time and most of all, empathy;

*"You've got to put yourself in their shoes, you've got to ask yourself, 'what works best for them'?"*

*"My time here with the elephants has made me that much more fiercely respectful and made me want to protect and to fight for the rights of every aspect of nature. The more you understand the more you see no one animal is more important than the other we're each part of it whether it's a frog in a puddle or a tree or a mountain or elephants or whatever and we have no right to play god whether or not I could do this as well with animals I don't know, I think I can with practice, but with these guys it's because I do know them so well, I pretty much know what they're thinking and it's a very sure feeling that comes over me."*

And again to summarize, Jodi describes the effects these methods have on her and her surroundings, the profound respect that motivates her to care about and act positively towards all aspects of nature, how she came to this understanding of natural wholeness through the parts, us and the elephants but how that took time, engagement, active participation and especially mutual empathy.

ENP's methods, as outlined by founder LekChailert and implemented by Jodi Thomas and her colleagues, are very similar if not the same as Goethean methodology. ENP is made to be the great, award winning, animal, forest and culture saving park that it is, by its holistic methods and attitude of respect for nature resulting from the increased focus on experienced based understanding. The elephants here are slowly readapting to their natural ways with freedom from work and abuse, medical care if they choose it, and safety from poachers, in such a way that respect for the land and culture of the place is maintained too.

I truly believe that if more institutions incorporated more of this integrative holistic methodology, such as Goethe's, based on theoretical learning backed-up by experience and respect for nature, then we will overcome the limits of using only our current methods so as to improve scientific ethics and make way for a scientific community that really cares about the natural world. Conservation efforts would massively improve in terms not only of elephants or buffalo or animals in general, but the whole natural world and our responsibility to it.

### Holdrege's flexible giant

In reference to Holdrege's work in *The Flexible Giant* I would like to show support for how accurate I found his descriptions to be, I read the paper after my own experience with elephants.

Looking through my notes from the trip I found my own closest interpretation of the ur-phenomenon of an elephant was its ability to adapt on a personal, individual level. This was

mostly apparent to me because I had read about the strong family bonds female elephants form. But the elephants I had been observing had all been rescued from abusive backgrounds, and had long been separated from their biological families. What struck me was that in the park, all the elephants had adopted families, they were almost all orphans bar the few born at the camp, but all had formed bonds and there were more than 3 large families still accepting new comers into their herd to become part of the matriarchal care system. Even though these elephants had mostly been captured and separated from their families before they were 5 years old, they still all adapted back into family life once it became available. This, I would consider a part of the flexible nature Holdrege (2003) describes.

Some pictures of other parts he noticed as major indicators of the essence of an elephant, that I too took particular notice of are included in this article. You can see that the description of the elephant Holdrege describes is truly reflective of the nature of an elephant as experienced in real life. He paints a vivid picture that gives you a feel for what the elephant is like as well as an understanding of the theory of how they work.

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### References

- Bortoft, H., 1971. The Whole: Counterfeit and Authentic. *Systematics*, 9(2), p. 43–73.  
Holdrege, C. (2003). *The Flexible Giant: Seeing The Elephant Whole*, NY: The Nature Institute.  
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Figures: All photos are my own and were taken between the period of 13/07/15-27/07/15.

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