When entering a fresh environment, everything may seen chaotic and yet it is necessary to check things out.

Human minds are great at spotting things against a chaotic background or things that camouflage themselves.


When we see something new, we make a negative image of its three-dimensional perimeter .It serves **to give** the mew thing an identity and to recognize it and others like it later on.


If a thing fits the identifier-recognizer device, it is regarded as a member of that set of things.

Because there is no way to see into a bird without dissecting it, **people** can only begin to be able to predict how it will act or know what it can do by giving it inputs and seeing what outputs result. **For** this reason it is called a "black box."
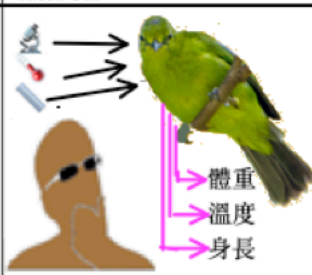

There are many kinds of non-invasive measurements that can be taken without breaking into the black box, e.g., weight, body temperature size, rate of respiration, omounts of food **and** water donsumed, etc..
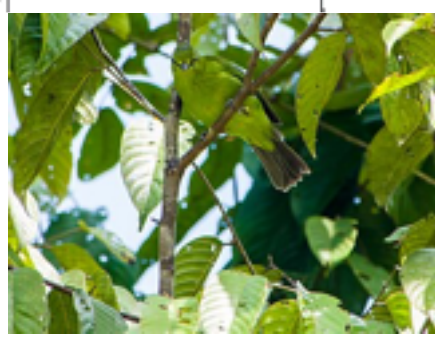
One way to increase understanding is to use the information non-invasively collected to make models that can try to reproduce the capabilities of (in this case) the green bird.
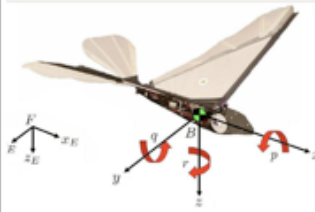
When we figure something out, when we discoveer a regularity across some of. the things we have learned to identify, and now can recognize, we can form a clear idea of what is happening. Probably we will express this knowledge in words and/or in numbers. For instance, we may notice that the deeper we go in a body of water, the greater the pressure. I think it is fair to call these ideas "empirical generalizations" in the beginning, but once you start to use language to refer to language and thought, you can get into self-reference problems. Regardless of such complications, when we expresssd something we think we have figured out, we can call that understanding a "concept."

https://youtu.be/2Nd8BA3OHCc?si=-pkxqS9LD3fbVhI-

https://youtu.be/2Nd8BA3OHCc?si=-pkxqS9LD3fbVhI-&t=348

https://www.researchgate.net/figure/Ornithopter-test-bed-with-reference-coordinate-frames_fig1_268470987

Re-examining the position of Lao and Zhuang in scientific philosophy

Patrick Edwin Moran

(1) Preface

This article touches on something that may subvert one's general way of thinking.

The following concepts may appear to be neither fish nor fowl when put together. However, the author would like thelp readers be mentally prepared well ahead of time. The annotations for the following words are at least close to their usage in this article.

Nothingness — not a vacuum but the embryonic beginning of everything

The Great Unity We are all regions of excitation in the same space-time continuum, "separate" waves on one sea.

Continuum (Cloud density never goes to zero.)

Quan literally, "fish trap"

It catches fish but not water snakes, not beavers, not little kids, etc.[1]

Creature *creature* (The author adopts a special font to distinguish this

word from its usual interpretation.) A dust devil is a good example of what it means to be something that is always losing dust as it picks up more dust, fades out from center to an imaginary boundary on the outside, starts out of nothing visible and ends by being reduced to obscurity.
https://upload.wikimedia.org/wikipedia/commons/e/ea/
Superb_coal_devil_in_Mongolia_-_1.JPG

Black box Anything that you have to make hypotheses about because you can't get inside to see how it actually works.

Model   A model airplane can help us understand how a real airplane is constructed and how it works. A mathematical model gives us an approximation of what

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[1] https://commons.wikimedia.org/wiki/
File:COLLECTIE_TROPENMUSEUM_Fuik_TMnr_137-283.jpg

results the main physical characteristics of some system or artifact will produce.

Identifier and recognition mechanism
source: https://commons.wikimedia.org/wiki/
File:Memory_Worm_(15980884172).jpg

If you came upon an some instance of extra-terrestrial life that was well camouflaged, you would have to try to distinguish it from its background. Once you had done that, you would have a clear enough idea of the creature that you could identify it if you encountered it again, but you could also recognize other aliens like it.

Isolate (noun) Something that is believed to be entirely distinct or separate from all else.

Countless sensory impressions appear in a new baby's mind, the baby's realm of experience. In the infant's experience these impressions exist independently. For infants, these impressions have no single origin and require no explanation. At first, the baby's experienced world is one and the same, a continuous region. There are so many stimuli, some flowing forward and some receding. It's really like chaos. Nothing stands out. How can a baby cope with this chaos? The only thing to do is to use some "fish traps," and only then can the baby capture some

creatures. That means creating some identifier mechanisms and

then using them to create an isolated thing that resembles a paper doll.
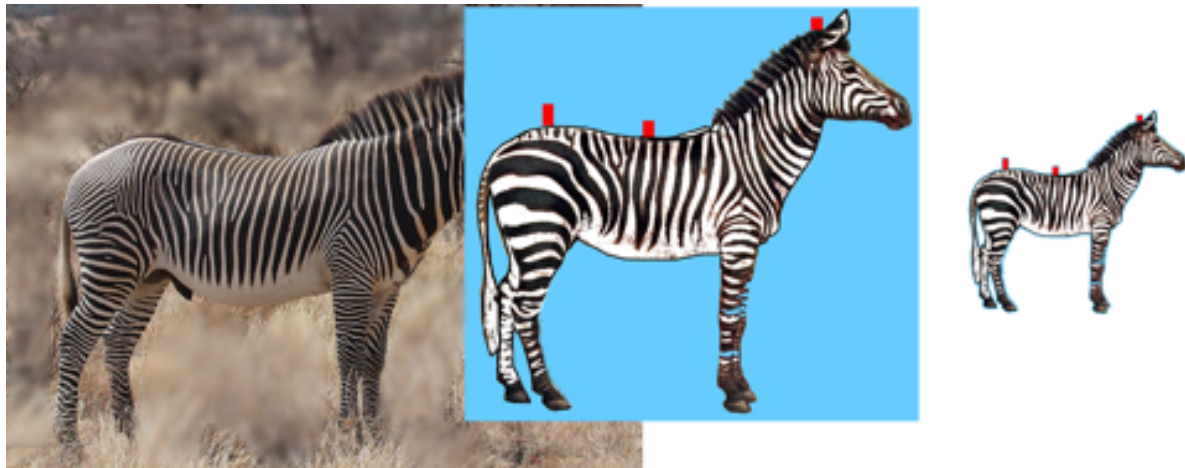
| Photo[2] | Some individual[3] isolated from its background | Cut out paper dol |

[2] https://commons.wikimedia.org/wiki/
Category:Male_zebras#/media/File:Grevy's_Zebra_Stallion.jpg
CC BY-SA 2.0, modified.

[3] https://wellcomecollection.org/works/c6kaqmrq After theis public domain image;

Identifier mechanism (i.e. a fish trap analog)

How do people squeeze overwhelming impressions into more manageable components? Probably the only way is to use a specific identifier mechanism to provide themselves with some

limited *creatures*.

If you want to understand these newly created *creatures,* you

must treat them as black boxes and study their inpust and outputs. Maybe people can come up with a model of this

creature later . Although people gain knowledge in this way,

this method is not always reliable. We have to consider that tomorrow we may have to completely change the design for a certain model. We used this process reiteratively to get a world of our own making. At the same time, we help ourselves understand that same world.

In the process of creating and understanding one's own experience, one will encounter language, emotional reactions, and legends and narratives provided by others.

These factors all have their impact, but there is no need to talk about them for now.

The above is a brief description of the research in this article.

Creatures are so called because they are what all observers

create, for themselves. It is not called a *creature* because some

Creator created them .

"*Creature*", in Zhuangzi's book – how should it be translated

into vernacular Chinese or English? This problem is very troublesome because Zhuangzi does not use the definitions and explanations of ordinary thinkers. In the first chapter, Zhuangzi has already talked about "the transformation of creatures" but, from the perspective of ordinary people, what is born as a human is always a human, and when Huainan Zi talks about werewolves, tigers, etc., to those observers they could only be characters in a a ghost story. In Chapter 26, Zhuangzi mentions the ability of the sage to escape from the state of existence.

Chapter 22 says: "Therefore, all *creatures* are one. What is

beautiful is miraculous, and what is evil is foul. The foul rot turns into magic, and the magic turns into smelly rot. Therefore, it is said: "One lifebreath connects the world." "The sage values the One." The second chapter says, "...the way connects into One. Its

division means completion; its completion means destruction. All things are neither made nor destroyed, and they are unified into One."

The universe, or Dao, has unity. Only when some observer is conscious can this unity be broken up. Only when consciousness exists can the unity be divided. These separated off regions of the universe are what Zhuangzi calls _creatures_.

A toddler who is just learning to talk will occasionally make a mistake as to what general name he should give to the domestic animals that keep him company. For example, his pet is a kitten, and everyone calls it "Mimi". The neighbor's pet is a German Shepherd. The child also called it Mimi. The child's identifier mechanism selected a pet, but everyone in his family called their pet Mimi. In the eyes of that child, there was a kind of _creature_ called Mimi. The child also needs to add two categories of _creatures_: one category is cats, one category is dogs, and then the child needs to change the original "Mimi" to "pets". There is nothing wrong with the child's original identifier mechanism. Let him come into contact with some cats, some dogs, and some other pets, and he will easily figure out the objects and their names.

Some of the major revolutions in intellectual history of the twentieth century had already occurred in primitive Daoist thought. Classical physics, or roughly nineteenth-century physics,

encountered some obstacles that it had to overcome. These revolutions are about:

(1) Overly general definitions of scientific terms that needed to be revised. Operational definitions often help clarify meaning.

(A) There are two kinds of jade (nephrit and jadeite). Jadeite is "harder" than nephrite in terms of rebound hardness . In terms of carving hardness, nephrite is "harder" than jadeite . If you just say "Jade is hard," " Nephrite is harder," " Jadeite is harder,", "Jadeite is harder than Nephrite, " etc., it is easy to confuse people.
,
Technicians have provided accepted procedures for measuring pressure deformation and scratch resistance. These procedures provide operational definitions for both kinds of hardnes.

Rebound hardness is defined as :
https://zh.wikipedia.org/wiki/Vickers Hardness Test

Scratching hardness is defined as :
https://zh.wikipedia.org/wiki/Mohs Hardness

Looking at the wider scope, this problem reappeared in the twentieth century. Physicists surrounding Niels Bohr , especially Werner Heisenberg , discovered that results derived from reasoning based on the theories of classical physics could not be automatically applied to quantum mechanics. Sometimes the

theoretical "*creatures*" in classical physics are not allowed to be

regarded as the "*creatures*" in quantum mechanics.

(2) Another related task is to clarify the relationship between reality and terms such as "black box", "useful fiction" and "model". When encountering a new phenomenon, you must first create an isolate using the identifier mechanism.

What is created in this way is called a "*creature*" in Daoism.

Creatures only reveal their outer shells, and under normal

circumstances there is a barrier between the observer and the

interior of the *creature* This barrier is the black box of

creatures. Because there is a certain barrier, the observer can

only look at the input and output conditions, and then try to invent a model based on this data that can be used to predict the

behavior or performance of the *creature.*

• Example: When there are too many bees and their residence is too small, the bees will divide into two groups. One group will stay in the original home, and the other group of bees will flock together to travel to their new home. While traveling, these bees are called swarms. People call father, mother, their three children, and even their grandfather all living together a family. Normally when someone talks about a family moving from Canada to England, the speaker knows how many people are there and

where they are (which plane they are on, what route the plane is on, etc.) . But that's not the case with bees moving.

What is the identity of a bee swarm ? Someone said, "There is a bee swarm flying ahead." But the bees are more or fewer, some fly in, some fly out, some may die in the air, no one knows, The spatial latitude and longitude, location, etc. of that bee swarm are not known. Their circumference and position are constantly changing. A swarm of bees is not as easy to observe as a wooden board. The definition of

things like bees has a subjective component, so _creatures_ like bee

colonies are unnatural, their black boxes are amorphous, and their models are difficult to design. In many ways, a swarm of bees seems to be a "continuous" thing.

The swarm of bees resting on several branches seems to have a center, but where are the boundaries of the swarm?

What is the boundary membrane of this colony?

(3) Maya (the world of illusion) is an important part of Indian religion and philosophy, but in a Eurocentric society, few people believe that what we experience is some kind of illusion.

People who think something is ridiculous about someone often advise that person to get back in touch with reality. They fully embrace the traditional idea that there is a reality that everyone can experience. The common belief is that people should experience reality as the norm. According to them, when people cannot come into contact with reality, they have some kind of abnormal psychological condition. Consider what that "reality" is. is it anything other than a social construct?

In the 20th century, we have all encountered so-called quantum weirdness. Even so, we often use language inaccurately and then accept our preconceptions without question and without regard to QM. As a result, we rarely apply the new discoveries offered by modern physics to our daily lives.

The Dao is not some illusion, but _creatures_ change over time.

Moreover, any exercise in discernment cannot avoid illusions, and as a result, people cannot perfectly capture reality.

No matter how careful people are, they often end up with unsatisfactory results. Despite these liimitations, some of our objects and some of our models are quite satisfying and useful. Quantum mechanics has been tested countless times, but no errors have been found in the theory We cannot declare it to be true, but it is certainly most useful.

When dealing with other people or other things, people sometimes need to be precise and sometimes need to be loose. Either way, they need to understand the actual requirements and how to meet them.

If the boss asks a worker to go to the hardware store to buy a hammer and a 3mm diamond drill bit, then the worker may find many hammers that meet the requirements, but it will be difficult to find the required drill bit. Therefore, the selection criterion the hammer can be flexible, and it does not matter if the hammer is larger or smaller. If the boss asks the workers to buy "some drill bits," they can pick whatever they want. But if, say, a steel rod of a certain size had to pass through a certain steel plate, workers would need to create a selection criterion that determines the exact characteristics of the required drill bit.

People's processing of reality may be compromised by misidentifying people, mistaking a duck for a goose, etc. These are relatively common mistakes. On the other hand, things that are merely similar are often mistakenly equated.

(4) Similar things that can usually be lumped together include people. The two photos below are not of the same person. On the left is "Spider-Man" Andrew Garfield . The man on the right is Leon Trotsky .

Problems can also occur when looking at a single person. The Trotsky who was born just now is different from the Trotsky who was twenty years old, and also different from the Trotsky who died just now. Trotsky is changing every moment, so these Trotskys are different, but we use language to treat them all as the same Trotsky. So Lao Tzu reminds us, "A name that can be given to someone is not a constant name." Therefore, the meaning of "Trotsky" changes from one time to the next.

There was more to the problem than this : the Trotsky in Vladimir Lenin 's heart was not the Trotsky in Joseph Stalin 's heart. I have my own understanding and opinions about Trotsky. If 10,000 people say they know who Trotsky is, they probably all have their own mental models of him in their hearts, and there are probably 10,000 different Trotskys. I think Trotsky is a good man, you think Trotsky is a bad guy. It seems that no one can understand that this

is a conflict between different social constructs. Therefore, many social disputes have no reasonable solutions.

Sometimes the identifier mechanism created by one person is not good enough. For example, if there are identical twins in a class, it may be difficult for the teacher to tell them apart. If the teacher discovers that one of them has a birthmark, then he can adjust his two identifier mechanisms. On the contrary, sometimes two things are very different, but after just a quick look, many people will think that they are the same. Goats (Capra aegagrus hircus) and domestic sheep (Ovis aries) have the same Chinese name "羊 yáng, sheep" but belong to different species. Whales are not fish , and alligators (genus : Alligator) are not Siamese crocodiles (genus : Crocodylus). Unless you are well-educated, going out to collect mushrooms (which could include toadstools) to eat can be dangerous. It takes professional knowledge to distinguish between what is poisonous and what is edible.

Gaining benefit and avoiding victimization both depend on the quality of the identifier mechanism.

Keen observers are able to discern more closely what is really going on in their presence, and therefore they become more successful creatures. Unlike them, careless observers may greedily consume highly toxic toadstools.

Many people mistakenly believe that things are given to us and received in perception, as if they were independent of our cognitive abilities and perfectly presented to us in our experience of them. Flat Earthers can look across the American prairies and immediately realize that the land is flat. They will avoid considering contrary evidence. That kind of reaction is detrimental to oneself. Flat Earthers often go the long way:
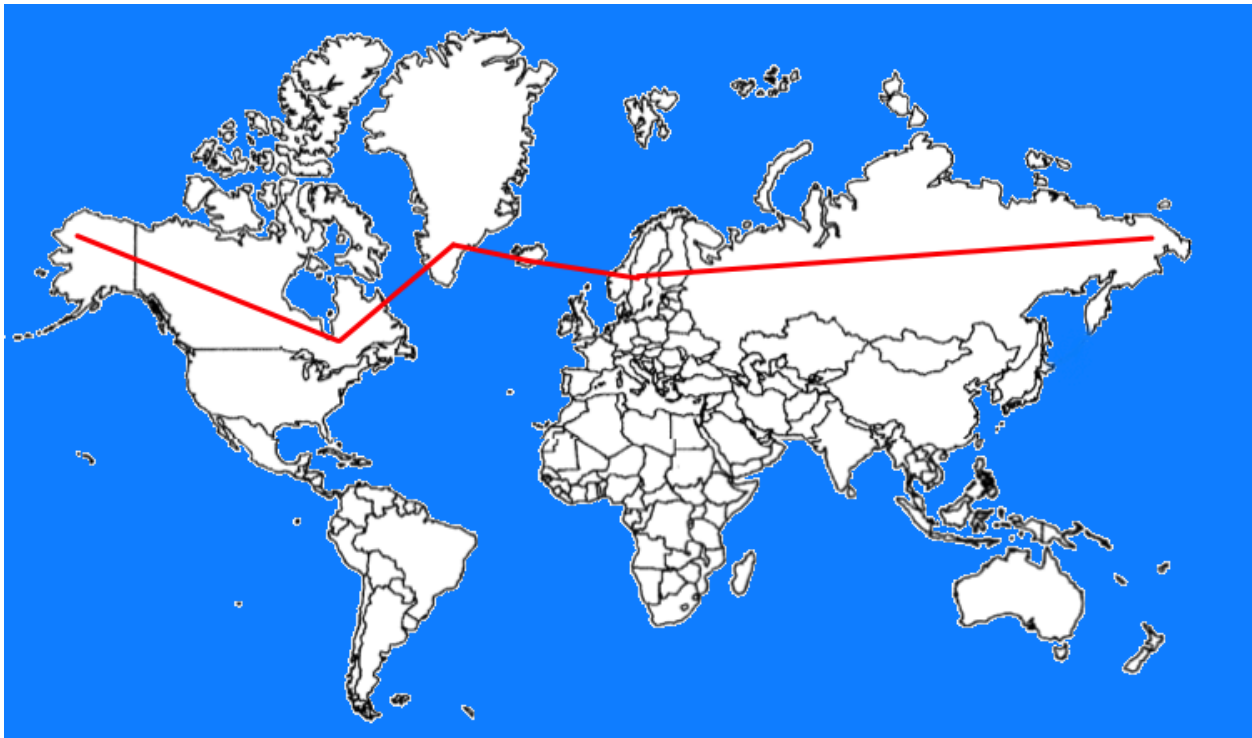
28,000 kilometers Or **3,000** kilometers? Please choose.

A new situation requires a new identifier mechanism. When attacked by an enemy, it is extremely dangerous to be unable to undo old interpretations of the enemy's intentions. This change is tantamount to being able to immediately discard the old identifier mechanism and create a new one. In this case, there is no time to use internal dialogue to determine responses. The reaction must be as fast as the spark produced when flint strikes steel. Whether the disaster can be avoided depends entirely on whether the identifier mechanism can be modified in an instant.

 In a fluid series of movements, the attacker attempts to make the defender think he is going to be kicked by the attacker's right foot. The defender needs to make corrections (i.e. re-employing the identifier mechanism) at every stage of the action . In the

second step, the attacker shifts his body weight to his right foot so that he can kick out with his left foot. If the defender is not alert, he will continue to expect the attacker to attack with his right foot. If the defender is alert, he will anticipate the attacker's attack with his left foot. (筌3A or 筌3B) If defender expects the situation of 筌3B , the defender will be able to stop the attack.

(2) Look down at the landmarks of this article from the perspective of Peng niao

(more later)