Pleasures of association, and *poissons*, such as love–

- **The creation of an evolutionary tree**

Exhibition by Mariana Castillo Deball

The exhibition »Pleasures of association, and *poissons*, such as love–« consists of a space enveloping spiral installation of an evolutionary tree. It was created by artist Mariana Castillo Deball in dialogue with paleontologists Florian Witzmann and Daniela Schwarz.[1] The spiral structure in the exhibition presents ink rubbings on paper of fossil samples of the evolutionary process of 200 million years of vertebrate from water to flight (roughly from fish to bird). The tree does not include the human species, nor human time. Apart from the fact that humans did not exist then, this also reminds us that our existence does not state the end of evolution. However, we humans, have the privilege to be able to fantasize about evolution of the species, and thus create or even redesign the evolutionary order. This is the anthropocentric aspect of the creation of evolutionary tree that the exhibition and title negotiates.

Deball's artistic practice and methods resemble the work of an archeologist, paleontologist, ethnographer or a historian, and yet, this is not what it is. In general, she excavates historical and archeological objects, fossils, patterns, diaries or documentation and creates new contexts for them as she splits the old ones up. For example, in her solo exhibition »Parergon«, Hamburger Bahnhof, Berlin, 2014, she selected sculptures, signs, patterns, personal stories, and ornaments from the institutional storage and the history of the building and created a new historical context for Hamburger Bahnhof. Furthermore, she publishes her own biannual journal, »*Ixiptla* - Journal on art and archeology«, 2014-[2], where she shares the discussions that take place with experts as part of making her artwork.

The title of the current exhibition, »Pleasures of association, and *poissons*, such as love–«, is a twist of a diary note by geologist, zoologist and evolutionary biologist Charles Darwin, written during one of his expeditions as he developed his theory of natural selection of populations in 1838. Here he

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[1] Paleontology is the science dealing with the fossils of long-deceased animals and plants that lived up to billions of years ago. It's an interdisciplinary field involving geology, archaeology, chemistry, biology, archaeology and anthropology.
See Paleontologists: What is a Paleontologist?, 19.11.2016, available via http://paleontologyworld.com/2016/11/19/what-is-a-paleontologist/ (retrieved 01.09.2017)

[2] "Ixiptla - Journal on art and archeology", 2014-, edited by Mariana Castillo Deball, Volume I-III, and published by BOM DIA BOA TARDE BOA NOITE, Studio Manuel Radere, Berlin.

finds »… an analogy between pleasures of association, and passions such as love –« [3] in his comparative and connective work that led to »On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life«, 1859.

If anything, Darwin is known for his novel idea that all species developed from one and the same organism or origin, and that species' populations develop according to the survival of the fittest: natural selection. The title of the exhibition focuses rather on the pleasure of association when looking at the diagram of evolution in the exhibition. This artistic version of an evolutionary tree begins with a fossil of a fish. So, by replacing Darwins' »passions« with the word »poissons« in the title (the French word for fish), she refers to the species she begins the diagram with. Yet it also creates a phonetic association to the word »poison« in English. Although very fascinating, the long line of scientific battles about the origin of life, survival, extinction and the ordering of the species is also poisonous. On a methodological level - how to order evolution - there is an inherent brutality as it always also involves the conflict of who survives and why? It also involves the battle between differing techniques of generating scientific arguments, facts, serving a certain view on evolution.

In dialogue with evolutionary biologist Gabriela Aguileta, Deball discovered how dramatically the study of evolution has changed with technology, genetic research, and the development of phylogenetic trees. This methodology is in strong contrast with comparative anatomy studies. In her notes on making the evolutionary tree, Deball writes, »I (...) considered if it would be possible to put these two worlds together: the territory of tangible fossils that leave an imprint on stone, and the very ethereal and cybernetic study of genetic data.«[4] This discussion will be further developed in a dialogue between Deball and Aguileta, which will be part of the public program at the exhibition at Galerie Wedding.

Notes on the imprint, the evolutionary tree and the invention of Natural History

Natural History and paleontology as sciences originate in the late 18th century and in the Enlightenment thinking, and are known to have been founded by French zoologist Georges Cuvier, who established the studies of comparative anatomy. So, strictly speaking, it is only for slightly more than 200 years that western scientists have been able to order and represent evolution as a diagram. Towards the end of the 18th century there were more documented efforts from other corners of the world at depicting evolution. In the European context, French zoologist Lamarck, and, soon after him,

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[3] Darwin Online, note book from 1838, transcribed by Kees Rookmaaker, corrections by John van Wyhe and Martin Rudwick 6-7.2009, revised by Rookmaaker and van Wyhe 11.2011: http://darwin-online.org.uk/content/frameset?keywords=of%20pleasures%20association&pageseq=12&itemID=CUL-DAR130.-&viewtype=side (retrieved 1.9.2017)

[4] Mariana Castillo Deball, Research paper behind the installation "A Hypothetical Tree", Sao Paolo Biennial, 2016, p.2. The paper can be found in an updated version in the exhibition (also in German tranlation).

Darwin, were the first to add timelines to the representations of their differing theories of evolution. Before the 19th century, evolution was often depicted as a theatre of the species or an etching of a landscape with the different animals placed in the earth. In the exhibition, Deball, as an exercise, has created her own diagram and brings the representation of it back to a more indexical and theatrical form, yet taking the scientific dimension very seriously, too.

»I'm interested in Fossils because of the association with printing, which always fascinated me. I'm interested in the imprint – of a fossil and of printing – and in the fossil sediment in the south of Germany, Solnhofen, where also Lithography was invented by Alois Senefelder.«[5]

In the town of Solnhofen, Lithography, the technique of stone printing was invented in which the lime stone (calcium carbonate), which also carries fossils, was and still is used for printing. The German actor and playwright Alois Senefelder invented lithographic printing when searching for a cheap way to print his manuscripts. He experimented with a new etching technique using a greasy, acid resistant ink that does not stick to the oil-based image that was put on the surface of a smooth fine-grained Solnhofen limestone from Bavaria.[6] He called it »Steindruckerei«. In both cases – the fossil and the lithography – the imprint is a mark that is directly connected to the depicted object, thus the artist associates the two.

In principle, fossils are sediment bodies transported through time; they are indexical signs carrying a direct physical relation with what they represent as American linguist (a.o.) Charles Sanders Peirce explained in his semiotic theory of signs (symbol, icon or index)[7]. Deball's rubbing of fossils onto paper brings out a proximity of the traces of the Pleistocene and early Holocene era in the present. The fossils here become visible, readable, even more than the fossil stones themselves, and haptic as an index of the now transformed body of a living creature, for example, at the beginning of the Holocene era, ca. 11.700 ago. This is a completely different indexical way of representing pre-history than the Natural Museum's practice or even the iconic animation-films of dinosaurs that we often see today.

In collaboration with the Naturkundemuseum, Berlin and paleontologists Florian Witzmann and Daniela Schwarz, Deball has developed the order of her phylogenetic tree, which hangs in a bamboo

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[5] Conversation between Mariana Castillo Deball and Solvej Helweg Ovesen, Berlin, 31.8.2017.

[6] Website on the sediment in Solnhofen also describing the invention of lithography due to the richness of limestone: https://www.lfu.bayern.de/geologie/geotope_schoensten/71/index.htm (retrieved 12.9.2017)

[7] C.S. Peirce first formulated his theory of the three signs symbol, icon and index in the paper "On a New List of Categories" delivered to the American Academy of Arts and Sciences, 1868, and further developed it until 1910.

tree structure. From each »branch« hangs a large banner of paper with rubbings from fossils of vertebrate from water to flight. Why this facination with ordering and associating pre-human fossils?

»I'm inspired by the way this information is being ordered, because since Darwin started to describe the evolutionary order, and how the species are connected to each other, these diagrams of evolution have been changing a lot. The system or representational form I use in the installation is a three-dimensional spiral. So people can walk into this evolutionary tree and see the connection between the species. If they hang really low on the spiral (towards the ground) they are really old and if the hang high (closer to the ceiling) they are closer in time – so in a way this three-dimensional tree makes the evolutionary process clearer – as a comprised model – to us, to the visitor. In Galerie Wedding it is the transition of vertebrate from water to flight. We have some Dinosaurs and also this very famous Archaeopteryx in the diagram (dinosaur bird, Solnhofen). Climate wise there was water almost everywhere in the Pleistocene and beginning of the Holocene era and Amphibians (such as frogs, snakes) started to exist, then reptiles, turtles, and then also the birds evolved, some became flying birds, some Dinosaurs. My evolutionary tree stops here.«[8]

Natural History as a method of ordering is closely connected to the appearances of ordering structures, such as the evolutionary tree, the diagram and the structures of naming: taxonomies. In »The Order of Things. An Archaeology of the Human Sciences«, 1966, Michel Foucault accounts for, or digs out, the origins of the human and the life sciences and looks at how the scientific discourse and classification systems are created. Natural history only became possible in the moment that the word and the object and the documentation of the object were perceived as three separate entities, before the sign and the thing were perceived as one and the same thing. It also only became possible due to the invention of the microscope, through which visual observation was intensified, and due to the fact that physical spaces were created for comparison, for example, of new collections of animals and plants in the 1800s. Foucault explains, »It is often said that the establishment of botanical gardens and zoological collections expressed a new curiosity about exotic plants and animals. In fact, these had already claimed men's interest for a long while. What had changed was the space in which it was possible to see them and from which it was possible to describe them. To the Renaissance, the strangeness of animals was a spectacle: it was featured in fairs, in tournaments, in fictitious or real combats, in reconstitutions of legends in which the bestiary displayed its ageless fables. The natural history room and the garden, as created in the Classical period, replace the circular procession of the 'show' with the arrangement of things in a 'table'. What came surreptitiously into being between the

[8] Conversation between Mariana Castillo Deball and Solvej Helweg Ovesen, 2017.

age of the theatre and that of the catalogue was not the desire for knowledge, but a new way of connecting things both to the eye and to discourse. A new way of making history.« [9]

This way of making history concerns the empirical ordering, by way of visual and haptic comparison, close-up study, and thus naming the invention of taxonomies. At this point in time, the Linnean Taxonomy was designed and written (by Swedish zoologist Carl Linnæus) of species and subspecies and became a foundational system of reference and specification.

However, in the installation, »Pleasures of association, and *poissons*, such as love–«, the taxonomy of the represented fossils remains in the background (printed on the floor), whereas the fossil ink prints emphasize the visual comparison of the (at times abstract) imprints.

In her exhibition, Deball opens up a physical space of association and connectivity that allows visitors to understand deep time or the scale of evolutionary processes outside of human existence, outside of our own accelerated presence. With the organic spiral shape, with the indication of time (the oldest fossils hang lower, the ones closer to humans in time hang higher) and although different in setting, this evolutionary tree also brings associations back to the optically and socially engaging theatrical or painterly display form.

Text: Solvej Helweg Ovesen

Forbidden Symmetries

Finally, we have the honor of launching a public work by Mariana Castillo Deball at Rathausvorplatz (opposite Leopold Platz), »Forbidden Symmetries«, 2016. Prior to this exhibition, Deball has realized a work situated next to Galerie Wedding as part of the new paving of the nearby Plaza. It consists of paving stones in a circular pattern growing from the middle, a Penrose Parquet pattern, with tiles showing the artists' organic engravings. The Penrose Parquet is a pattern that renders self-repeating impossible. It grows like a flower from the middle and out. The engraving on the stones is hand drawn and casted in concrete and the whole stone 3 D printed. "Forbidden Symmetries" discards the traditional northern European functional paving and creates a deviating mark, maybe leaving an imprint that lives beyond us?

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[9] Michel Foucault, The Order of Things: An Archaeology of the Human Sciences, Vintage Books, New York, 1994 (first published in English in 1971 by Pantheon Books and in French in 1966). Available via: http://www.naturalthinker.net/trl/texts/Foucault,Michel/Foucault,%20Michel%20-%20The%20Order%20of%20Things%20-%20An%20Archaeology%20of%20the%20Human%20Sciences.pdf, p. 130 (Retrieved 6.9.2017).