# Digital Wood

by Annika Frye

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This project is an investigation of the materials of the forest by using digital modes of representation. It seeks to visualize, reproduce and preserve structures and materials from the primeval forest of Kočevje by scanning them and re-translating them to materiality by 3D-printing. Because of its interchangeability, the technique of 3D-scanning is often used to create digital archives of archeological artifacts.

As the objects of the forest quickly decay, this archaeologic method captures the ephemeral quality of the objects and their unique, bionic shape which cannot be produced by digital design. By connecting the two different entities – the materials from the forest and the digital representation techniques – a new materiality between digital and analogue emerges.
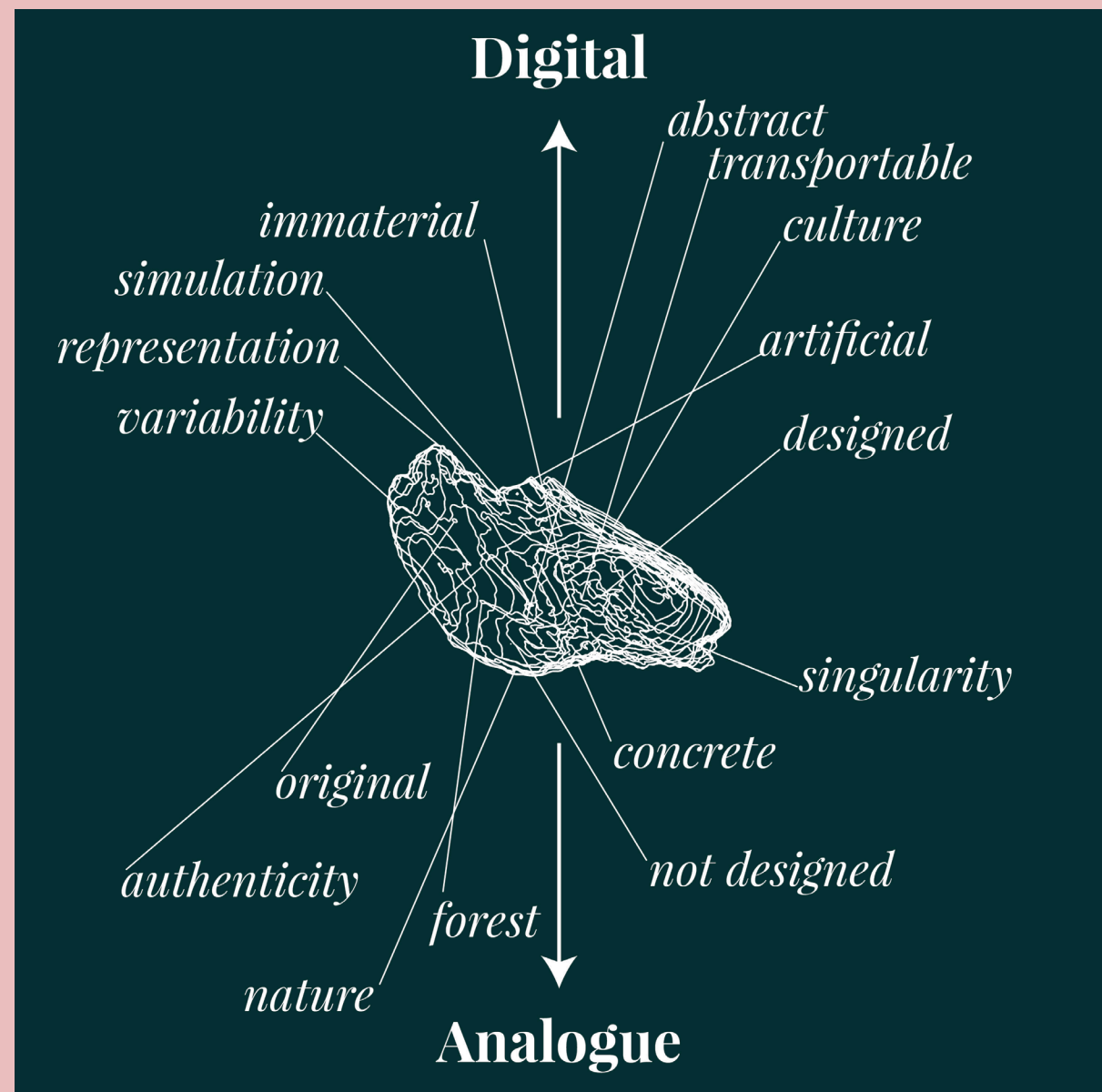
The project starts with a dualism of digital and analogue. The forest contains materials and artifacts we would relate to as singular, as organic, as ephemeral, and – most importantly – as natural. The forest is understood as something »original« and as something that is »not designed«. Digital modes of representation, in contrast, are understood as immaterial, artificial and mutable. They are »culture«. Regarding this connection of the two worlds (the forest and the representation) I refer to a text by Bruno Latour in his book »Pandora's Hope« (Latour 1999: Circulating Reference. Sampling the Soil in the Amazon Forest). Latour describes a group of forest researchers who investigate the soil of the rainforest of Boa Vista by using a number of scientific instruments and techniques. They transform the soil and its heterogeneous materiality into transportable and – considering the singularity and the diversity of the rainforest – extremely abstract representations and diagrams to be published in a scientific journal. Although the diagrams describing the forest have transformed and designed it, they still refer to the original forest.

In a similar way, my digital transformation process simplifies the objects from mature and makes them transportable, but also mutable. Nevertheless, the scan has a material quality on its own. All the objects I scanned (a stone, a mushroom, a piece of wood and a piece of bark) consist of different materials and belog to different species, and are transformed into polygon grids and into a new materiality. When the digital simulation is combined with the real and random shapes deriving from the forest of Kočevje, a new material quality can be produced that lies in between the natural and the artificial: First, the real objects are captured and stored. Their unique shape is being recorded by using the 3D-scanner. Then, the process of scanning alters the object by recording only its outer shape and by transferring it into digital data.

1 — How can the formal and material qualities of the forest be transferred into an ubiquitous, digital language? How can, on the other hand, digitality be reconnected back to materiality?
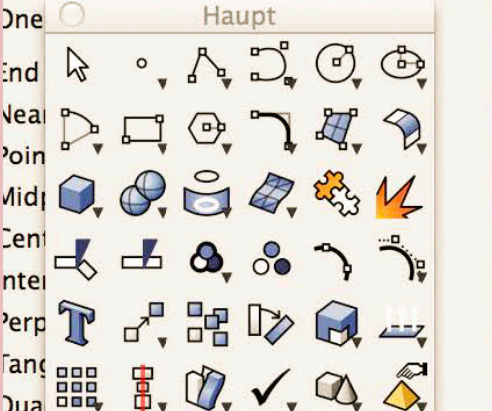
2 — more on: www.annikafrye.de

3 — The project's perspective on the forest and its materials and shapes is similar to contemporary methods of archeology. Here, 3D-scanning techniques are used to preserve precious archaeologic artifacts. By 3D-scanning, the unique quality of the archaeologic shall be preserved and made transportable. But even though 3D-Scanning tries to be as »realistic« as possible, a 3d-scan will always transform the object into a different, digital materiality. As a second step, the pieces were re-transferred into materiality by using a 3D-printing technique.

Grid_visualization_forest_floor.3dm — Bearbeitet

Grid Snap   Ortho   Planar   SmartTrack   Gumball   History   Standard

Perspektive | Drauf | Front | Rechts

Drauf

Name
Standard

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Persistent
One
End
Near
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nter
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Tang
Qua
Knot
Vertex
On curve
On surface
On polysurface

Haupt

Command: _Backg
Command: _Backg
1 Polygonnetz der A
Command: _Drag
1 Polygonnetz der A
Command: _Rotate
Command: _Drag
Command: _Drag
1 Polygonnetz der A
Command: '_Zoom
Command: _Rotate
1 Polygonnetz der A
Command: _Delete
1 Polygonnetz der A
Command: _Rotate
1 Polygonnetz der A
Command: _Scale
Command: _Drag
Command: _Docum
Seite zum Anzeiger
Linetypes Mesh Un
_Render

e zum Anzeigen (Dimensions Grid Hatch Linetypes Mesh Units WebBrowser Render) _Render   CPlane   X: 84.753   Y: 6.538   Z: 0.00

"

I thought I was deep in the forest, but [...] we are in a laboratory, albeit a minimalist one, traced by the grid of coordinates.

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Bruno Latour: Pandora's Hope. Essays on the Reality of Science Studies, p. 32

3D-printed copy of a piece of decaying wood from the forest of Kočevje, Slovenia and the original part.