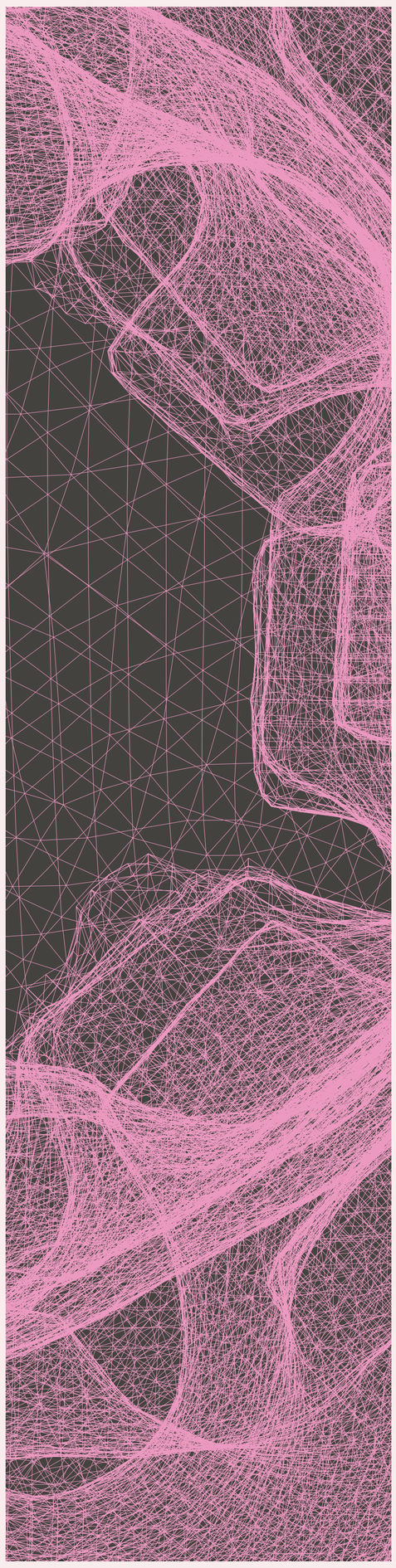
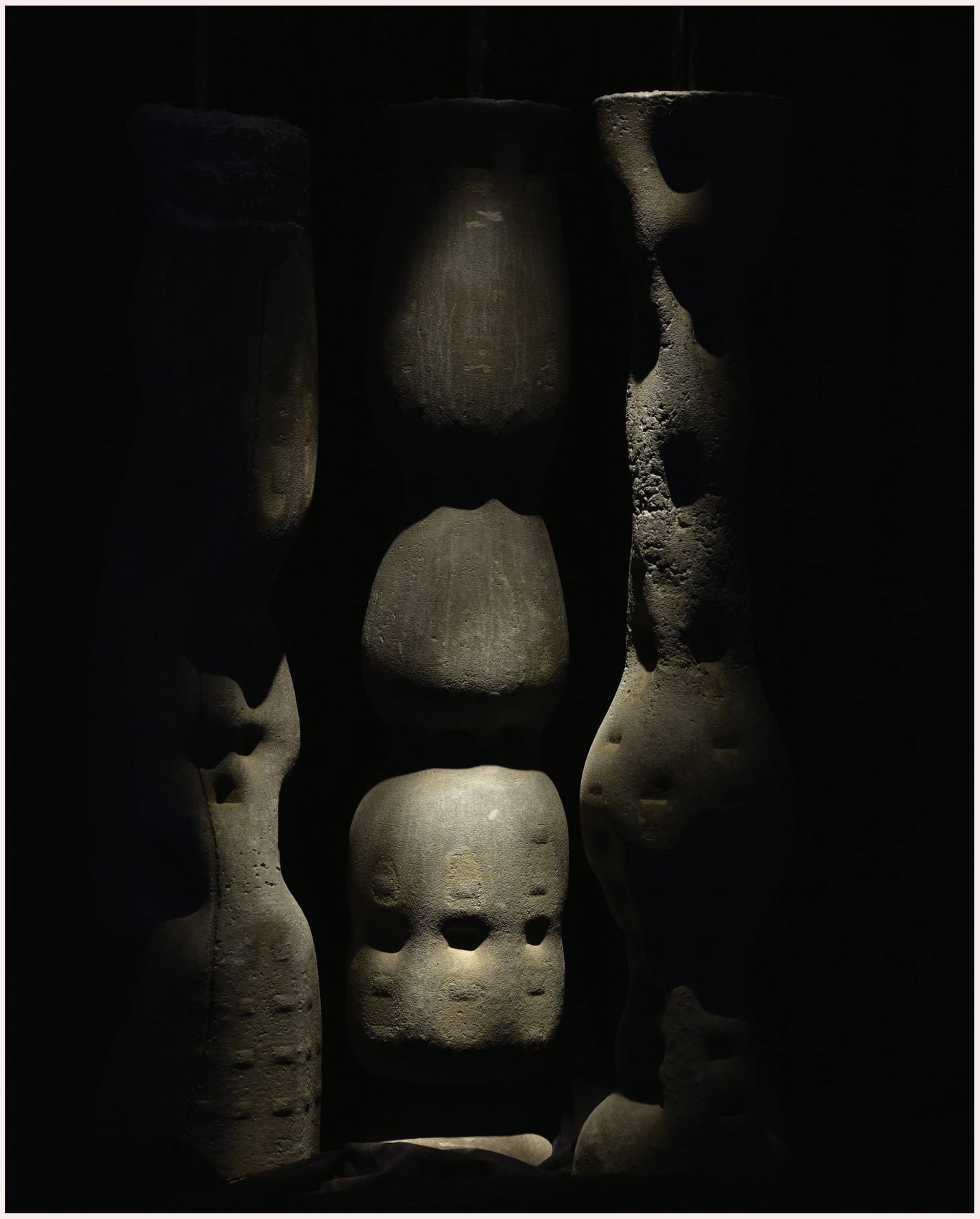
# CONCRETE COLUMN

**The continuing development of fabric formwork as an alternative to more traditional and rigid formworks such as timber or steel, opens up many possibilities in concrete design and construction. This, in conjunction with the evolution of parametric architecture and programmes such as rhino or grasshopper, has unleashed endless potential to create double-curved structures and complex organic forms. This research aims to explore how both fabric formwork and parametric design can create a series of biomorphic columns, each resulting in a unique outcome through the use of a standardised mould. This mould shall be designed to be easily constructed and facilitate interaction in the process of making. Our aim is to create a formwork that allows anyone to get involved in tactile concrete construction and create personal forms with relative ease.**

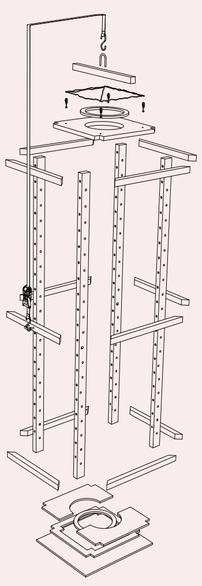




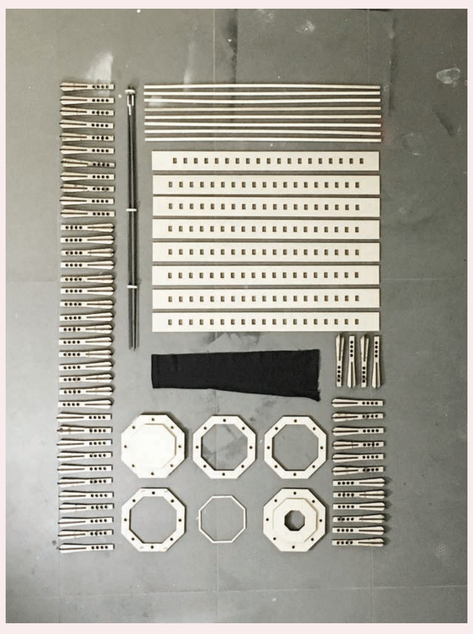
**Addressing tactility, interaction is two-fold. The mould itself encourages people to get hands on, adjusting the formwork to create evocative self-determined forms. Further this is projected in each finished piece. Touchable surfaces, visual curves and inherent material meaning assemble to bolster tacit qualities that manifest through each of the senses. Environment further alters each interaction.**

Concept model

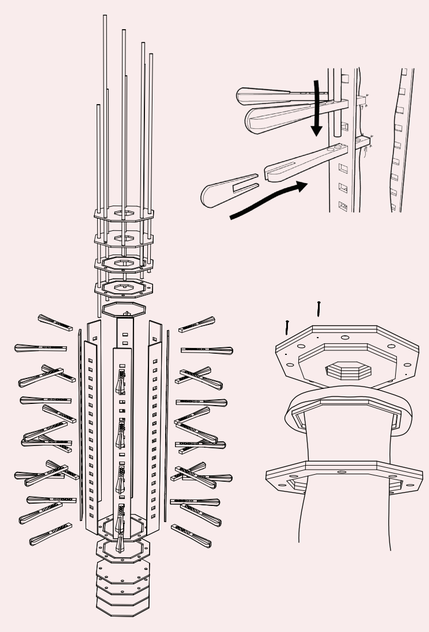
Parametric studies



Dynamic mould



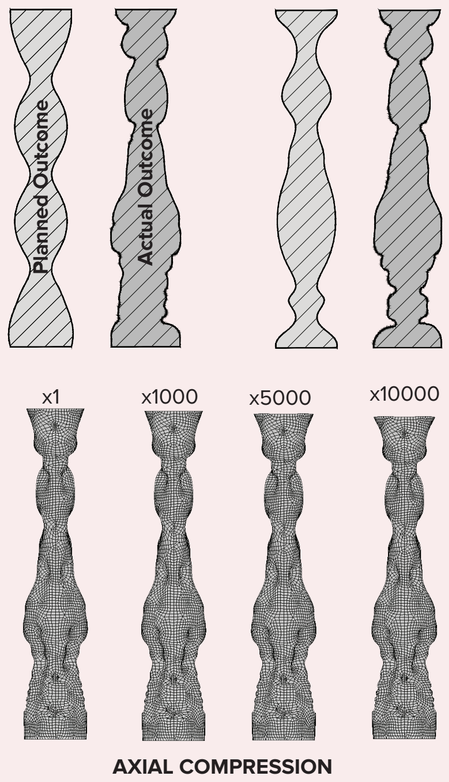
Kit of parts



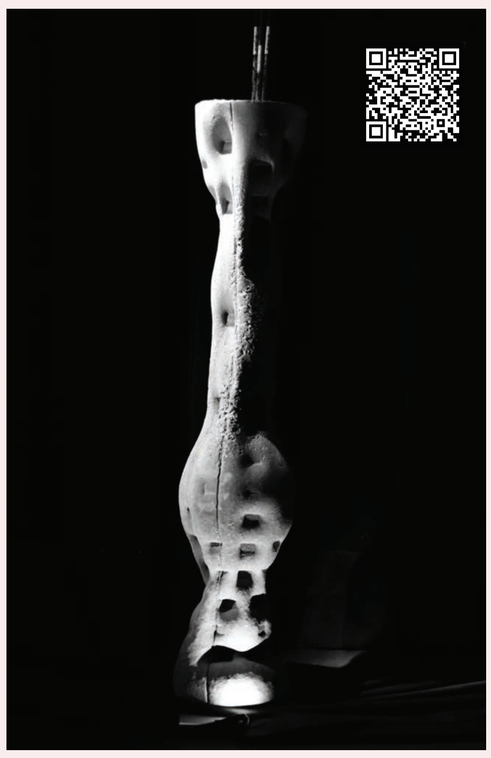
Parametric mould has a series of pegs, each with four holes, this allows the user to precisely deform the fabric with a repeatable pattern. Dowels lock through providing vertical support whilst holding the pegs in place during the casting process.

Exhibition

# #concretecolumn




AXIAL COMPRESSION

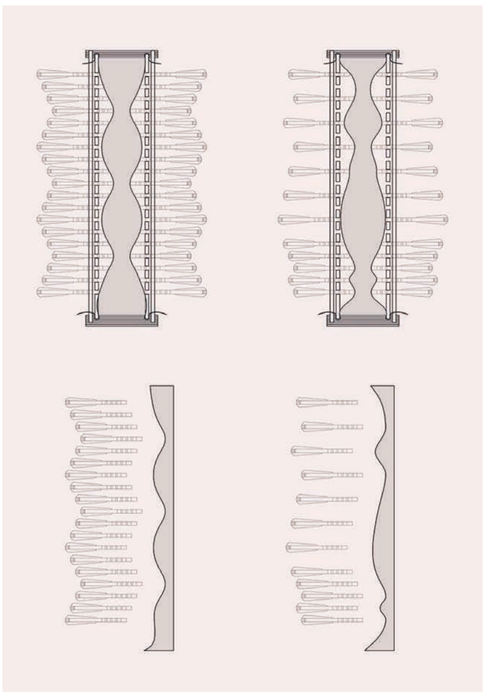


ASTROID

COMPRESSION

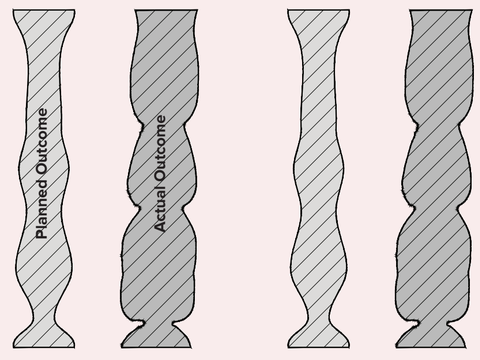


BENDING



**FORM FOLLOWS FORCE**

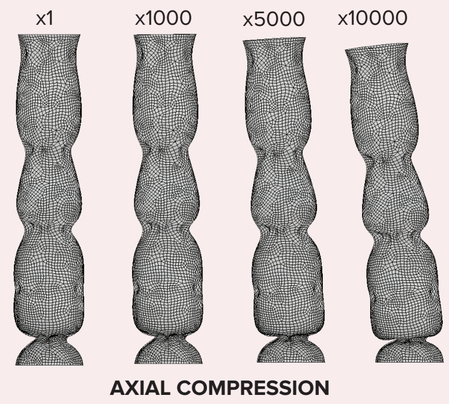
**The column forms produced are biological. Technical and ethical development has resulted in a human/e architectonic that challenges the interplay of force and form. Countless outcomes make the project infinite.**




SECTION AA



SECTION BB

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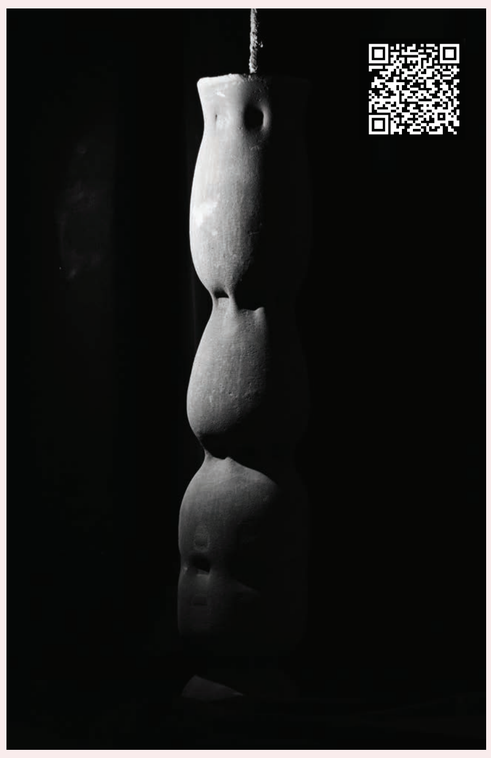
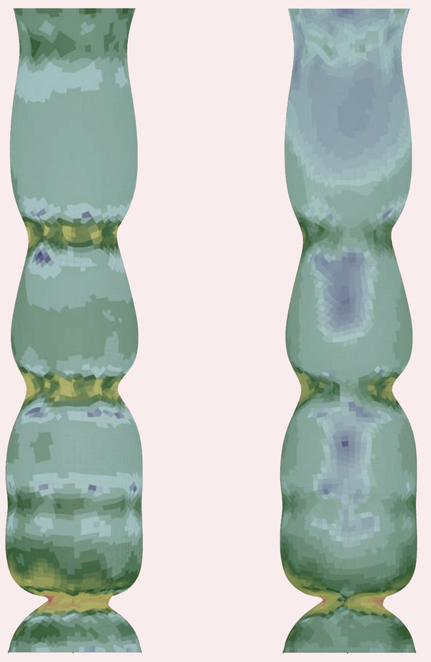


ELLIPTIC



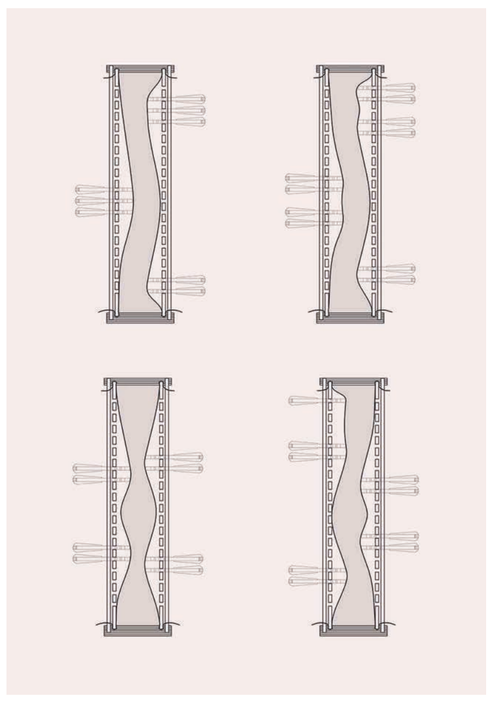
COMPRESSION

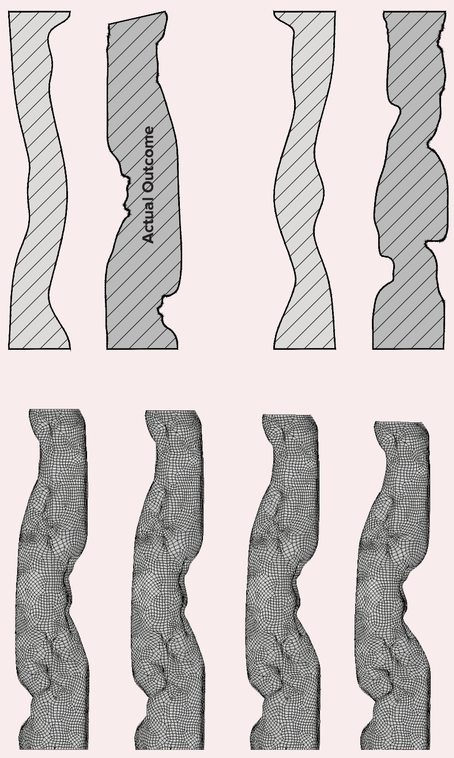


BENDING

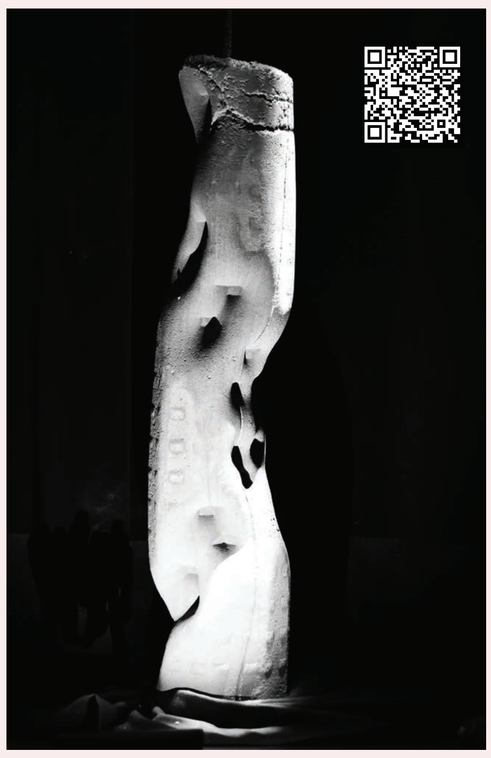
**MAPPING SURFACE**

**Analogue and digital techniques coalesce to counteract the assumption that free forms are inherently unmappable and unpredictable. Our process scans each outcome to compare and evaluate against anticipated form.**

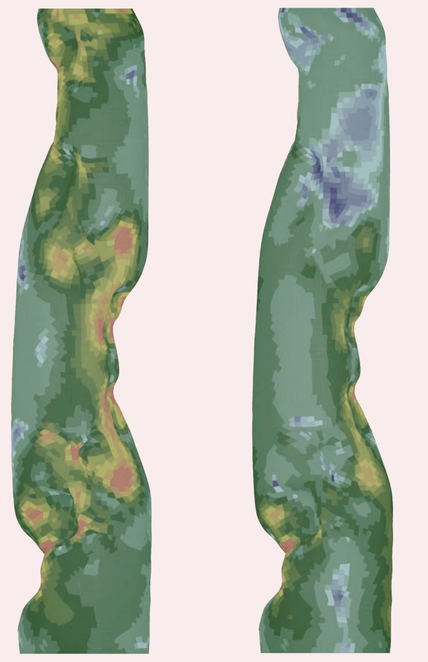





AXIAL COMPRESSION



BEZIER



COMPRESSION



BENDING