MAS.834
Tangible Interfaces

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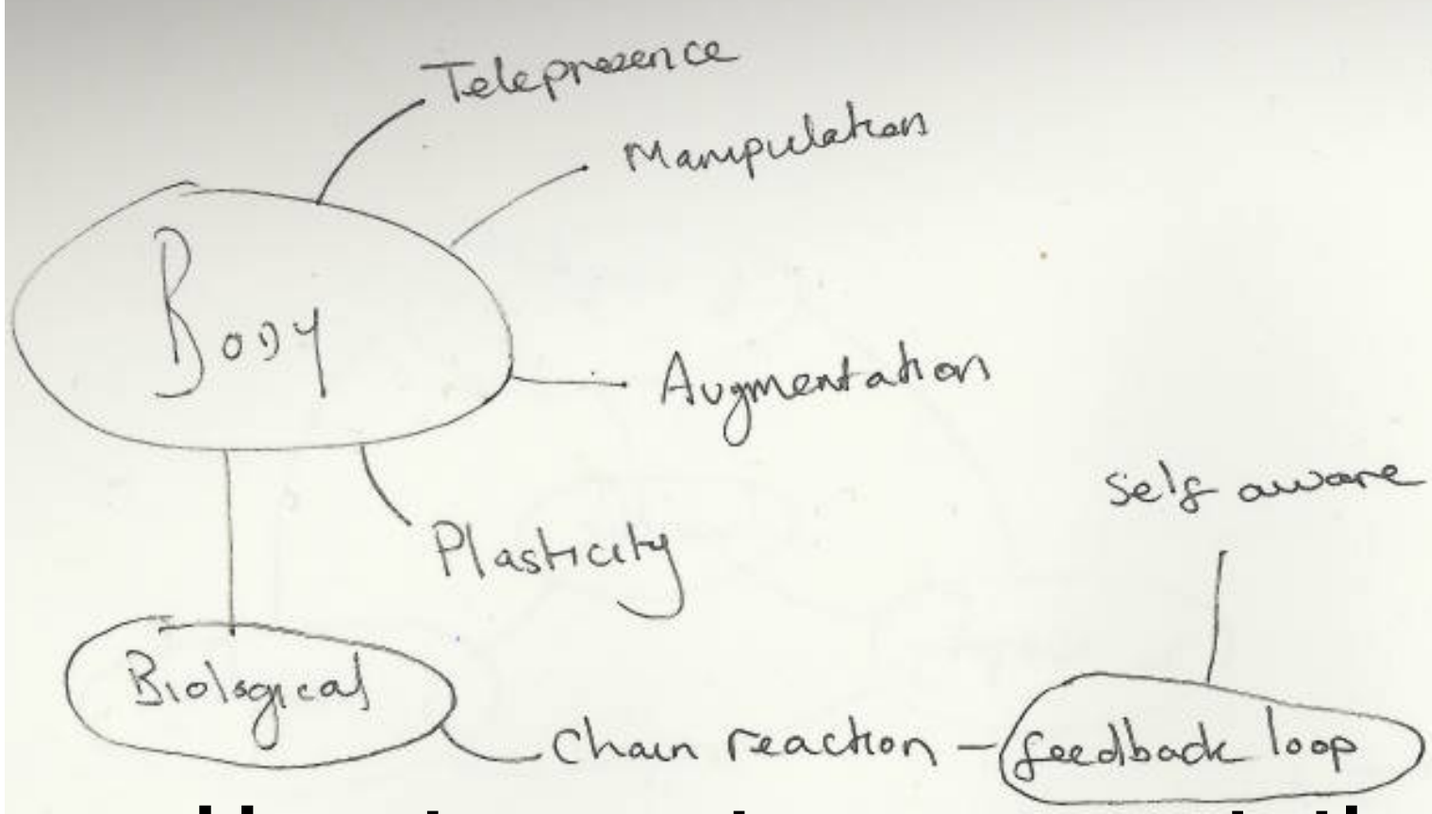
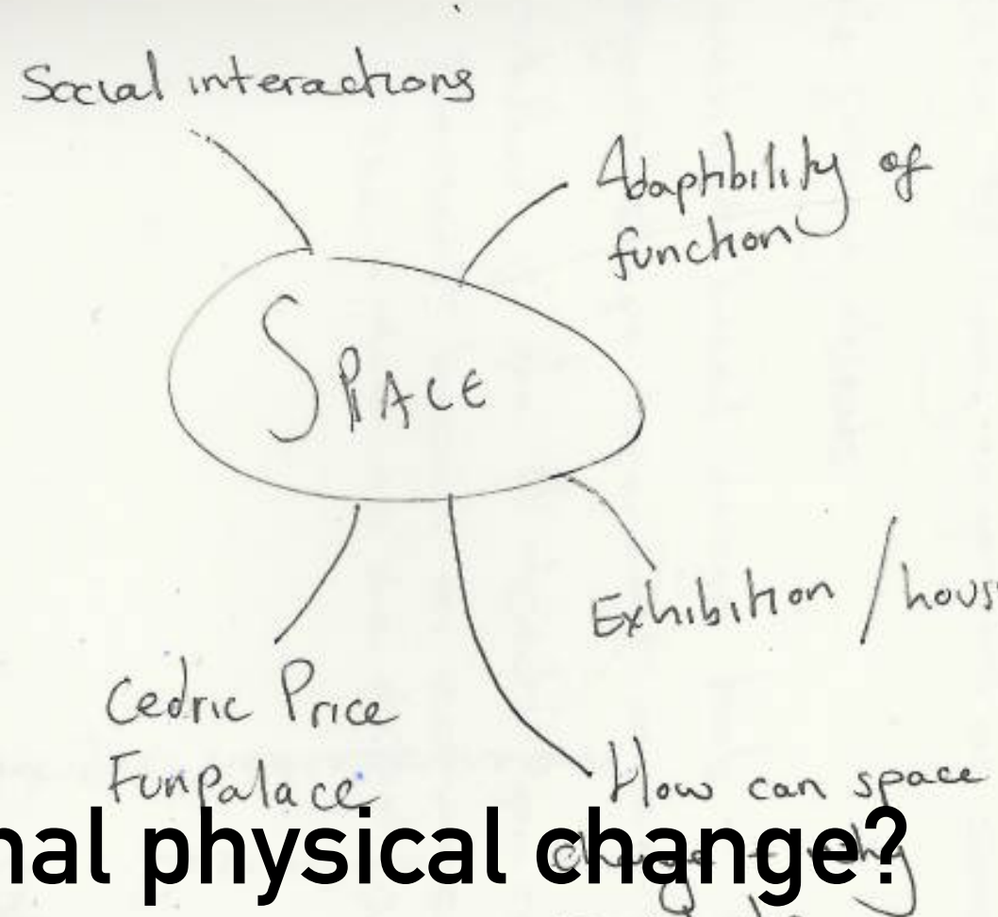
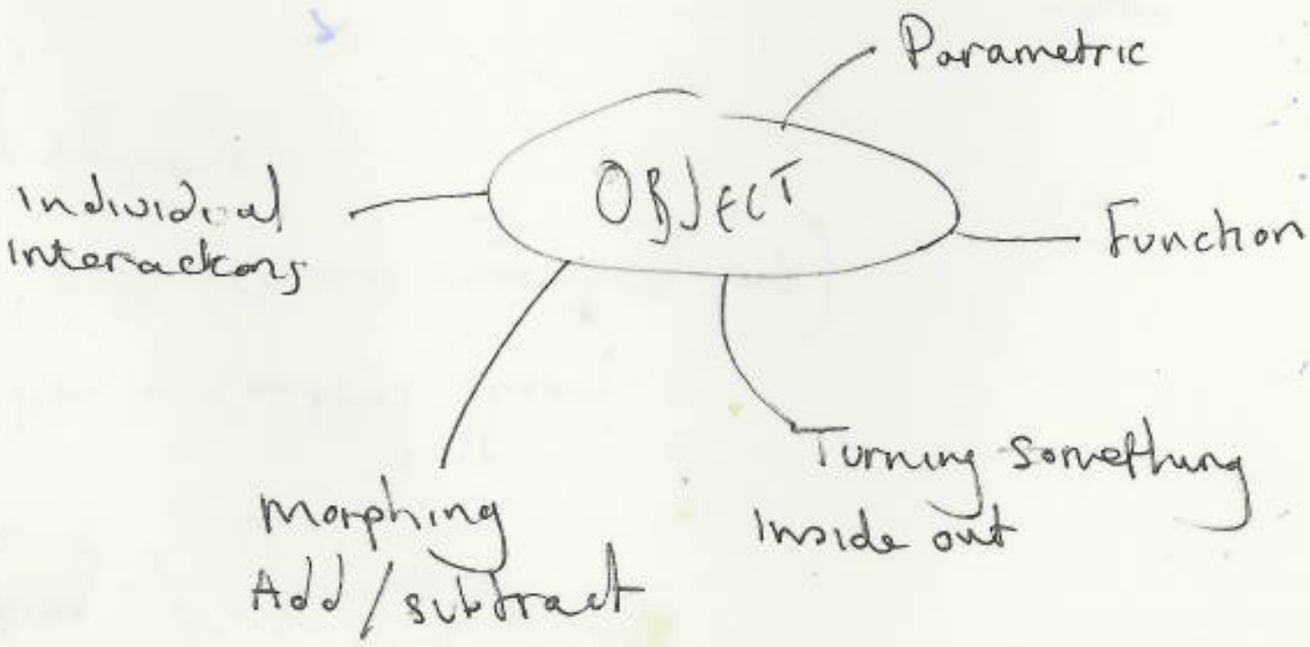




How to create a computational physical change?

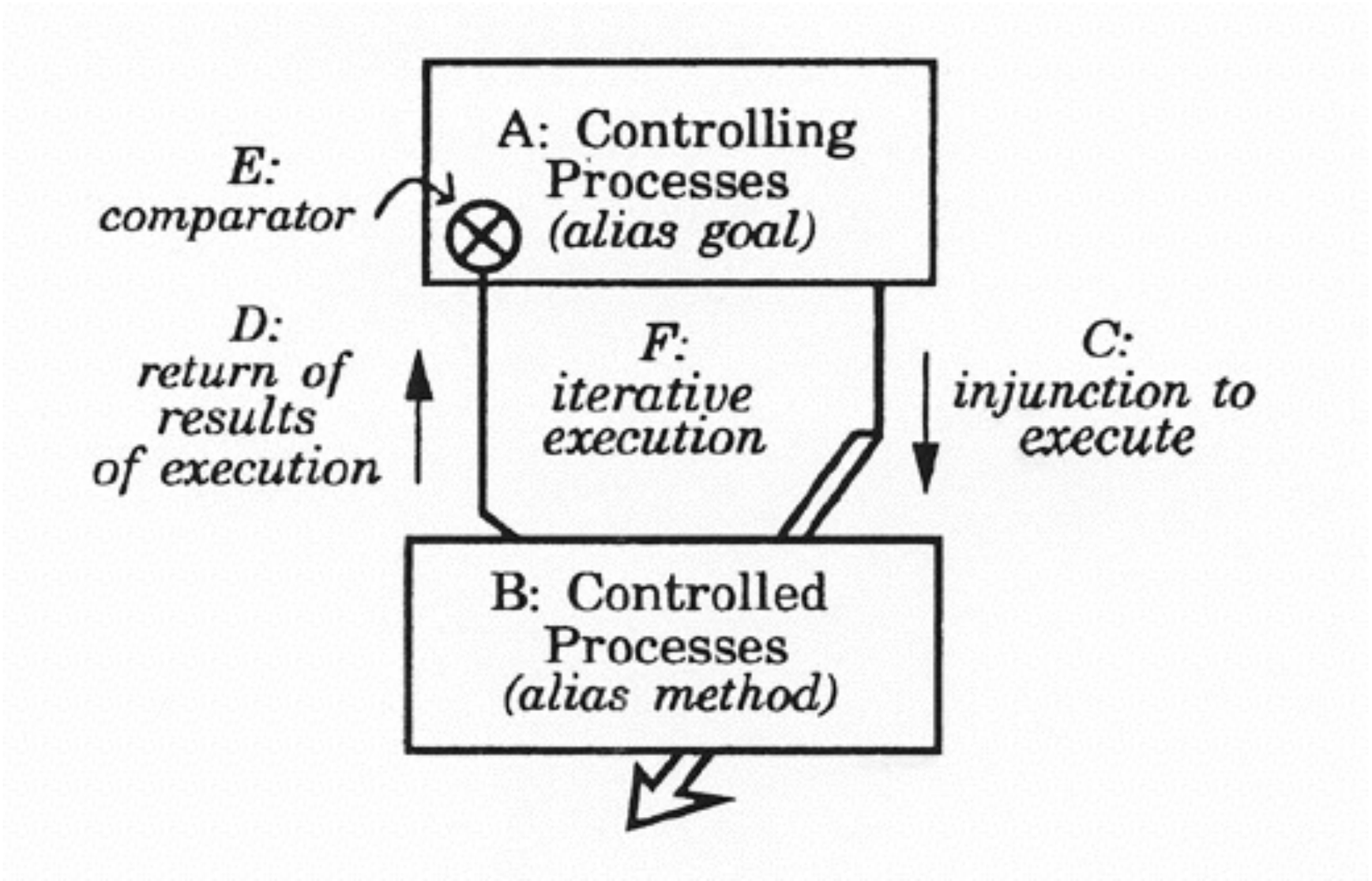


Key Points:

- Human interaction as opposed to robot autonomy
- Bi-directional ‘conversation’ with algorithmic transformations
- Feedback loop from materials, maintaining control of interaction
- Nature inspired physical change
- Mid-point between autonomous computational change, and direct human input

Proposal 1.

I/O Bits

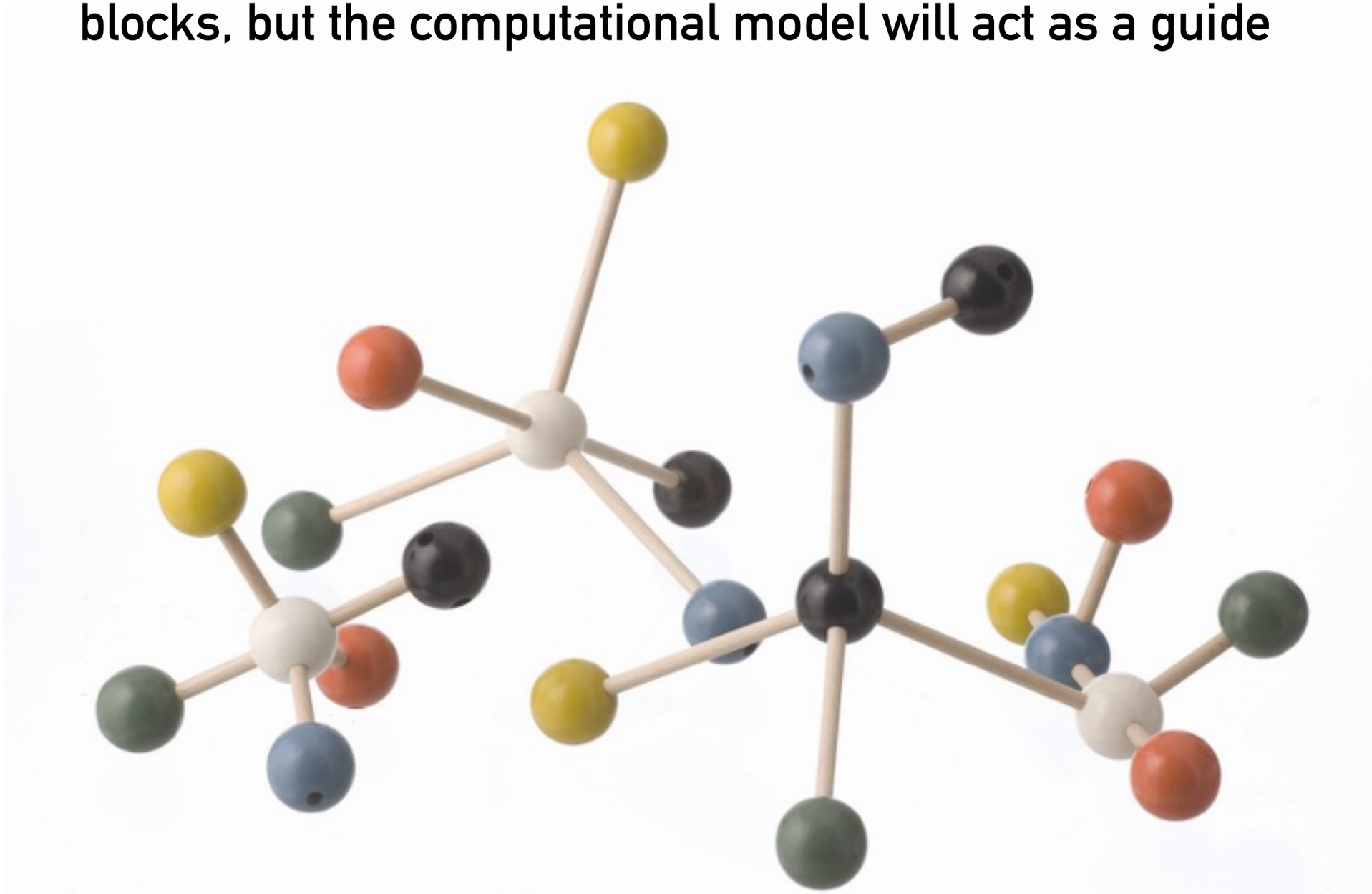


Conversation Theory - Gordon Pask

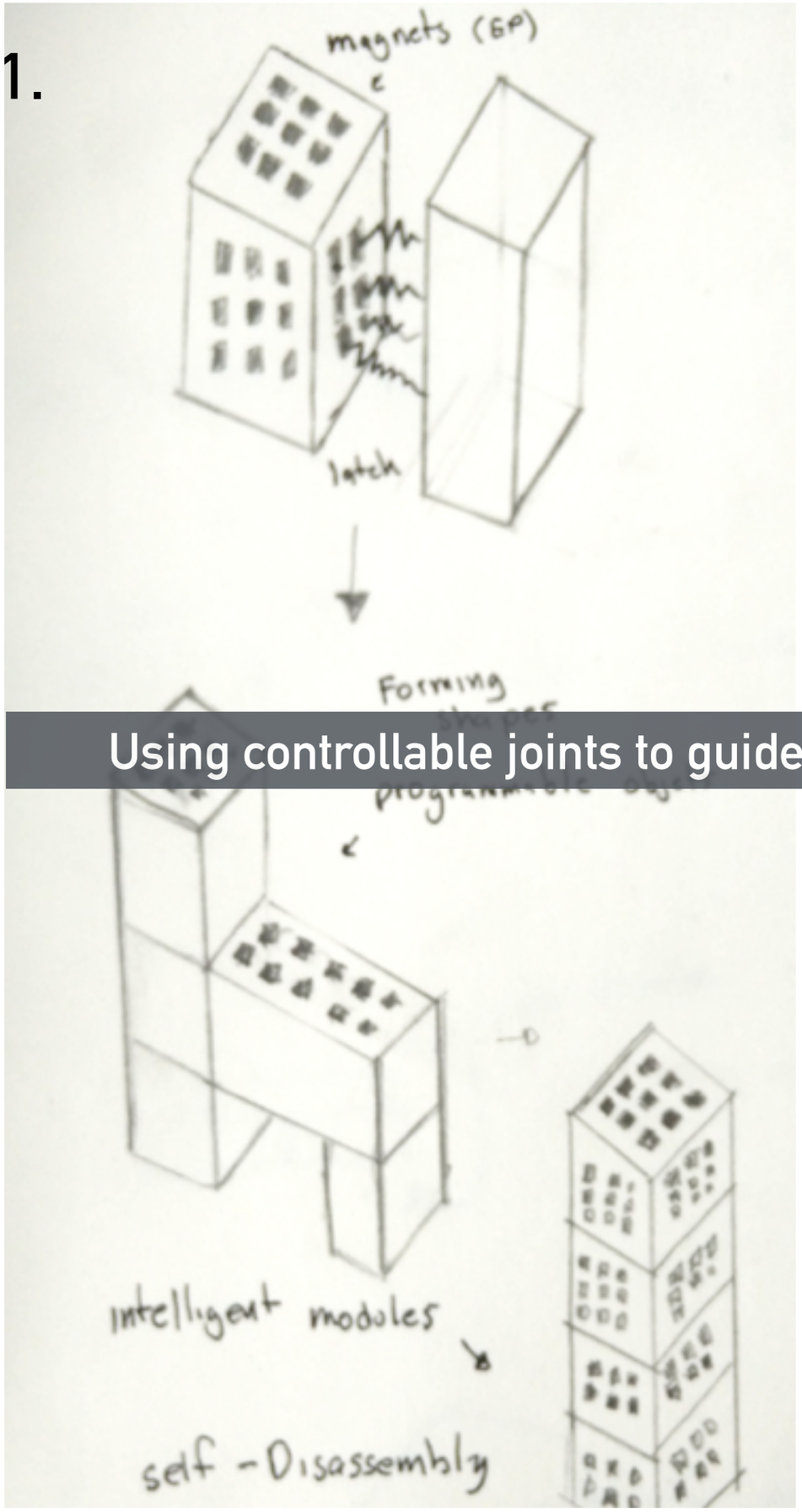
Bi-directional conversation between entities

Idea 1.

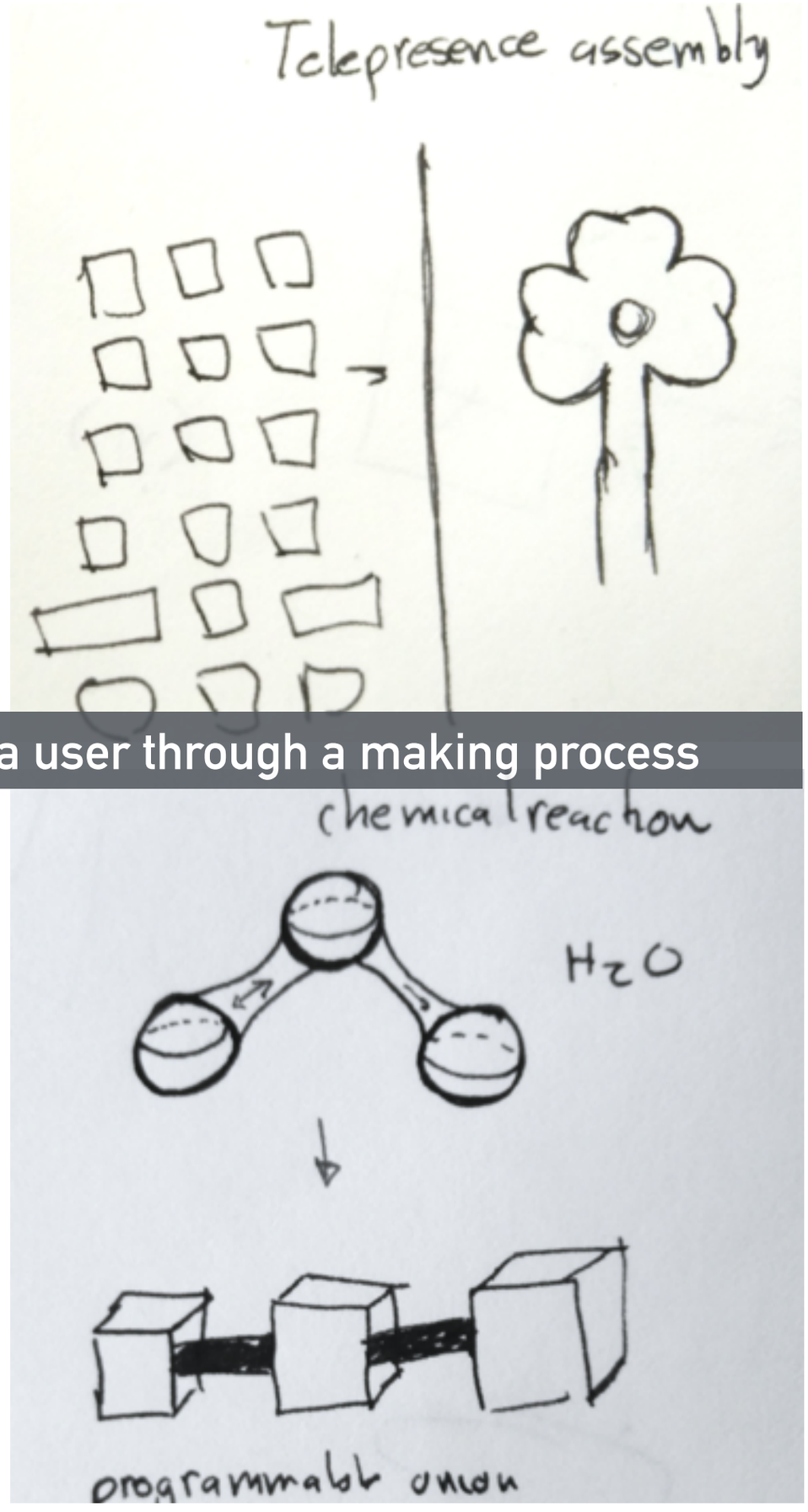
Inspired by atom structures:
Building blocks with programmable on/off magnets to create a dialog between the user and the material.
The feedback loop between the person and the objects will give the user autonomy over the construction of the blocks, but the computational model will act as a guide



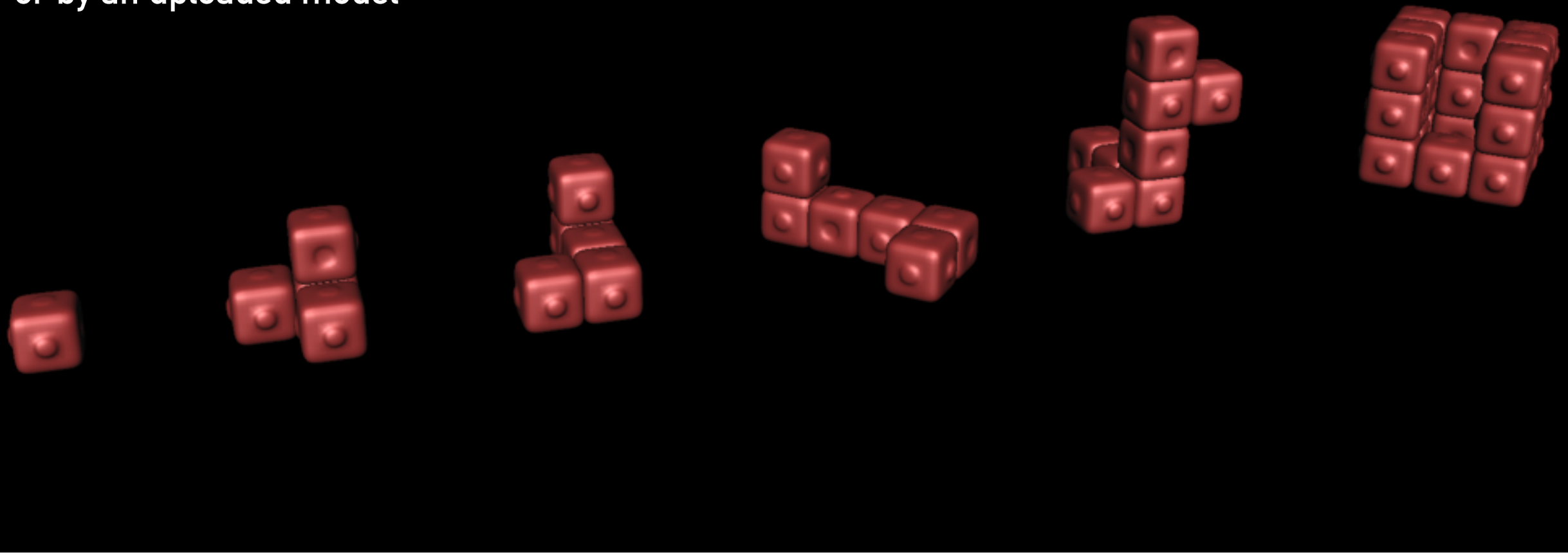
Idea 1.



Using controllable joints to guide a user through a making process



- Computational design + human input
- Predefined shape is uploaded to block array
- Users piece together structures, guided by the blocks' magnetism
- Outputted shape is determined either algorithmically, by telepresence (distant play) or by an uploaded model



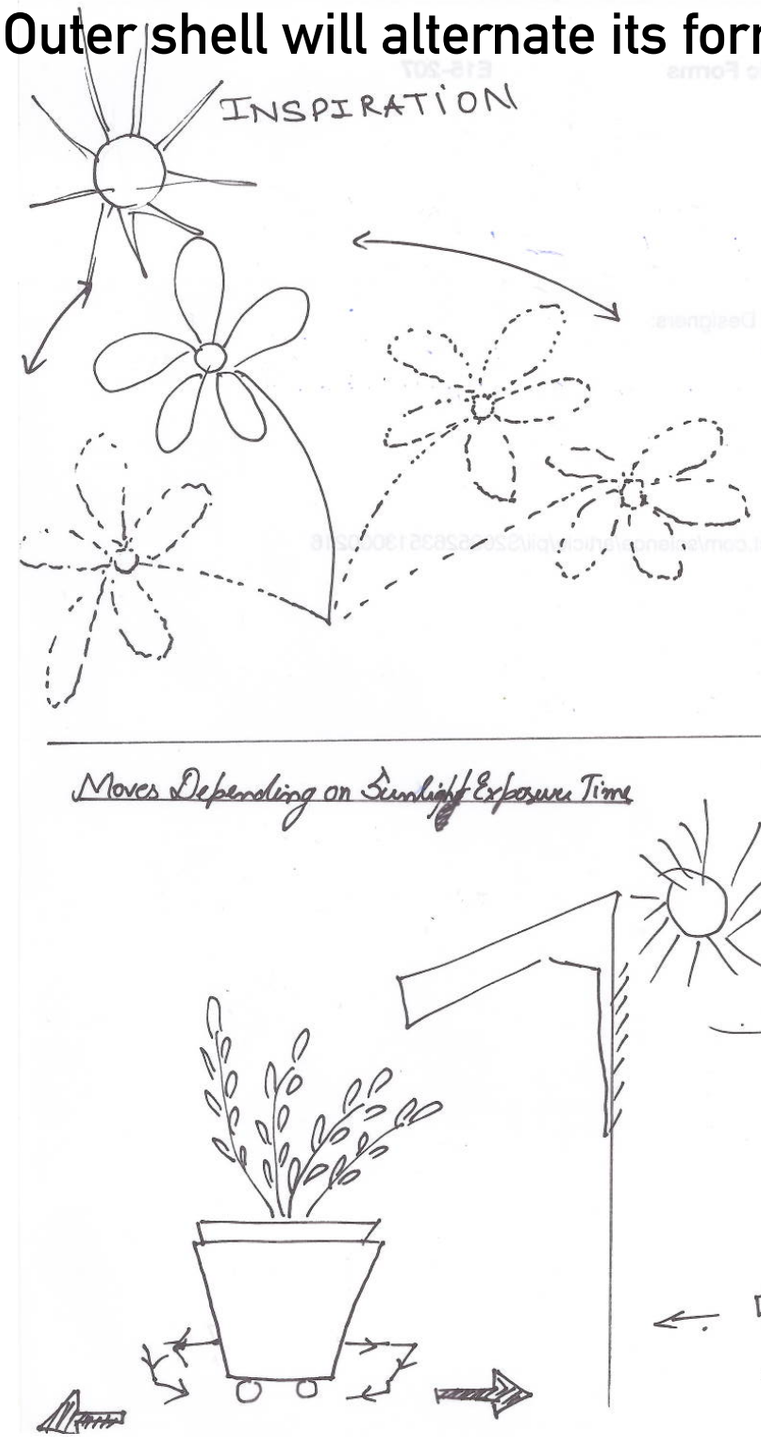
Proposal 2.

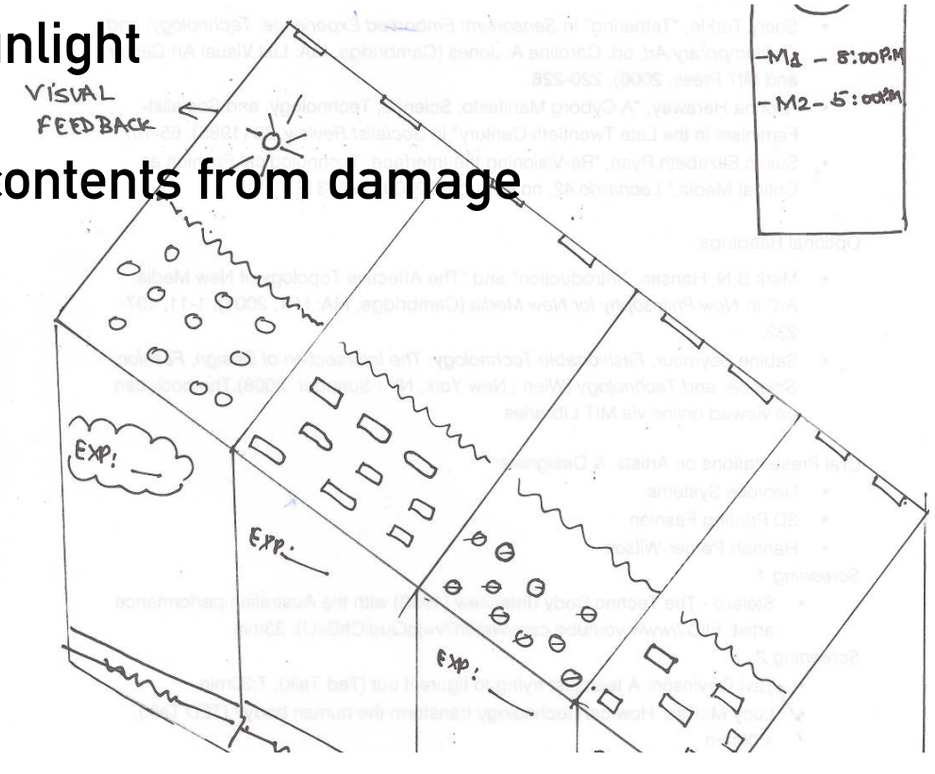
Digital Tropism

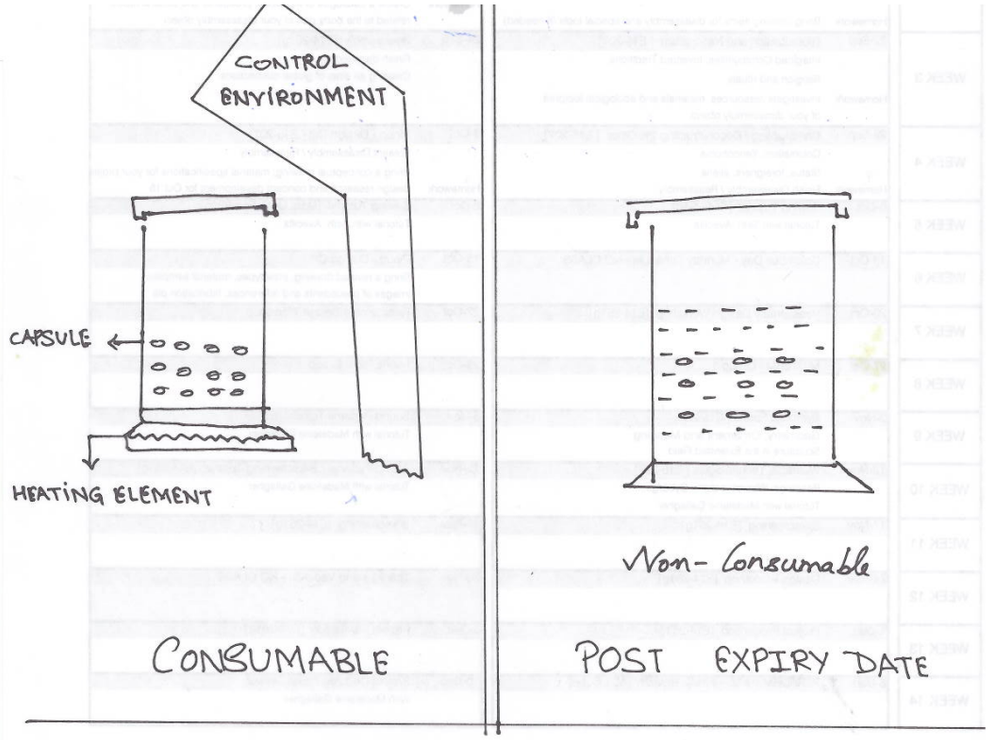
Nature inspired exoskeletons to apply sentient behaviors to domestic objects:
e.g. how flowers turn their heads towards the sun

Idea 1.

Attachments to items that should kept out of direct sunlight
e.g. medicine bottles / pill packets
Outer shell will alternate its form to move or protect contents from damage

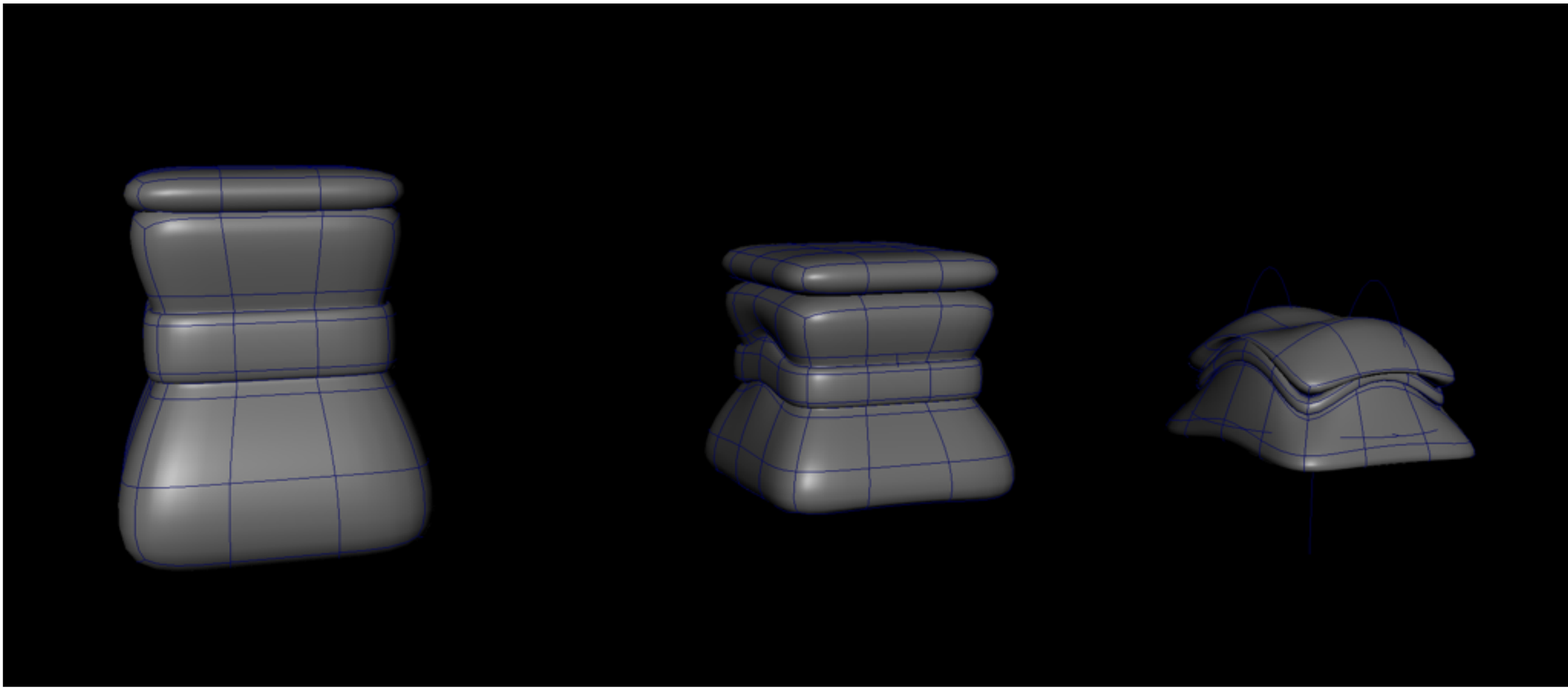






Idea 2.

Self destructing packaging - dissolves or morphs when out of date



Thank you!