

## Contextual Studies: Material Culture

*Research and critically assess only one or more of the following: critical design, speculative design, design fiction, conceptual design, radical design, social fiction, design for debate, design probes or ludic design.*

The combination of Design thinking, design fiction, and storytelling, entails the development of Speculative Design; this method allows us to ideate and materialise concepts that aid the progression of future services, products, and experiences. These designs are built on a foundation of anti-commercialism. That is to say that profit and marketability are not the primary goals in Speculative Design, but instead we are looking to spark discussion and debate, and to raise awareness (J Auger, 2013). We aim to offer a reality check to those that are actively contributing towards the downfall of our planet. Society, currently, are slaves to capitalist and commercialist methodologies; profit determines one's success and there is very little regard for the effect our collective selfishness is having on our planet. The outcomes produced from Speculative Design should underline the steps that we can take towards a preferred protopian future. While utopia is arguably the end goal, we must work within the realms of realism at this current moment to avoid overwhelming ourselves (Manzini, E).

Over the last few centuries, as society and technology have progressed at impressive rates, it is undeniable that humans have predominantly invested in ourselves. Our intelligence and our innovation have advanced, and due to this, we have no excuse to ignore the ramifications of our actions. Our continual development is certainly something to be proud of in one sense, but we can simultaneously hold this pride alongside our overbearing guilt as we bear witness to exactly how our technological evolution has harmed the Earth. Speculative Design offers us the opportunity to discuss environment-centred design. This consists of exploring and evaluating the relationship and interactions between humanity, technology and nature, while also developing ideas for creations that fall beyond the confines of human-centred design (D. Lutz, 2020).

Speculative Design should not be misinterpreted as an attempt at predicting the future or promising solutions to our problems. Instead, it should be viewed as a way of reframing our current perspective on the future. It can reveal countless potential futures, alternatives to the one that we may envision as individuals, and unseen trajectories of environmental, technological, cultural, and socio-economic trends (D. Lutz, 2020). This is achieved by taking more of an intuitive approach, as opposed to one that is data-oriented, leading the process beyond realistic commercial expectations.

If we were to consider each potential future, mapping out all possibilities no matter how outrageous, created by the choices that we are making today, how would we create the most optimal path forward without testing each possibility? This is the purpose of Speculative Design. We can use the process to investigate these infinite possibilities and hopefully navigate the most beneficial path towards the future.

Key to the success of a speculative design project is the management of the speculation, it cannot wonder too far into the future. Those presented with the speculated design will not be able to relate to implausible concepts or the likes of alien technology, resulting in a lack of interest and connection. In effect, a design speculation requires a bridge to exist between the audience's perception of their world and the fictional element of the concept.

The notion that Speculative Design can be used as a means of guiding us into the future consequently causes designers to take this as a challenge. They become inspired to create new, exciting materials, processes and ideas that push beyond the limits that we conceive as ordinary and possible. Evidence of this can be found in a project by Meydan Levy, which has seen him successfully

develop 4D printed fruits. These are created from cellulose skins that are filled with nutrient-rich liquids and come in a variety of colours and flavours (J. Hahn, 2019). The development of these artificial fruits aided his journey towards finding ways to 'feed the ever-growing human population and offer a more appealing alternative to using food supplements to improve nutrition.' (M. Levy, 2019).



(Neo Fruits by Meydan Levy, 2019)

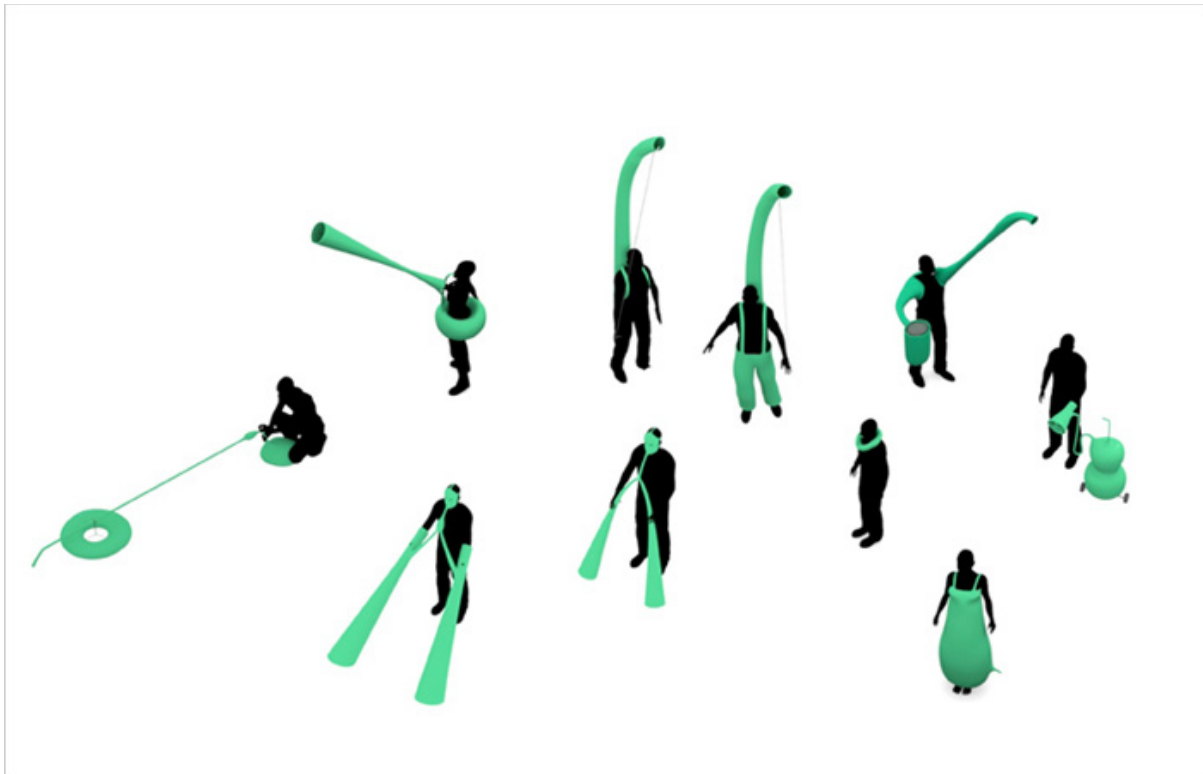
Levy's artificial fruit as an example of Speculative Design should be understood as something practical and beneficial that could be presented both to companies and to the general public. Through his artificial fruits creation, Levy has been able to develop and present a concept that uses very technologically advanced processes and materials, though remains somewhat tame in its presentation, allowing it to retain a familiarity that then allows a level of probability.

Another example of speculative design that looks to solve the future issues of feeding an overpopulated earth is from the work of Dunne and Raby. The UN states we need to produce 70% more food over the next 40 years to accommodate this overpopulation - a situation which is unsustainable.

Dunne & Raby's 2009 design 'Foragers' was their answer to this; they were looking at the evolutionary process, molecular technologies and the way in which humans can take control of and utilise it. They agreed with the assumption that the duo of government and industry would be unable to solve the problem, and concluded that groups of people would need to use the resources available and prior knowledge, to build their own solutions. (Dunne & Raby, 2009).

The concept is based on extracting nutrition from typically non-human foods using a combination of synthetic biology and new digestive devices. These take inspiration from the digestive systems of other mammals, fish, birds and insects. 'Foragers' create DIY devices so that they can implement this synthetic biology to create stomach bacterias, as well as creating electronic and mechanical devices to maximise the nutritional value that they can

extract from the natural environment- nutritional value that commercially available foods of the future will likely lack.



(Foragers, Dunne & Raby, 2009)

Unlike the work of Levy who looks to new futuristic processes and material, focusing on the advancement of technological discoveries that lie in our foreseeable future, Dunne & Raby used 'Foragers' as a way to create Speculative Design by observing what already exists in the world. This included them looking back at the Earth's evolutionary past, taking what other animals have and redesigning it for usage by humans in a future, protopian society.

I feel that the solution proposed by Dunne & Raby to the forthcoming future food shortage has the most significance to the Earth as a whole due to the fact that its key element is looking at what the Earth already has and re-implementing them in new ways to develop as a design rather than the concept of Neo Fruits by Levy that has a stronger focus on developing both new production techniques and materials which in the long term will most likely have no significant impact on the environmental state of the world in a protopian society. One current designer who does not work on speculative design but rather furniture design.

Fernando Laposse, a Mexican designer, created a fur cabinet completely by hand as an example of recycling natural materials into practical and aesthetically unique designs. To make the fur, he used excess Agave leaves, leftover from the process of making mescal. From the extraction of the fibres to the knotting of them, it should be highlighted that his method included simply his own two hands; he had no aid from technology, tools or equipment. Laposse emphasises that the response to some

of our current environmental turmoil lies within traditional craftsmanship. While it is exciting and also natural to do so, considering our technological development is rapid, it may not be necessary to rely on new technological discoveries; designers would benefit from sometimes shunning the new

and placing their trust in methodologies of the past. Old and near-forgotten traditions can still prove just as beneficial to us now as they did in their prime.



(Agave fur cabinet, F. Laposse)

Taking this view from Fernando where he looks back in the past to find solutions to tackle sustainability on a smaller, more niche area of concern within interior design. I feel his approach to look at more traditional, somewhat forgotten processes, and the use of before unthought of materials can be translated into much larger solutions for the world-wide issue of sustainability and Humans environmental impact. In some ways a backwards speculative design where designers focus primarily on developing and re-designing past methods and materials that can then be taken and used in the speculative design process to have a positive impact on the environment in the future.

Overall, designer are using speculative design to Speculative design is a design method addressing big societal problems and looking towards the future with the help of technological advances that are pushing new materials and processes. I believe that this is essential to solving these issues in the future that will lead us to a protopian society, though I also believe that designers should look back at what we have already developed and in some cases forgotten. Designers such as Fernando Laposse are pushing for the greater use of traditional methods of production which can and should be taken into larger scales from which we can attempt to tackle the issue of reversing our environmental damage.

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