The Electricity Thief

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Electricity plays a key role in making our everyday lives possible. Inferring from the ever increasing number of digital devices and appliances in our homes, we think that electricity will remain a crucial resource in the decades to come. We hope for a time when humans can harness and utilise electrical energy in a sustainable and seamless way, and to support this goal, we believe that systems for engaging with electricity as a resource would become an important aspect of our everyday futures. One of the key challenges in this regard is finding ways to overcome the intangibility of electricity- It is invisible, difficult to grasp, somehow instantaneous, and although we experience it through other devices it activates- we can not always recognise its presence.

We therefore set out with the following research question: How can electricity be quantified in a visible, experiential way?

Guided by this question, we explored different ways in which ambient electricity may engage with materials to reveal itself to humans. We envisioned an autonomous electricity-stealing creature as our research artefact that might interact with tiny amounts of static electricity or energy leakages from electrical objects and change its physical form to indicate the 'electrical potential' in a home. The "Electricity thief" would float around the home, rubbing against surfaces and grow in size as it converts ambient electricity into its own kinetic potential. When fully inflated, the Electricity Thief deflates rapidly to propel itself to a new spot, and the process starts anew.

In a research setting, the artefact could be placed in households. Imagine a family in the near future discussing why the Electricity Thief grew so large in the living room – the artefact triggers engagement with the electricity which is always present around us. The artefact could trigger several questions: In what ways do people relate to their electricity use, now and in the future? Is electricity something to be saved, managed, generated, by ourselves or by professionals? What does it mean to have an abundance of electricity in your home, or to be 'power-poor'? What might be the effects of abundant electricity on our health or state of mind? (How) is the Electricity Thief comparable to the kitchen mouse, which also 'lives' off of the little bits of waste often too small for us to notice?

On a more practical level, we hypothesized that the Electricity Thief could trigger householders to be more conscious about energy consumption, and standby consumption in particular. Its size (or movement) could reflect a particular metric of 'stored energy' to make the device's actions more easy to interpret.

Working with new materials forced us to consider material limitations as well as material opportunities early on. Through the 'dialogue' we had with our artefact we reflected on the omnipresence of electricity in our living environment and considered what the world might look like from the perspective of an autonomous, electricity loving creature.

Based on our experience, here are a few tips for exploring every futures through designing a research artefact:

Do's

- Move back and forth from making to ideation- use the materials and objects at hand as a starting point and shape an idea around it. **I**n the limited time, it is better to start out with an unpolished idea, gradually improving it as you work with the materials on hand.
- Listen to how others interpret your concept or artefact. In our case, the 'narrative' of the Electricity Thief expanded and improved as passers-by shared what triggered them.

Don'ts

- Don't underestimate the importance of how you intend to connect / attach materials; this is as important to the eventual artefact as the base materials you choose to work with.
- Don't feel limited by your level of skill in making things; let your imagination lead, and ask for advice from experienced makers present in the lab.

Photo’s documenting the process: