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Fiore, Eleonora

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Relating Systems Thinking and Design
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Investigating new scenarios in food preservation

Eleonora Fiore

University of Parma

Creating products has great responsibility involved. Papanek (1984), Thackara (2005), and Manzini (2006) warned about the risks of the design activity, as well as the consequences of bringing products to the world (Fiore, 2018). Products create consequences: direct and indirect; intended and unintended.

'Systemic design at the product scale is a dialogue between facts and concerns: navigation of multiple overlapping and interconnected systems, most often undertaken with incomplete information, awareness, and understanding'.

With the premises of the related focus' PRODUCTS ARE SYSTEMIC OBJECTS', this workshop intends to investigate new unexplored scenarios regarding food preservation. It treats the topic with a systemic design approach to understand the strengths, possible unintended consequences, rebound effects, and trace the boundaries of new systems. Considering the current 'refrigerator object', i.e., the appliance in charge of food preservation, during the workshop, participants will explore how this is closely linked to many household dynamics, including food waste (O'Neill et al., 2022). It results in a system that can be observed at different levels of detail (Tamborrini and Fiore, 2020). Sometimes objects designed with a function can lead to the opposite. For example, fridges and freezers, typically designed to preserve food, *'very often operate as coffins of decay that play an active part in carrying discarded food towards the waste stream'* (Evans, 2012, p. 1132). This workshop combines the Systemic Design approach and Alternative Nows as design methods for investigating alternative scenarios such as the distributed refrigerator, the inside/outside refrigerator, the social refrigerator, and the locked refrigerator. The activity is structured as a focus group with researchers, designers, and non-designers that ended with a systemic design sprint on food preservation related to one of the four scenarios presented.

KEYWORDS: systemic design, alternative nows, food preservation, refrigerator, fridge.

RSD TOPIC(S): Cases & Practice, Methods & Methodology

Alternatives to the refrigerator

In the last two centuries, massive changes occurred, and in the last few years, the social and working dynamics and economic conditions are constantly evolving. Many factors undermine the foundations of traditional inhabited models and the related status symbol – a legacy of past generations – implying the need for more flexible models to accommodate these changes. For example, suppose housing models deviate from traditional housing to include other relational dimensions (such as roommates or caregivers and assisted) and other forms of accommodation such as hostels, co-housing, or temporary homes. How would the needs of those who live there change? The rigidity of buildings and everyday things often unwillingly support this type of change.

For example, the refrigerator is one of the solutions that was given long ago to the need to preserve food from spoilage. After its conception, there have been no significant changes except in size and technologies. The concept has remained unchanged.

However, products are systemic objects and social dynamics are interrelated and permeated by them. Systemic Design helps us consider objects and the dynamics they trigger as a complex system made up of resources in the form of flows (energy, matter, and information), stakeholders, and relationships between them. In this perspective, recent studies have highlighted the importance of involving relevant stakeholders (inhabitants) in understanding specific aspects and dynamics, such as food waste concerning the fridge (Joosse and Marshall, 2020; Heidenstrøm and Hebrok, 2021). This approach helps highlight different ways of behaving in relation to this appliance. Nevertheless, many studies refer to an exploratory phase, allowing the researcher to retrieve missing information and better understand the current context. There is no evidence of studies proposing and discussing alternative scenarios to the refrigerator.

It could be exciting to debate and assess whether current refrigerators are still suitable items to support the situations described above, but also to become aware that other situations are direct consequences of their presence, reliability, and pervasiveness. This appliance indeed triggers many dynamics, thus shaping our lives. Work dynamics, supermarkets, and even food shopping habits have all been modelled according to the existence of this appliance. As Father John Culkin (1967) reported by the words of Marshall McLuhan, '*we shape our tools and thereafter they shape us*', our world, our houses, our lives, and habits.

Can we imagine new dynamics, new behaviours, new needs, and habits related to food preservation and consumption in evolving contexts?

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In this workshop, we meant to investigate four future scenarios on refrigerated conservation, namely:

- the distributed refrigerator,
- the inside/outside refrigerator
- the social refrigerator
- the locked refrigerator

The aim is to stimulate a change of perspective, assumptions, dynamics and generate new systems that differ from the current one, co-designing them and investigating their acceptance, as well as iterating possible systemic design models.

This workshop welcomes design researchers, practitioners and other stakeholders from the food community.

It consists of a focus group divided into four work tables about food preservation to investigate current and future scenarios. Each group will define relevant stakeholders for each scenario, detail dynamics, and frame the system, including identifying wicked problems (Rittel & Webber, 1973), rebound effects, unintended and unpredictable dynamics related.

It will be interesting to reflect on where the new scenarios are placed compared to the current situation in food preservation. Are they tackling the ‘heart of the system’? Or rather explore the borders?

Then, participants will discuss their suggestions and insights through a participatory dialogue in small groups. Finally, the workshop concludes the first day by summarising the collective insights.

On the second day, these four scenarios are made evolved in simulations through body-storming and creative toolkits. The aim is to understand the new systems thoroughly through rudimentary prototyping.

Pre-workshop activity: Participants will be asked to reflect on examples of possible disruptive scenarios in food preservation from their professional and everyday experiences.

Workshop format

2 days | blended | maximum number of participants 32 participants | using Mural, Miro, Figma

Workshop agenda

Day 1

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Part 1. Welcome. 30 minutes. The facilitator will introduce the workshop and provide the knowledge needed.

Part 2. Small group conversations about the current food preservation system. 60 min.

Elaboration of the current scenario through holistic diagnosis. 60 min.

Part 3. The facilitator will introduce the four scenarios. Small group conversations about the scenario assigned. 60 min

Elaboration of the system (stakeholders' definition, system boundaries, leverages for change, potentials and criticalities) 60 min.

Participants will share their examples to open the debate with other participants. 60 min.

Day 2

Part 1. Finalisation

Work tables will summarise their work in a presentation. Every group also creates a gigamap that will be displayed somewhere accessible for the rest of the conference. 150 min.

Part 2. Evolution

Simulations through body-storming and the use of creative toolkits to understand the new systems thoroughly through rudimentary prototyping. 120 min.

After the workshop: The result of this workshop will be part of a book.

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