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Speculative Fabulation to Reclaim the Verbal Dimension of Co-Design.

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Man has always been a narrating animal. In 2009, the literary critic Brian Boyd offered the first comprehensive account of the evolutionary origins of storytelling. According to his theoretical framework, humans respond to the selective pressures of their environment by expanding their repertoire of social behavioral responses through storytelling.

This article, as part of an ongoing doctoral research, advocates speculative fabulation as an understudied explorative approach to co-design accessing stakeholders experience, enabling feedback loops, subsequently facilitates a “worlding” activity toward societal cultural transitions. The aim of this study is to investigate and conceptualize speculative fabulation, within the co-design process, as an analysis (i.e., problematizing) method to societal transitions.

The qualitative research builds on (i) the work of philosophers Donna Haraway, Gilles Deleuze and Félix Guattari on speculative fabulation, (ii) Elizabeth Sanders on generative research, (iii) Mitrovic and Šuran, Dunne and Raby on speculative design, (iv) Göbel's work on systems model to story analysis and (v) Greimas semiotics. Bridging these bodies of literature is novel and allowed us to envision implications for further strands of design research. The suggested framework contributes to conceptualizing speculative co-fabulation within systemic design and may be useful for future implementations in academia and practice toward societal transitions.

KEYWORDS: storytelling, speculative fabulation, design language, systemic co-design

RSD TOPIC(S): **Methods & Methodology, Society & Culture**, **Socioecological Design**

Introduction

Within the Systemic Design (SD) framework, co-design refers to the engagement of multiple actors in the process aiming both (i) to understand the interconnected systems that contribute to a problem – as an analysis method – and (ii) to improve the legitimacy, context specificity, innovativeness, and feasibility of the outcomes – as a solution method – (Sanders and Stapper, 2008) through a learning-by-doing process (Ryan, 2014), addressing so-called “wicked problems” (Rittel and Webber, 1973; Manzini, 2015). Indeed, considering participants as a generative network, rather than subjects, embodies the “human at the center of the project”, and “the relationships generate the system” principles of SD (Bistagnino, 2011).

In recent years, several studies have been carried out to facilitate this democratic process within generative research and SD. Many studies have focused on the conceptualization and implementation of tools and methods to facilitate horizontal interactions among stakeholders within the Quadruple Helix framework toward solutions generation (Sanders and Stappers, 2008, 2014; Battistoni et al., 2019; Sevaldson, 2015, 2022). Some have attempted to map those tools and methods supporting socio-technical system innovation (Pereno and Barbero, 2020; Sanders, 2008, 2014). However, little attention has been paid to conceptualizing how the storytelling processes of co-design can occur verbally as a sensemaking practice.

In the next sections, the need for deepening the verbal component of co-design within speculative approaches is argued building on generative research and speculative design. Second, speculative fabulation, as a verbally generative co-design activity, is explored and conceived as a design analysis method from the works of philosopher Haraway, Deleuze and Guattari. Then, speculative co-fabulation is formalised in a framework within SD methodology building on Göbel's fabula model and Greimas semiotic square. Finally, we conclude discussing forthcoming implementation within two dietary culture co-design case studies and SD implications are presented.

The need for a speculative fabulation framework

When dealing with systems complexity, such as social transition, it is necessary to adopt a systemic and participatory process to engage in a generative "dancing with systems"

(Meadows, n.d.), a process of design and reframe (i.e., how we interpret life) of possible futures. Subsequently, generative research and speculative design are explored as synergic approaches to systemic co-design (Lin et al., 2021), affirming the need to deepen the verbal component of such approaches through speculative fabulation. Finally, a definition of the latter as a co-design analysis method is provided.

Generative Research

The different ways of accessing past, current and potential stakeholder experience in terms of perspectives and needs have evolved over time and can be traced back to the tripartite framework conceived by Sanders (2002): what people do, what they say, and what they make. Sanders argues about the change of perspective in design research from direct or indirect observation of what stakeholders do, to methods that stimulate stakeholders to make something through proposed tools in a collective generativity paradigm. Even if generative tools' components are both visual and verbal, generative methods are conceived mainly as a visual language (Sanders, 2000). The word itself as a generative medium has been little explored in the design language within co-design analysis (Evensen et al., 2009). This is mainly because: (1) tacit and latent needs, by their nature, are challenging to expressed in words (Sanders, 1999) and (2) our poor storytelling skills in general, which has been exacerbated by digital media (Gálik & Gáliková Tolnainová, 2015). We can therefore argue that design has been developing a purely semiological language through storytelling (Rheinfrank III et al., 1986).

However, storytelling is based on oral tradition. As an ancient human tradition present in "all corners of the world" (Foley, 1999), it plays an important role as a matter of multicultural diplomacy in terms of the reception, preservation, and oral transmission of knowledge, art, ideas, and cultural material without or in parallel to a writing system (Vansina, 1985). Story making is about growing as a human being in kinship with others human and more-than-human siblings.

Hence the need for design to reclaim its verbal expressive capacity to access the past, present, future cultural knowledge of social groups to shape new narratives and informing design intervention through oral and writing systems recovering stories that have been marginalised, erased, or silenced by hegemonic narratives.

Speculative Design

Design has always been a signifying generative practice that analyzes, distributes, mediates, and reproduces meanings in societal transitions (Mitrovic and Šuran, 2015). Speculative design, by its definition, is a discursive practice and thus stands as the most enabling approach for design to recover its verbal expressive capacity. Striving to discuss what the future should be, speculative design relying on imagination, narrative, and fictional qualities of design language. Therefore, when exploring the issue of societal transformation, speculative practices have a strong potential for contributing to this change accessing the level of tacit and latent needs (Lin et al., 2021). Speculating, designers engage in a sensemaking activity reflecting the complexity of today's world and question the interrelationship between potential changes in product and system development and society.

Dunne and Raby in "Speculative Everything" (2013) claim for speculative design to help design researchers and stakeholders to think in productively critical ways about futures; about what is likely, and within that, what must be resisted as unlikable; and about what might be possible, and how we can make quite a different kind of futures more possible giving meaning to collective experiences (Verganti et al., 2021). Co-fabulation, within the speculative design paradigm, can be conceptualized as a method seeking to investigate and challenge dominant or hegemonic narratives. The next section explores the role of fabulation as booth an analysis and solution design method within a speculative approach that enables stakeholders to think and tell about sympathetic, dislikeable, and possible scenarios.

Speculative fabulation as design generative method

In Latin, “fabulari” means to speak and to invent a story (Oxford University Press, 1982), as a narrative scheme originates from the oral tradition. The term fabulation originated in literary criticism to denote a class of novels similar to magic realism that violate standard novelistic expectations drastically by adding magical aspects to realistic descriptions (Abrams, 1957). Henri Bergson (1990) was the first to use the word "fabulation" in a philosophical sense, conceiving it as the cognitive capacity to create a mentality, a second nature, that stimulates the generation of common beliefs. It twiddles psychological mechanisms involved in learning and cooperation, narrowing attention, and inducing empathizing (Singh, 2021).

Although the term fabulation implies a generative action, the speculative feature of fabulation was only introduced in 2011 by Donna Haraway as a method aimed at shaping new modes of “worlding” (Wiame, 2018), defamiliarizing, disrupting habitual ways of knowing. Reviewing Truman (2018) and Haraway's studies on the convergence of situated feminisms, we can generalise that by recognising any situated cultural knowledge – as part of anti-hegemony narratives- together with speculative fabulation, researchers and designers can engage participants in a sensemaking practice to generate solution for more equitable and responsive futures. To this extent, Deleuze (Debaise, 2017; Deleuze & Guattari, 1993) conceived fabulation as the "art of the poor", as it is a way in which human beings can project themselves into a scenario other than the set of starting (hegemonic) conditions.

Thus, to define fabulation as a speculative co-design generative method, we build on the dimensions of speculative fabulation mentioned and borrow the concept of potential futures from Dunne and Raby (2013). Co-fabulation, within speculative design approach, can be conceptualise both as an analysis method and a solution one.

As an analysis method, it can be defined as a word-driven generative analysis method of multiple forms of situated knowledge in order to enable accessing the meanings of the possible present (and future). Rephrasing, speculative co-fabulation is a “problematizing method” building on the definition of Foucault, who clearly defines problematization as a method of critical inquiry as a form of “re-problematization” (Koopman, 2015). Thus, problematization is understood as a process of defamiliarizing common sense by eliminating conventional understandings (hegemonic narratives) of a topic to adopt new points of view (from different situated knowledge) exploring anti-hegemonic narratives.

Also, speculative co-fabulation, as stated, can be understood as a solution method since it can be applied to envision opportunities, and mediate and generate meanings to drive changes in societal transitions toward possible futures. Nevertheless, it does not presuppose an innocent and romantic vision. To ensure the generation of solutions that are more effective, equitable, and responsive to the needs and perspectives of stakeholders in the design of potential futures, a framework for speculative co-fabulation as an analysis method to inform design intervention needs to be defined.

Back to Systemic Co-Design

Within the Double-Diamond SD framework (Design Council,2021), co-design refers to the engagement of multiple actors in the process of discovery, define, development and delivery. In this framework, storytelling is considered an enabling tool surrounding the whole design process. Since the discovery phase aims to understand the latent, marginalised, deleted, or unexpressed needs of stakeholders, this phase is best suited to formalise the speculative co-fabulation as an analysis method to access past, present, and future stakeholder perspective in cultural change. To enable the verbal sensemaking of non-hegemonic situated knowledge, we argue for speculative co-fabulation to be grounded in the semiotics. The semiotic square, initially introduced by Greimas (1966), is a conceptual tool widely used in semiotics that allows for the analysis of oppositions, contradictions, and complementary elements within a given system. By applying the semiotic square to stakeholder perspectives, the diverse viewpoints, tensions, and potential synergies that arise during the discovery phase can be mapped. To do so, causal relations between the elements of the fabula play a key role. In the field of systems science, Trabasso's (1989) work on defining a model for story analysis, while Göbel et al. (2006) formalize an approach to fabula as a causal network of all events based on four causal relations: physical causality, motivation, psychological causality, enablement. Through iterative processes, designers can facilitate the construction of the semiotic framework to highlight the causal relationships between different elements within the context of the addressed societal transition till the fabulation enunciation (and eventual textualization). To practically engage stakeholders in the co-creation of speculative narratives, designers should engage stakeholder in the semiotic generative pathway (Greimas, 1983) as follow:

1) Identify opposing concepts: designer facilitates discussions to identify contrary and contradictory elements or concepts related to the explored societal transition. For example, within new dietary scenarios, traditional vs. futuristic, organic vs. synthetic, local vs. global.
2) Define relationships: the identified concepts are placed on the semiotic square, and relationships between them are established. This step involves considering causal relationships, oppositions, and contradictions. For instance, following the previous

example, traditional and synthetic can be positioned in an oppositional relationship, while local and global may form a causal relationship.

3) Engage in compilation: stakeholders are involved in the compilation of the semiotic square, highlighting different, personal perspectives concerning the relationships among elements.
4) Enunciation: stakeholders are involved in the construction of narrative utterances by constituting the fabula based on causal implications and relationships. Possible textualization of the story follows.

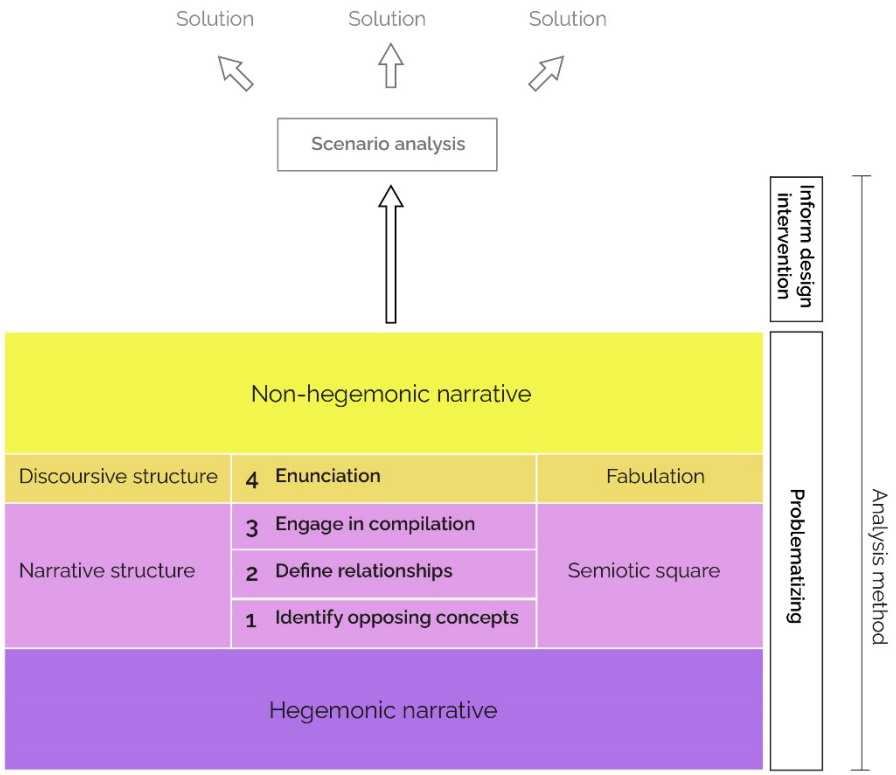

Figure 1 Speculative co-fabulation framework

Building on lessons learned from Greimas, the proposed speculative co-fabulation framework (fig. 1) is conceived as a method to engage stakeholders in a systemic co-fabulation activity, an "orienteering" exercise, to "find the way" from one specific point (hegemonic narrative) to another (non-hegemonic) at the immanent level (Krockover & Levandowski, 1979). Through facilitation by the designers, participants in the co-design activity are engaged in a sensemaking activity telling (and/or writing) a speculative fabula building on the semiotic square mapping:

- problematizing a given societal transition topic, identifying concrete or existential elements of past and present perspectives (i.e., cultural barriers and causal relationships);
- finding new perspectives building on situated knowledges in overcoming reluctance to transform the scenario under study through design and systems thinking, engaging in anti-hegemonic discourse.

Subsequently engaging in speculative scenario analysis, the insights gained from speculative co-fabulation can then inform the design of interventions and strategies that address stakeholder perspectives, ultimately leading to more inclusive and contextually relevant design solutions.

Conclusion and future work

To ensure the generation of more effective, equitable, and responsive solutions to the needs and perspectives of stakeholders in the design of potential futures, designers must first effectively inform the design interventions. The suggested framework is intended as a word-driven methodological co-fabulation model for storytelling activities in the field of participatory societal transition to possible futures unbounded by hegemonic narratives. It is the result of an effort to reclaim the verbal expressive capacity of design language to access the past, present, and future perspectives of stakeholders involved in societal transitions through sensemaking as the quintessential activity of human design (Verganti et al., 2021).

Formalizing speculative co-fabulation within SD methodology can bring about novel contributions to design practice and research. Co-fabulating with stakeholders, designers can:

a. Enhance stakeholder engagement: the use of the semiotic square provides a structured approach to engage stakeholders, enabling them to actively participate in the narrative creation process.
b. Uncover causal relationships: the framework allows designers to identify and analyse causal relationships between different concepts, facilitating a deeper understanding of the setting cultural transitions.

c. Promote alternative narratives: speculative co-fabulation, building on the semiotic square, helps participants in constructing narratives that challenge dominant narratives and explore alternative perspectives, contributing to anti-hegemonic discourse;
d. Inform design interventions: the insights gained from speculative co-fabulation can inform the design of interventions and strategies that address stakeholder perspectives, ultimately leading to more inclusive and contextually relevant design solutions.

Therefore, a testing and validation phase of this framework is needed and planned in the context of new dietary scenarios. As the world population grows, the pressing issue of food (in)security emerges as a crucial research topic in SD as a bridging discipline between others. Indeed, in catalyzing global instances of new food systems and food production in contextual scenarios, it is necessary to problematize the cultural transition of local actors to novel foods through co-design. To address these issues, the co-fabulation framework will be implemented, validating its responsiveness and effectiveness as an analysis method, and identifying its limitations, in the study of two European food culture sensemaking processes in Piedmont (Italy) and Flanders (Belgium) as part of a doctoral research.

Through this period of validation and testing of the framework, it will be possible to assess the potential and limitations of this co-design approach as a problematizing method for designers to ensure the design of solutions grounded on the needs and perspectives of those involved in social transition. Notably, it is necessary to (1) investigate how cognitive biases in groups may hinder the emergence of those non-hegemonic needs by participants in storytelling processes and (2) define strategies to mitigate these biases in sensemaking. Eventually, research is still needed to formalize speculative co-fabulation also as a solution method.

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Additional sections

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