

# Back to the Future: 10 Years of Design Fiction

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## ABSTRACT

The term design fiction was originally coined in 2005 by the Science Fiction author Bruce Sterling. In the 10 years since, design fiction has received considerable interest from a range of disciplines most notably HCI which increasingly draws upon generative methods and creative practices. In this paper we consider examples of recent HCI research that refers to design fiction in order to highlight commonalities and ambiguities in how the term is interpreted and used. We argue that design fiction is a compelling and powerful concept but is inherently ambiguous. We therefore suggest strategies to disambiguate communications ‘about design fiction’ in order to strengthen applications ‘of design fiction’.

## Categories and Subject Descriptors

• Human-centered computing • Human computer interaction (HCI) • HCI design and evaluation methods

## Keywords

Design theory, design fiction, design futures, prototyping

## 1. INTRODUCTION

The term design fiction was coined almost accidentally by the science fiction author Bruce Sterling when he was trying to articulate how design thinking impacted his literary output, “Design fiction reads a great deal like science fiction; in fact it would never occur to a normal reader to separate the two” [12]. However, it was not until Bleecker’s influential 2009 paper on design fiction [cf. 1] that Sterling’s raw concept was combined with a number of other ideas, to give it foundations whereby it could be considered a research method and design approach in its own right. More recently Sterling has refined this less than concrete description to “the deliberate use of diegetic prototypes to suspend disbelief about change” [Cited by Bosch in 13] and despite qualifying it as “the best definition we’ve come up with” thus far, it is currently the most succinct description of what design fiction actually offers to designers and researchers.

Comments on design fiction in HCI contexts suggest that design fiction is recognised as an interesting approach, but is not yet seen as a respectable research method, as illustrated by the following:

“The studio theme of design fiction is a somewhat recent theoretical development” [15:347];

“It is obvious from the growing literature that design fiction is

open to several different interpretations, ideologies and aims” [10:231];

“Its meaning has remained somewhat up for grabs within the research community” [16:22];

We suggest that linking design fiction’s ambiguities to its infancy is a misattribution. Instead we posit that design fiction is inherently flexible, and it is this flexibility that causes the ambiguity, which in turn results in HCI researchers being tentative about how they characterise design fiction’s role in their work. We therefore call for clarity of communication around how it manifests in specific projects, what role it plays, what its products look like, and why it is the suitable tool for a particular task.

## 2. DEFINING A DEFINITIVE DEFINITION

The breadth and flexibility of Sterling’s 2012 definition can be demonstrated by unpacking its constituent elements. With roots in ancient philosophy *diegesis* can be a rather troublesome word for those outside media theory. Thankfully design fiction’s purposes *diegesis* simply to refer to the world of the story. Thus it follows that a *diegetic* prototype is a prototype that exists within a story world [cf. 4]. Suspending disbelief about change is in line with speculative design - an approach on which design fiction draws - and relates to a primary focus on generating understanding and insights rather than finished products. Thus the role of design fiction is “not to show how things will be but to open up a space for discussion” [2:51]

So a design fiction is (1) something that creates a story world, (2) has something being prototyped within that story world, (3) does so in order to create a discursive space. Although this definition appears straightforward, complexity arrives when we consider what ‘something’ may be - and we believe it is this complexity that is circumvented in discourses that characterise design fiction as ‘up for grabs’ or ‘open to different interpretations’.

While story worlds may be created in a huge variety of ways, design fiction has undoubtedly been heavily influenced by Hollywood’s *diegetic* prototypes, yet it is not inherently limited to filmic prototypes such as *A Machine. Learning.* [6] or *Sight* [11]. Markussen & Knutz describe using a variety of media including text, video, objects and graphics, as ‘packaging’ for design fiction stories [10]. Additionally abstracts and conclusions to academic papers have been used as the substrate for design fictions exploring the possible unintended consequences of HCI research [9]. Meanwhile other examples build assemblages to craft the story world in multiple media simultaneously [e.g. 4,11].

Mirroring the diversity of media used to construct story worlds is the variety of *diegetic* prototypes that exist within them. Design fictions have the ability to experiment with technologies or situations that do not currently exist. They can also play with limitless varieties of interface, form-factor, user group, or any other relevant property. Further, as design fictions are self-contained worlds they extend traditional prototyping approaches by demonstrating both the concept and the context simultaneously

[7]. To further complicate the task of describing design fictions in a coherent way, and inline with the “contingent, provisional and aspirational” traits of research through design outputs [3] (also see [8] for a further discussion of design fiction and research through design), the very process of constructing a design fiction world tends to result in the creation of prototypes, or contexts *for* those prototypes, that weren’t envisaged at the outset.

Acknowledging the variety in these two elements of design fiction, how a story world may be created and what that story world may be prototyping, goes a long way in explaining why scholars appear reticent about design fiction’s relevance and role in their projects.

The ‘discursive space’ element of Sterling’s definition is another complex and multi-faceted idea central to design fiction, and is in need of clarification. However discussing that element in detail is beyond the scope of this position paper.

### 3. MAKING SENSE

Despite the apparently intangible quality of design fiction, we believe that it is possible to identify constituent elements of the approach, and to describe particular design fictions in terms of the nature of these elements. We can do this by asking questions about the story world such as:

- What media (or combination thereof) is used to build the story world?
- What prototypes are introduced?
- What impact do these prototypes have on the people and their environment?

By considering these questions, utilisation of design fiction within HCI may begin to recede from noncommittal considerations and instead articulate uses of design fiction explicitly and with clarity. In spite of our calls for increased specificity of communication, we are clear we do not want to force design fiction research into conforming to notions of verifiable theory. Consonant with Gaver’s account of research through design, “[we] suggest that attempts to establish disciplinary norms of process or outcome are political acts to be approached with care... we should reflect on the appropriate ways to pursue our research on its own terms” and that “convergence may not be the only or best model for progress” [3:945]. We thus argue that a balance can be struck between the flexibility and breadth of design fiction and that with an appreciation of our unpacked version of Sterling’s definition, along with careful consideration of the questions above, this balance can be achieved on a case-by-case basis.

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