#### 1 Introduction

[p.113] The Narratives in Design Toolkit is a practical tool that can be used in a pedagogic and professional setting. It helps designers analyse the ways in which narrative informs [p.114] design work, and helps to generate design work focusing on the work's narrative qualities. This toolkit is based on the framework described in the paper Narratives in Design (Grimaldi, Fokkinga and Ocnarescu, 2013) which was developed and iterated further into its toolkit form.

The Toolkit was tested within a number of workshops primarily with postgraduate design students, though many of the students who participated were also professional designers. The feedback from workshop participants showed that the toolkit helped participants to identify, articulate and manipulate the narrative elements present in the design process and in completed design work. The toolkit provided clear ways in which to understand, analyse and articulate narratives within design, and practical ways in which they could use and direct this knowledge to position future design work.

Undergraduate product design students, and in some ways students and designers across different design disciplines, have a tendency to be very good at articulating what their design is for, in a problem/solution type of design framework, but are not usually as adept at articulating what their design is about (Dorst, 2003). This is reflected in what Krippendorff describes as the Semantic Turn in design, arguing that contemporary design should not only make things, but also help to make sense of things

(Krippendorff, 2005). Focussing on what a product is for, as opposed to what it means, makes it harder to design for product experience, as addressing what a product does is not enough to understand how that product would be interpreted and used over time by a person, how people may relate to that product, or how they may relate to other people through the product. Paying attention to the narrative aspects of the design helps the designer to address the ways in which a user may interpret specific details of the design as well as overall features.

This is something that is taught in design schools through feedback and critiques, however introducing narrative as a key concept in the design process can be a valuable way to encourage students to envision how users may interpret their product and gives them a framework to articulate and envision how the experience of a product may unfold over time. In Nicholas and Aurisicchio's terms, it can allow students to move beyond technical functions of a product and to concentrate on aesthetic and social functions of the product they are designing (Nicolas and Aurisicchio, 2011).

## Narratives in Design

Stories are used in different ways in design; the design literature tends to focus on some specific ways in which stories or narratives are used, while some other ways are talked about less frequently in this context.

Narratives are commonly used in the design process; this can be as a research tool, for example through Cultural Probes (Gaver *et al.*, 2004), design ethnography and other participatory research methods especially in fields such as service design and UX design (Koskinen, Binder and

Redström, 2008; Kankainen *et al.*, 2012; Wetter-Edman *et al.*, 2014; Penin, 2018). In addition, narratives are used as a creative tool in the design process, for example as used in spatial design by Studio Weave (Ahn and Smith, 2011), or in interaction design and HCI in Fictional Inquiry (Dindler and Iversen, 2007), Design of Tangible Stories (Nam and Kim, 2011), and Interaction Relabelling (Djajadiningrat, Gaver and Fres, 2000), or in innovation processes (Zurlo and Cautela, 2013; Price, Matthews and Wrigley, 2018).

[p.115]Often studies will look at the ways in which a design prompts a narrative interpretation in the user either through semiotics, for example in the Anna G corkscrew by Alessi (Markussen, Ozcan and Cila, 2012), or when objects are associated with memories of loved ones (Miller, 2008). Sometimes design might prompt a narrative interpretation in the user by being ambiguos, for example in child play with objects (Portis, 2009) or in interaction and speculative design work such as the Nipple Chair by Dunne and Raby (Dunne and Raby, 2001).

Design work is often accompanied by a narrative that is external to the designed object itself, and the narrative is delivered through additional means, for example in product advertising and branding, in design movements such as modernism, where the design represents a bigger story about what design should be, or through accompanying stories, for example in projects such as the Tree Trunk Bench by Jurgen Bey for Droog (Ocnarescu *et al.*, 2012) or Significant Objects (Glenn and Walker, 2012).

One of the areas that is less talked about is how a narrative can be embedded into a design and prompt the user to interpret the design as it is used over time. Examples of this are interactions with an ATM machine and SoMo3 – The Musical Mobile, IDEO with Crispin Jones (Löwgren, 2009) or the On-Edge Lamp (Grimaldi, 2008).

As seen in the examples above, story, and to a certain extent narrative, are terms that have been extensively used in design in the last decade. However, there is a lack of unified language around narrative terms, which can lead to misunderstandings of what is considered to be narrative within a design, or within the design process, the presentation of the product or the user experience, and this makes it difficult to talk about some of the areas outlined above that are less commonly referred to as narratives in the design literature.

This study uses the term 'narrative', as opposed to the term 'story' which is more commonly used in the field of design (Forlizzi and Ford, 2000; Parrish, 2006; McCarthy and Wright, 2010; Blythe *et al.*, 2011), because the term 'story' comes laden with connotations from everyday use, and is used in narratology to indicate only a certain aspect of a narrative. Most of the narratology literature (Scheffel, no date; Bordwell, 1985; Abbott, 2008) understands 'story' (also 'fabula' or 'histoire') to be the events that constitute the chronological plot of the narrative, as opposed to the way these events are told, referred to as 'narrative discourse' (also 'syuzhet' or 'discours'). It was deemed necessary to align with the terminology used in narrative theory in order to better adapt theoretical concepts from narratology to use in a design context, without losing some of the detail coming from the narratology literature.

When delving into the narratology literature, the picture becomes even more complex. There are different fields that study narrative from different perspectives and for different purposes, and each field has its own way of defining what narrative is. Some of the disciplines that contribute to the literature on narrative are literary studies and film studies, as well as history, psychology, philosophy and sociology (Meuter, 2016). It is therefore difficult for designers to get a clear understanding of this wide field with differing perspectives, and this creates a barrier to a clear application of theory to the analysis of design work and the integration of this understanding into the design process. This barrier means that designers who work with storytelling and narratives don't get the benefit of accessing narrative theory, which would enable them to consciously enrich their design by focussing on how the experience of the design is interpreted narratively by the user.

[p.116] Adding to this complication, within literary-based narratology there are different approaches focusing on particular aspects of narrative. The traditional approach to narratology is structuralist, and this approach is interested in describing the elements that constitute a narrative and how these are structured, focusing on the way the story unfolds over the time of the storytelling, and the way in which events are told. Post-structuralist approaches and more modern approaches to narrative theory focus on different aspects: contextualist narratology focuses on the historical, social and ideological context of the narrative, trans-medial narratology looks at non-literary narrative mediums, and cognitive narratology focuses more on the effects that narrative has on humans and on cognition (Meister, 2016).

Cognitive narratology in particular provides a bridge into design with an experiential focus. Experiences happen over time. Narrative is the way in which we as humans organise our understanding of time-based events, and how we retell these experiences (Bruner, 1991; Forlizzi, 1997; Dewey, 2005; Hassenzahl, 2010). The field of narrative theory has been opening up to wider interpretations of what constitutes a narrative that go beyond the literary text. For example, from a literary persective, Abbott acknowledges that everyday events can be described and analysed as narratives (Abbott, 2008), and Bal uses narrative theory to analyse the interpretation of fine art (Bal, 2002). From a neurological perspective, Young and Saver describe the role of narrative in the formation of a life narrative and personal identity (Young and Saver, 2001), something that is reflected in earlier work in psychology (Polkinghorne, 1991; Sacks, 1998). These interpretations can include on the spot interpretation of an experience or retelling or remembering that experience as narratives.

However, the idea that narrative is both a part of the user experience and also the mechanism for the interpretation of products is often overlooked within a design context. There is potential to use this area of knowledge to help direct the way an experience unfolds over time, and how it is interpreted, understood, remembered and retold by the user ((Grimaldi, Fokkinga and Ocnarescu, 2013; Grimaldi, 2015).

# Narratives in Design Toolkit

The Narratives in Design Toolkit providies a framework and a language for discussing the narrative aspects of design work, thus enabling conversations about narrative to take place. The premise is that all design is narrative in some ways; and therefore the question is how design uses narrative elements, and how a designer can purposefully incorporate narrativity and have more control of the narrative elements of their design (Grimaldi, 2015).

The framework that the toolkit is based on develops the model that was described in the paper Narratives in Design (Grimaldi, Fokkinga and Ocnarescu, 2013). This model was generated by analysing a large number of examples of design work that use narrative in some way, and analysing these by focussing on the narrative aspects. The examples were selected because they were described by the designers, or by other researchers in further analysis, as being narrative. The ways in which that narrative worked were analysed based on these descriptions. Following this, a framework emerged focussing on who authors the narrative (user or designer), when the narrative appears (in the design process or in product use), where the narrative appears (if it's embedded in the design object or external to it) and why the narrative is used (what effect it has). In addition, a literature review was [p.117] conducted of a wide range of narratology literature from different schools of thought and disciplines, looking for what different narratologists specify to be the minimum elements necessary for the phenomemon to be considered a narrative, and this was synthetised into five simple definitions under the heading what (what type of narrative is present). This framework was revised and adapted into the Narratives in Design Toolkit, with the aim to make it more user friendly and easier for designers to apply.

[p.119] The Narratives in Design Toolkit is a deck of cards to facilitate reflection upon how narrative is used in design, and synthetises some of the concepts deriving from narrative theory into a framework that is relevant for designers, and easy for them to use. The framework is delivered through questions on the back of the cards and definitions on the front which can be

used to answer these questions. This tool can be used as an analytical tool as well as within generative phases of the design process.

Each card has a front and a back: the front is for participants to circle definitions, while the back provides instructions. Approaching it in sequence, the first card contains a very brief introduction to the project and to how to use the cards. The second card asks the user to describe the narrative at play in their design. This is an important step as it forces the user to think of what narrative or narratives are in the design and which narratives to focus on for this exercise. It also encourages participants to discuss this with a peer. The third card asks about details of the project (designer, project, year) and details of the workshop and participant.

Most of the users' reflection happens in cards four to eight, which are colour coded and present the headlines *Who*, *When*, *Where*, *Why*, and *What*. On the back of the cards are questions such as "*Who creates the narrative and who is the audience of this narrative?*". Users have the opportunity to answer the questions by circling one or more of the definitions on the front of the cards, or indeed [p.120] add a different answer. Users are also encouraged to circle more than one definition per card if they think that more than one applies, but are asked to prioritise a main answer. The final card is used in testing workshops, and asks for participant feedback on the workshop.

# Silvia Grimaldi

	FRONT	BACK	
INSTRUCTIONS	Narratives in Design a toolkit to analyse the use of narrative in design, and to help define the use of narrative in the design process.	These cards are designed to help you assess the way narrative is used in existing design examples, as well as help guide your use of narrative during the design process.  To redesign or reposition existing work, change the answer on one or more of the cards, and redesign accordingly.	
	Mark your answers on each card as you go through them.	To create new work, answer the questions on the card as part of the idea generation process, keeping an open mind in terms of repositioning design work.	
DESCRIBE the narrative		Please describe in your own terms the narrative(s) present within this design example. You might find it easier to discuss this with someone before writing it down.	
DETAILS	Designer:	Your name	
WHO	CREATOR → AUDIENCE  User → User  User → Designer  Designer → Designer  Designer → User	project)  Who creates the narrative and who is the audience of this narrative?  Designers may create narratives for users, but they may also create narratives for the design team. In the same way, users may be creating the narrative for themselves or other users, or for the design team.	
WHEN	In the design process  In the user experience	When is narrative present?  Is the narrative used within the design process, for example as a research tool or as an idea generation tool, or is it designed into the user experience of the object, for example through associated stories or trajectories through space?	
WHERE	Internal to the object  External to the object	Is the narrative internal to the object or external to the object?  An internal narrative is understood by looking at or using the object without requiring additional information.  An external narrative is understood only after referring to additional information not contained in the object itself. For example, the user may need to read something, view an accompanying video, or hear an explanation.	
WHY	Communication & Conveying Information Evoking Reflectivity Showing & Teaching Values Empathy, Identification & Bypassing Social Structures Imagination & Creativity Memorability	Why is narrative used, to what effect?  In this card we are interested in what the narrative does, within the context of the design, as opposed to what effects the design itself has. For example, an object might delight because of its physical appearance but not through a narrative.	

# Narratives in Design Toolkit

	Engaging & Delighting Persuading Cohesion & Comprehension		
WHAT	Minimal Narrative	What type of narrative is present?	
	Sequenced Narrative	Minimal Narrative: a representation of one or more events.	
	Logically Sequenced Narrative	Sequenced Narrative: a representation of one or more	
, 11110 211	Value-Laden Narrative Entertainment Narrative	characters or entities in a series of chronological events.	
		Logically Sequenced Narrative: Sequenced Narrative where chronological events are connected by causality or agency.	
		Value-Laden Narrative: an emotion-evoking and value-laden Logically Sequenced Narrative.	
		Entertainment Narrative: A Value-Laden Narrative, which progresses through conflicts toward a climax.	
FEEDBACK		For more information about the Narratives in Design	
		workshops: narrativesindesign.wordpress.com	
		or email Silvia Grimaldi on s.grimaldi@lcc.arts.ac.uk	

Table 1 Narratives in Design Toolkit, content of the cards



Image 1 Narratives in Design Toolkit card set front

# Silvia Grimaldi



Image 2 Narratives in Design Toolkit card set back

# Testing the Narratives in Design Toolkit as an Analytical Tool

	Tested with		Participants	Version of the toolkit & workshop
A	MA Narrative Environments, Central Saint Martins, University of the Arts London	5 Feb 2014	21 students	fact sheet, intro lecture, analytic and generative uses, participants brought examples, feedback collected.
В	MDes Service Design Innovation, London College of Communication, University of the Arts London	23 May 2014	8 students	first card version, intro lecture, analytic and generative uses, participants brought examples, feedback collected.
С	MA Graphic Design, London College of Communication, University of the Arts London	11 June 2014	9 students	first card version, intro lecture, analytic and generative uses, participants brought examples, feedback collected
D	MA Information Experience Design, Royal College of Art	29 May 2014	6 students	first card version, intro lecture, analytic and generative uses, participants brought examples, feedback collected
E	Design Fiction Course, running across design degrees, Kolding School of Design, Denmark	20 Nov 2014	9 students	final card version, intro lecture, generative use, informal feedback only

### Narratives in Design Toolkit

F	Learning and Teaching Day 2015, University of the Arts London	14 Jan 2015	about 30 lecturers	final card version, intro lecture, analytic use only, examples provided, informal feedback only
G	Foundation Diploma in Art and Design, Central Saint Martins, University of the Arts London.	26 Feb 2015	about 20 students	final card version, not facilitated by the author, analytic and generative uses, participants brought examples, informal feedback only
Н	MA Service Experience Design and Innovation, London College of Communication, University of the Arts London	19 Oct 2016	13 students	final card version, analytic and generative uses, participants brought examples, feedback collected

Table 2 Workshops run with the Narratives in Design Toolkit

The Narratives in Design Toolkit was tested within a number of workshops primarily with postgraduate design students, though many of the students who participated were also professional designers. The workshops took place over the course of two years, and with different groups of students. Results and feedback were collected and documented after each workshop, and then these were qualitatively analysed to understand how the participants had used the toolkit and how it had affected their understanding of narrative within design, their analytical and design processes.

Depending on the workshop, participants were either supplied with a series of examples to analyse or were asked to bring examples from their own practice and/or from other designers' work. Workshops A-F started with a presentation of the framework with discussion of several examples, while workshops G-H had a more general introduction to the toolkit without a formal presentation.

In all workshops participants were divided into small groups of two to four people and asked to discuss one example at a time from those provided by the author or supplied by the participants. This created lively discussion within the groups. They were then asked to go through the toolkit as a group and use all the cards in sequence for each of the designs they discussed, omitting the feedback card at this moment. In those workshops in which

### Silvia Grimaldi

participants brought examples, and especially when the examples they brought were specifically from their own design practice, this provided an occasion for participants to reflect upon how as a group they had similarities or differences in terms of the ways in which they used narrative.

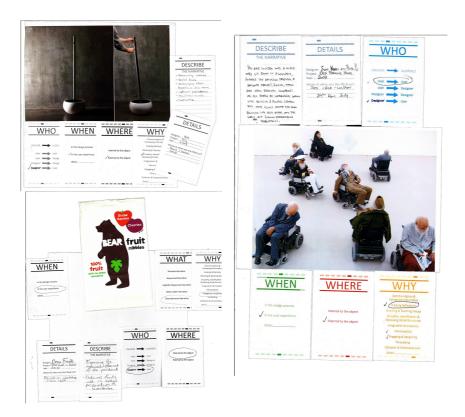


Image 3 Examples of toolkits

[p.121] From the point of view of the facilitators of this workshop (the author in most cases except for workshop G), the analytical use of the toolkit provided the basis for lively and focussed debate about the examples shown. There were some healthy disagreements in some groups, resulting in

circling more than one answer. Picking a main answer out of those, as opposed to picking the only answer, facilitated the resolution of these disagreements. Overall the conversations were on point and the level of concentration was high throughout. One of the common points for conversation focussed on the fact that the designs presented had multiple and multi-layered narratives, with disagreements around which of these narratives should be the focus of the exercise. The facilitator [p.122] explained that the narratives will always be multi-layered (Grimaldi, Fokkinga and Ocnarescu, 2013), and a similar analysis could be carried out for each of the multiple narratives or each of the layers, however, because of time restrictions they should focus on what it perceives to be the main narrative.

Another common point for conversation focussed around the observation that all design is narrative in some way, and the conversation was guided by the facilitators towards identifying in what particular ways narratives were used in these examples, differently from the way in which all design has narrative qualities.

From the point of view of the participants, this was seen as a clear way to analyse concepts which they had trouble articulating before and the anonymous feedback collected after the workshop largely stated that this level of analysis added something to their understanding of the design examples as well as their understanding of the use of narrative within design (see discussion section).

### Silvia Grimaldi



Image 4 Photos of the workshops

# Testing the Narratives in Design Toolkit as a Generative Tool

Following the analysis of the design examples, participants were asked to change the design taking as a starting point what narrative effects they wanted to achieve. This was [p.123] done in different ways to cater to the specific groups. When examples were given, participants were asked to randomly assign different categories for these examples, and then the group had to redesign this to make it conform more to the randomly assigned categories. When examples were provided by the participants, and especially when some of the examples were from the participants' own design work or work in progress, participants were asked to reflect on what they would like the narrative in their project to do, or where they would like

to focus more on narrative; they were then asked to redesign their project accordingly.

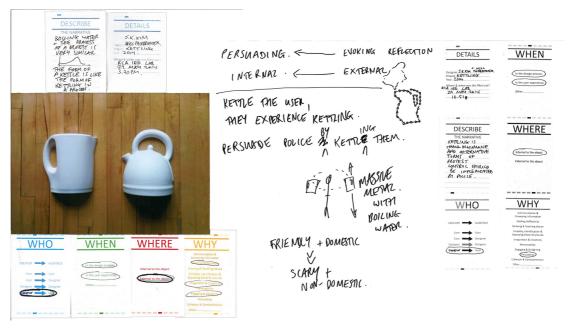


Image 5 Redesigned options

All participants were able to generate at least one concept variation on the original design based on the new analysis, and again this generated lively discussion in the groups. Some participants found this generative use more confusing than the analytical application. The discussions focussed on assessing why you would want to design for a different *When/Where* category or a particular *Why* category, and on what changes could be made to the design or to the design process to make the project fall within the new categories. Participants reported that it allowed them to think of their current project in broader terms and focus on the effect their design work has on the user (see discussion section). It also provided a quick way to refocus and experiment with the design.

### Silvia Grimaldi

In particular, when used in a generative manner participants were able to envision the narrative effects of a redesign or of a different design outcome, before they had generated the design itself. This allowed for different ways of interpreting the project brief and was found to carry particular value in more complex design problems. Workshop H in particular was designed to help participants to advance their current [p.124] service design project through using the toolkit in a generative way. The focus on narrative encouraged participants to envision positive outcomes for their project from the point of view of particular users and stakeholders, and this led to several participants reporting that they had breakthroughs in their thinking about the project and now were able to envision potential outcomes.

### Case studies

To show how the toolkit works in practice three case studies are presented that show an example analysed in the first phase of the workshop and then redesigned in the generative phase.

## A Portrait of Queenie

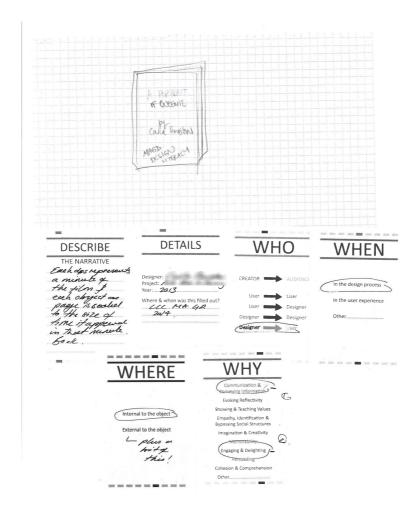


Image 6 Analytical use – A Portrait of Queenie

This was an example from the participant's own work which she brought to the workshop because she wasn't fully satisfied with its outcome. The original design was an interpretation of the film *A Portrait of Queenie* in the form of a book of photographs, with each photograph representing a minute in the film. Through analysing the design the participant realised that she wanted to refocus the way in which the project communicated to the audience, and make it more interactive and memorable for a user. The initial book was assessed as being designer  $\rightarrow$  user in the *Who* category, so

the participant decided to brainstorm a user  $\rightarrow$  user resolution that would allow the user more control over the creation of the project's narrative.

This switch came about through the participant questioning the authorship of the book's narrative and engaging with the question of who creates the narrative and who it is for. She had not engaged with questions of authorship before this workshop, but framing this in narrative terms helped her to take this perspective.

[p.125] In addition, she thought the initial book was communicating and engaging the user in terms of narrative (*Why*). The participant thought the redesign should make the narrative in the project more memorable to the user as a primary function. This was something that the participant was able to express in these terms because the Toolkit provided the vocabulary for this, while previously she had not engaged with or questioned what the effect of this narrative would be on a user, nor had she thought of using narrative for other purposes beyond communicating and delighting. To note this participant was a Graphic Design student, so she had naturally engaged with communicating and delighting in her initial project.

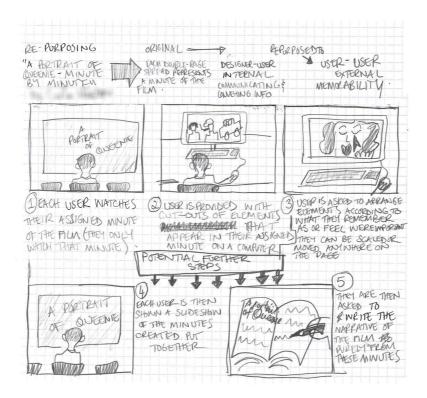


Image 7 Redesigned Project – A Portrait of Queenie

[p.126] The redesigned project addresses the authorship question (*Who*) by engaging the user in a summary of a single minute in the film. Subsequent users would create visual summaries of single minutes and these would then be shown in sequence as an interpretation of the film. The participant wanted the *Why* to address making this narrative more memorable, and did this in the redesign by engaging the user with their own memory of the minute of film and pulling out the memorable moments from it. The participant also proposed potential further steps that would engage the user even more in the creation of the narrative around the project.

# Collage



Image 8 Analytical Use - Collage

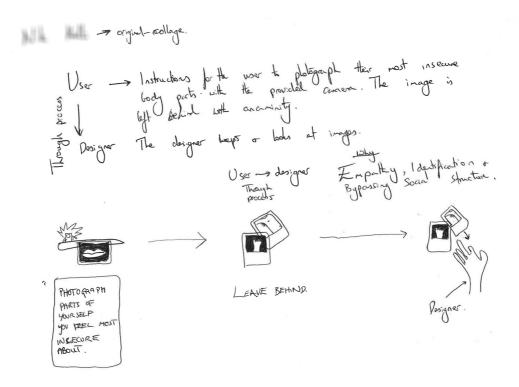


Image 9 Redesigned Project - Collage

This participant brought a collage project featuring homoerotic imagery and our societal perceptions of this imagery. He assessed this initial work as having a narrative created by the designer for the user (Who), the narrative is in the design process (When) and external to the final collage (Where) and the aim is to evoke reflectivity and persuade (Why). When deciding how to continue this project in a different direction, the participant decided that he wanted the authorship to be partially transferred to the user [p.127] (Who: user  $\rightarrow$  designer) so that it would involve participants in the design process (When) and the aim of this redesign should be to create empathy and identification in the designer (Why). As a consequence, the participant designed an interactive bench that asks users to photograph parts

of their body they feel insecure about, and this would inform the design process.

[p.128] Using the toolkit was a starting point for the participant to think what he wanted the aim of the project to be. The focus is changed to empathy and the participant made a link between involving the user in the design process through quite personal questions, and designing a project that displays more empathy. The redesigned artefact is not pictured or described, however the participant thought of the ways in which he could use narratives within the design process to then arrive at a different outcome. In this way the final narrative of the redesigned artefact is co-authored by the designer and the users involved in the initial design phase.

# Kettling

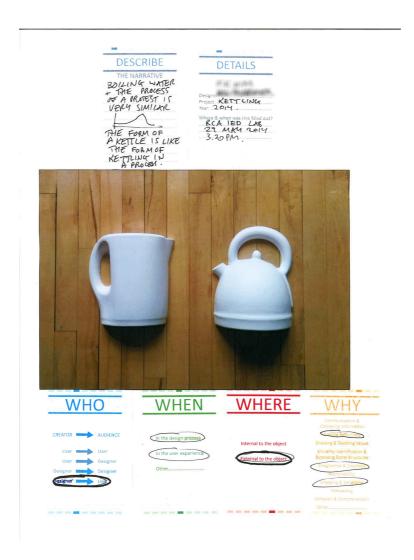


Image 10 Analytical Use - Kettling

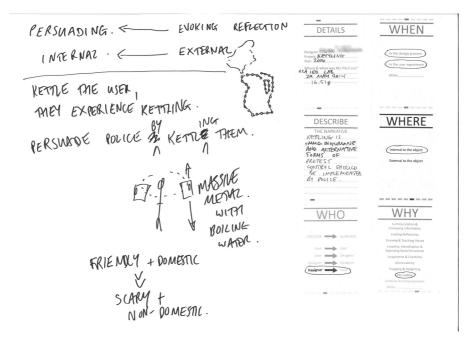


Image 11 Redesigned Project - Kettling

This redesign reflects a change in aim from reflecting on an issue to persuading. The initial project is named "Kettling" which was a topical issue at the time of the workshop: there were several demonstrations in London that year and the police were using a technique to diffuse these demonstrations, called kettling. This involves containing sections of the demonstration within specific areas, limiting the movement of people into and out of that area sometimes for hours at a time, until the situation diffused and the tension lowered.

The initial project was titled Kettling, and showed plaster casts of kettles, as a way to evoke reflectivity. It drew parallels between the form of a kettle and the experience of being kettled. Thinking of the narrative that the user would experience changed the audience for the design; the participant changed the design from an aesthetic consideration of parallels in the form of a kettle and the experience of being kettled, which would be

understood by few specialists, to an experience of being kettled that [p.129] involves the sensory experience of the sound of boiling water. This makes the narrative more explicit to the user as well as using this as a tool to persuade the user that this technique is inhumane.

[p.130] The fact that the participant had to focus on the narrative from different points of view, including what narratives the user would come away with, allowed the design to move beyond the formal approach it had taken. Also the fact that the categories for *Why* were spelled out meant that the designer could focus on *persuading* as a separate aim from *evoking* reflectivity, and focused the narrative in the design accordingly.

### Discussion

In most of the examples the participants were able to question the authorship of the narratives involved in the design work, the audience for these narratives as well as the aims of the narratives and the ways in which these would be experienced. The presentation of prompts on the card made this reflection more nuanced.

The one card that didn't feature in the discussion as much was the *What* card, describing the type of narrative. Through observation it was seen that this didn't help to reposition designs, and was very difficult for participants to understand, though it was meant to help to analyse the depth of narrative present. This will be discussed in the conclusions and will feature in further work.

# Feedback from the Participants

Feedback was collected after Workshops A, B, C, D and H through anonymous free comments on the cards, while in the rest of the workshops only informal feedback was collected orally from participants, and the facilitator conducted informal observations. [p.131] In addition, the lead tutors for groups of students who took part in the workshops reported how the tools or the language from the toolkit was used in further projects after the workshops. From the anonymous feedback collected, most participants found the workshop helpful to their understanding of the way narrative works in design and to informing the way they approach design work. Many have reported that it has helped generate ideas and focus their thinking.

There were a few negative comments about the format of the workshop (the main point was that it was too short and fast) and one negative comment about the examples shown which did not directly relate to the specific design discipline of the participant. The only comment that was negative about the whole approach was "The kit is too restrictive. At the end everything is/has a narrative so what's the point of it all?" (participant, Workshop C). The fact that all design is and has a narrative was the starting point for the workshop as well, and the point was to understand and manipulate these narratives consciously as opposed to instinctively, but it is acknowledged that this might not be the right approach for every designer.

Feedback about the toolkit clearly addressed three main areas: how it helped the participants identify, articulate and manipulate narrative concepts within design work. A few comments covered all three areas. Of note is the comment from a foundation student who participated in

### Narratives in Design Toolkit

workshop G and then wrote about it in their coursework blog (this was then signalled by the tutor who had facilitated this workshop).

"The workshop has encouraged me to really question the whole project and my design process, which leads to a much better understanding about what the project is really about, this will then lead to a more focused and well developed project. What I realised after this workshop is that a lot of design, especially conceptual ones are implicit to the user or audience. As users we tend to make a lot of assumptions and suggestions about a particular product that we're using. We rarely truly understand a product until we really look into the story behind it and what the designer's intention of designing it was." (Workshop G Participant)

The workshop helped this foundation student, at a pre-university level of study, to reflect upon, question and manipulate what their design work is about, as well as providing a level of understanding of the difference between user's interpretation of an artefact and the designer's intention.

# Identify

Participants reported in the feedback that they understood the concept of narrative much better as well as the ways they use it within the design process and how they can view design work through a narrative lens.

"Understand much better the multi-faceted natures of narratives and how design of an object can be adjusted for different outcomes." (Workshop D participant)

"And because of these tools I can remember that there are many ways to be narrative and how to use it." (Workshop A participant)

Overall the feedback pointed to the conclusion that the toolkit had helped the participants think about design differently, considering the communication of a narrative between the designer and the user; they understood the ways in which narrative is present [p.132] within design

#### Silvia Grimaldi

work and they saw the relevance of this approach to their own thinking and design practice.

### Articulate

In addition to a greater understanding of the concepts and how they are applied, many participants reported that they were able to use these concepts to analyse their own design practice and articulate the ways in which narrative plays or can play a part in their design practice.

"Very useful in making me think about the audience for my project + what I'm trying to say to them." (Workshop C participant)

"Very interesting way to analyse our own projects, I will certainly give more thought to the narrative aspect when designing future projects" (Workshop B participant)

Using the toolkit provided a way for participants to structure their understanding of narrative and a different lens through which to look at their project work.

### Manipulate

In the last part of the workshop, participants were asked to use the toolkit as a generative tool and reported that the exercise allowed them to understand how to manipulate the narrative elements of a designed artefact, as well as it being a prolific method for sparking design concepts.

"Very helpful to understand how we can use and change our narrative in a project" (Workshop A participant)

"Especially the re-design part gave me new ideas to work with my research project + try a new way of designing." (Workshop C participant)

The Toolkit was a good way to change the direction of a design project through considering its narrative elements. Most participants found it easy to use in a generative way, which was clear from observing the workshops and the ways in which most participants were able to quickly engage in the redesign and repositioning process. In addition, participants were working in small groups very effectively on the redesigns, which may be a consequence of the fact that participants were focussing on the narrative elements, thus fostering communication within the group. Most of the feedback on this last phase of the workshop also points to the fact that participants felt like they were more in control of the narratives associated with their design as a result of using the toolkit.

Workshop F, in which the method was presented and used with a group of art and design tutors within a university setting, led to informal feedback on the value of the toolkit as a pedagogic tool, both verbally at the end of the workshop and by email in the subsequent days. Several participants requested to use the toolkit in a pedagogic setting. One of these requests is recorded in this paper as Workshop G, which was led by the course tutor and carried out without the author present.

## [p.133] Conclusions

There is a good case for using this tool as an additional method within both a pedagogic and professional design setting and across design disciplines. In particular, the tool can be valuable in those cases in which the narrative and communication between designer and user is intrinsic to the design outcome. By focussing on the narrative this can enrich the designer's understanding of what their work is about, not just what the work is for, and allow the designer to use narrative to create different effects in the user or within the design team, such as communicating more effectively, fostering empathy or evoking reflection.

When used in an analytic or generative way, the toolkit helps designers to identify, articulate and manipulate narrative properties of their designs. This focus on the narrative properties of the design forces designers to engage with three aspects:

- 1. The designer is encouraged to envision and engage with the user experience of their design, and is encouraged to see from the user's point of view. This is more embedded in certain fields of design than others, yet participants across several design fields reported finding the toolkit useful for engaging with and envisioning a potential user experience.
- 2. Designers are specifically asked to engage with the user's interpretation of the design. By posing this question in narrative terms, the toolkit helps designers to vocalise and describe possible interpretations. Again, this is embedded within certain design practices but it is not done in all design fields.
- 3. The toolkit reinforces the idea that all details of the design communicate to the user, and helps to focus design choices in terms of designer-user communication.

It is acknowledged that the three aspects listed above can be highlighted in other ways and through other methods that do not involve narrative. The Narratives in Design Toolkit is one focussed way in which designers and design students can engage with these aspects during the design process or through design analysis. In other words, the Toolkit encourages designers to address how their design would be interpreted and used over time by a person, how people may relate to that design, or how they may relate to other people through the design.

The toolkit can also help designers to understand the range of ways in which they can use narrative within the design process or as a way of organising the user experience, to help direct the way user experience unfolds over time, and how this is interpreted, understood, remembered and retold by the user (Grimaldi, 2015). For example, having a list of possible aims for the design in the Why category helps designers to focus the design process towards a specific aim. During the workshops, some participants refocused the Why category slightly, for example from Engaging Reflectivity to Persuading and this allowed the participant to refine the design based on the reasons why they may be designing this particular thing. As another example, engaging with the *Who* category can provide a way for designers to engage with questions of authorship: while discussing the design itself it is clear that the designer is usually the author (with the exception of co-design and participatory practices) discussing the narrative related to the design can show how the narrative may have different authorship than solely the designer, and the designer can foster this type of engagement in the user.

[p.134] Further studies will continue investigating the ways in which narrative may contribute to the design process as well as the interpretation of designed things. In particular, the focus will be mainly on the user experience over time, and the ways in which narrative can direct the

unfolding of this experience. As part of this the *What* card is being investigated as a way to provide a scale of narrativity that would work in conjunction with each of the other cards. Further iterations of this toolkit will follow this direction more in-depth, focussing on the time-based aspects of user experience.

### References

Abbott, H. P. (2008) *The Cambridge Introduction to Narrative*. Cambridge University Press.

Ahn, J. and Smith, M. (2011) 'Studio Weave presentation at Narrative in Practice 2011'. Available at: http://www.narrativeinpractice.com/nip2011/#jeahnmariasmith.

Bal, M. (2002) *Travelling Concepts in the Humanities: A Rough Guide*. Toronto; London: University of Toronto Press.

Blythe, M. *et al.* (2011) 'History and experience: storytelling and interaction design', in *Proceedings of the 25th BCS Conference on Human-Computer Interaction*. Swinton, UK, UK: British Computer Society (BCS-HCI '11), pp. 395–404. Available at: http://dl.acm.org/citation.cfm?id=2305316.2305383 (Accessed: 15 July 2013).

Bordwell, D. (1985) *Narration in the Fiction Film*. Univ of Wisconsin Press.

Bruner, J. (1991) 'The narrative construction of reality', *Critical inquiry*, 18(1), pp. 1–21.

Dewey, J. (2005) Art As Experience. Perigee Books.

Dindler, C. and Iversen, O. S. (2007) 'Fictional Inquiry—design collaboration in a shared narrative space', *CoDesign*, 3(4), pp. 213–234. doi: 10.1080/15710880701500187.

2012).

Djajadiningrat, J. P., Gaver, W. W. and Fres, J. W. (2000) 'Interaction relabelling and extreme characters: methods for exploring aesthetic interactions', in *Proceedings of the 3rd conference on Designing interactive systems: processes, practices, methods, and techniques*, pp. 66–71. Available at: http://dl.acm.org/citation.cfm?id=347664 (Accessed: 27 May 2013).

Dorst, K. (2003) 'The problem of design problems', *Expertise in design*, pp. 135–147.

Dunne, A. and Raby, F. (2001) *Design Noir: The Secret Life of Electronic Objects*. August/Birkhauser.

Forlizzi, J. (1997) *Designing for Experience: An Approach to Human-centered Design*. Department of Design, College of Fine Arts, Carnegie Mellon University,. Available at: http://goodgestreet.com/docs/forlizziMDes.pdf (Accessed: 7 December

Forlizzi, J. and Ford, S. (2000) 'The building blocks of experience: an early framework for interaction designers', in *Proceedings of the 3rd conference on Designing interactive systems: processes, practices, methods, and techniques*, pp. 419–423. Available at: http://dl.acm.org/citation.cfm?id=347800 (Accessed: 27 May 2013).

Gaver, W. W. *et al.* (2004) 'Cultural probes and the value of uncertainty', *interactions*, 11(5), p. 53. doi: 10.1145/1015530.1015555.

Glenn, J. and Walker, R. (eds) (2012) *Significant Objects*. Original. Fantagraphics.

Grimaldi, S. (2008) 'The Ta-Da Series – A Technique for Generating Surprising Designs Based on Opposites and Gut Reactions', in Desmet, P. M. A. and Karlsson, J. van E. and M., *Design and Emotion Moves*. Edited by P. M. A. Desmet and J. van E. Karlsson. Cambridge Scholars Publishing.

Grimaldi, S. (2015) 'Narrativity of Object Interaction Experiences: A Framework for Designing Products as Narrative Experiences', in *Experience Design: Concepts and Case Studies*. London; New York: Bloomsbury Academic, pp. 57–68.

Grimaldi, S., Fokkinga, S. and Ocnarescu, I. (2013) 'Narratives in Design: A Study of the Types, Applications and Functions of Narratives in Design Practice', in *Proceedings of the 6th International Conference on Designing Pleasurable Products and Interfaces*. New York, NY, USA: ACM (DPPI '13), pp. 201–210. doi: 10.1145/2513506.2513528.

Hassenzahl, M. (2010) 'Experience Design: Technology for all the right reasons', *Synthesis Lectures on Human-Centered Informatics*, 3(1), pp. 1–95.

Kankainen, A. *et al.* (2012) 'Storytelling Group – a co-design method for service design', *Behaviour & Information Technology*, 31(3), pp. 221–230. doi: 10.1080/0144929X.2011.563794.

Koskinen, I., Binder, T. and Redström, J. (2008) 'LAB, FIELD, GALLERY, AND BEYOND1', *Artifact*, 2(1), pp. 46–57. doi: 10.1080/17493460802303333.

Krippendorff, K. (2005) *The Semantic Turn: A New Foundation for Design*. 1 edition. Boca Raton: CRC Press.

Löwgren, J. (2009) 'Toward an articulation of interaction aesthetics', *New Review of Hypermedia and Multimedia*, 15(2), pp. 129–146.

Markussen, T., Ozcan, E. and Cila, N. (2012) 'Beyond Metaphor in Product Use and Interaction', in. *Design and semantics of form and movement (2012)*, p. 110. Available at: http://desform2012.schoolofdesign.ac.nz/wp-content/uploads/DeSForM\_2012\_LR.pdf#page=112 (Accessed: 18 September 2012).

McCarthy, J. and Wright, P. (2010) Experience-centered design designers, users, and communities in dialogue. [San Rafael, Calif.?]: Morgan & Claypool.

Meister, J. C. (2016) 'Narratology', in Hühn, P. et al. (eds) *The Living Handbook of Narratology*. Hamburg: Hamburg University Press.

Meuter, N. (2016) 'Narration in Various Disciplines', in Hühn, P. et al. (eds) *The Living Handbook of Narratology*. Hamburg: Hamburg University Press.

Miller, D. (2008) The Comfort of Things. 1st Edition. Polity Press.

Nam, T. and Kim, C. (2011) 'Design by Tangible Stories: Enriching Interactive Everyday Products with Ludic Value', *International Journal of Dsign*. Available at:

http://www.ijdesign.org/ojs/index.php/IJDesign/article/view/682 (Accessed: 22 October 2012).

Nicolas, J. C. O. and Aurisicchio, M. (2011) 'The Scenario of User Experience', DS 68-7: Proceedings of the 18th International Conference on Engineering Design (ICED 11), Impacting Society through Engineering Design, Vol. 7: Human Behaviour in Design, Lyngby/Copenhagen, Denmark, 15.-19.08.2011.

Ocnarescu, I. et al. (2012) 'AEoT: An Initial Framework of Aesthetic Experience Over Time', in Out of Control: Proceedings of 8th International Design and Emotion Conference London 2012. Out of Control:8th International Design and Emotion Conference, London.

Parrish, P. (2006) 'Design as storytelling', *TechTrends*, 50(4), pp. 72–82.

Penin, L. (2018) *An introduction to service design: designing the invisible*. London: Bloomsbury Visual Arts.

Polkinghorne, D. E. (1991) 'Narrative and Self-Concept', *Journal of Narrative and Life History*, 1(2–3), pp. 135–153. doi: 10.1075/jnlh.1.2-3.04nar.

Portis, A. (2009) Not A Stick. London: HarperCollinsChildren'sBooks.

Price, R., Matthews, J. and Wrigley, C. (2018) 'Three Narrative Techniques for Engagement and Action in Design-Led Innovation', *She Ji: The Journal of Design, Economics, and Innovation*, 4(2), pp. 186–201. doi: 10.1016/j.sheji.2018.04.001.

Sacks, O. W. (1998) The man who mistook his wife for a hat and other clinical tales. New York: Simon & Schuster.

Scheffel, M. (no date) 'Narrative Constitution', in Hühn, P. et al. (eds) *The Living Handbook of Narratology*. Hamburg: Hamburg University Press. Available at: http://www.lhn.uni-hamburg.de/article/narrative-constitution# (Accessed: 7 October 2016).

# Silvia Grimaldi

Wetter-Edman, K. *et al.* (2014) 'Design for Value Co-Creation: Exploring Synergies Between Design for Service and Service Logic', *Service Science*, 6(2), pp. 106–121. doi: 10.1287/serv.2014.0068.

Young, K. and Saver, J. L. (2001) 'The neurology of narrative', *SubStance*, 30(1), pp. 72–84.

Zurlo, F. and Cautela, C. (2013) 'Design Strategies in Different Narrative Frames', *Design Issues*, 30(1), pp. 19–35. doi: 10.1162/DESI\_a\_00246.