

Title of paper

Thinking “narratively”: the role of narrative in design thinking

Track

1. How designers think: The role of design thinking in society

Contact information

Eun-kyong, Baek, Lecturer

Room 2.6 Fletcher building, Faculty of Art and Design, De Montfort University, The Gateway, Leicester,
United Kingdom, LE2 7DJ

Telephone number: +44(0) 116 250 6024

Fax number: +44(0) 116 257 7620

E-mail: ekbaek@dmu.ac.uk

Resume

Eun-Kyong Baek is a lecturer in design management and innovation at De Montfort University. Her research interests include the use of narratives in design management and design processes—in particular, the ways in which stakeholders of design projects communicate with each other through narratives. Baek is currently completing her PhD in design management. She also holds a master’s degree in design strategy and innovation from Brunel University and a BS in industrial design from the Korea Advanced Institute of Science and Technology, South Korea

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Abstract

The focus of design studies has recently evolved from viewing design as a rational problem solving process, to recognising design as a cognitive, and social process. In parallel with this change, attention has also moved from studies focusing on individual designers to studies of design teams. Narrative is widely recognised as a main means of understanding the world and ourselves as well as communicating with each other, thus should be regarded as an important subject to explore this recent view of the design process. However, interest in narrative within the design research community has been limited and little research has paid attention to narrative theory. The purpose of this paper is, therefore, to utilise narrative as a conceptual research tool in the design context, thus enabling the development of fresh insights and a deeper understanding of how designers think in practice.

Through observations of three real design projects within a broader ethnographic research approach, this paper explores how narrative plays an important part in different stages of design processes. It describes the role of narratives during meetings with and without clients, and among designers and the teams involved in real design projects. The paper argues that there is a widespread use of narrative by design practitioners, whether they are conscious of it or not. It concludes that there are three main roles of narrative in design thinking: 1) as a way of understanding the design project and its processes, 2) as a way of assisting problem solving activity, and 3) as a way of assisting management activity.

Key words: narrative, design process, design activity

1. Introduction

1.1 Thinking ‘narratively’

Although the subject of how we think is far too broad to be dealt within this paper, it is worth investigating as recent studies on the subject of the design process draw great attention to the cognitive side of design thinking. Over the past two decades, cognitive psychologists have made remarkable developments in the field of ‘narrative psychology’. This field of study proposes that narrative is an easy and involving way of describing our world, although its use may not be deliberately displayed or adapted. The view that is emerging is that narrative constitutes the primary process by which human experience is explained (Sarbin, 1986; Bruner, 1986, 1990; Polkinghorne, 1988; Crossley, 2000).

Polkinghorne, for example, states that:

“Our lives are ceaselessly intertwined with narrative, with stories that we tell and hear told, with stories that we dream or imagine or would like to tell.[...]We live immersed in narrative. Recounting and reassessing the meanings of our past actions, anticipating the outcomes of our future projects, situating ourselves at the intersection of several stories not yet completed. We explain our actions in terms of plots, and often no other form of explanation can produce sensible statements”

(Polkinghorne, 1988, p.160)

On the other hand, psychologists repeatedly make claims that one of the strongest functions of narrative is its primary role in the construction and maintenance of self-identity (Shotter & Gergen, 1989; Kerby, 1991). They argue that we are then, simply, the assembled stories that we tell about ourselves and the stories that are told about us by others. However, we also have the power to renegotiate our identity by altering these stories.

1.2. Narrative thinking in the design process

Despite various definitions and interpretations of design, it is commonly agreed that creativity plays a vital role in design processes. Subjects such as creativity and intuition have been long term interests in the field of design research. However, mainstream design research has been dominated by the rational and logical side of the design process since Jones used the term 'design science' in 1966 at 'the 2nd conference on the Design Method', viewing design as a logical process.

Since then, the focus of research activity in the broad domain of the design process has widened to a variety of disciplines including Sociology, Social Anthropology, and Psychology. In parallel with this change, attention has moved from design as an individual problem-solving activity to groups of people interacting within and by means of a variety of design projects.

Interest in using narrative has increased particularly in computer related design areas including human computer interaction design and architecture. However, narrative has simply been considered as a tool for a specific purpose; often referred as 'scenario' as a tool to generate design ideas (Carroll, 1995). Polkinghorne's view on narrative as the primary form by which human experience is made meaningful demonstrate that narrative thinking is an important part of the design process, thus narrative needs to be explored holistically across all design areas.

2. Definition of terms

2.1. Narrative

The concept of narrative is a complex and multi-dimensional one which cannot be captured in a single definition. Roof (1996) argues that narrative is the logic which can never be explained but always narrated. However, by reviewing major views on narratives, a shared vision can be built. The term 'narrative' originated from a Latin word, 'narrare', meaning 'to make known'. Since the time of Aristotle's definition

of narrative as ‘*a representation of an action*’ in ‘The Poetics’, definitions of narrative have been developed by a number of scholars. As a reflexion of these views, the Oxford English dictionary (2005 edition) defines narrative as ‘*an account of a series of events, facts, etc., given in order and with the establishing of connections between them; a narration, a story, an account*’.

The boundary of ‘what is narrative’ and ‘what is not narrative’ may vary among these definitions, but two elements are found in most definitions: they are what is told, and how it is told. Table 1 illustrates these commonly agreed two elements of narrative among narrative researchers by summarising the views of various western scholars for more than two thousand years. Chatman (1989) argues that a narrative consists of expression (discourse) and content (story) while Genette(1980) identifies narrative as statement (discourse), the content of the statement (story), and the action one performs when producing the statement (narration). Lacey (2000) proposes that *a narrative represents information as a connected sequence of events*. Lacey’s definition is simple, includes some established points and builds on them, and therefore will be used as a starting point in this study.

Table 1. Two aspects of narrative: ‘what is told’ and ‘how it is told’

Scholars	Narrative	
	What is told	How it is told
Aristotle (BC 350)	Mythos (plot)	Representation
Propp (1968)	Fabula (fable)	Sjuzhet (story)
Barthes (1977)	Histoire (action)	Discourse (discourse)
Genette (1980)	Contents of statement (story)	Statement (discourse)
Chatman (1989)	Contents of expression (story)	Expression (discourse)
Lacey (2000)	A series of events	Representation
Oxford dictionary (2005)	A series of events	Account

Structuralists take the view that narrative consists of story and discourse. Story is a temporal sequence of events or changes of state. These events might be real or fictional (Bruner, 1990). Discourse is the mode of representation of that story, which is based on time or logical order (Chatman, 1989). Narrative is the

interrelation of the two as an articulation. Relating these views to the Lacey's definition of narrative that was explained earlier, a working definition of narrative has been developed. For the purpose of this study, the definition of narrative is defined as following: *the description of at least two real or fictional events in temporal or logical order*. This broad sense of narrative definition allows one to explore a wide range of the characteristics of narrative used in the design process. The definition proposed in this section will be used to identify and analyse narratives from the observational study presented in the later part of this study.

2.2. Design activity

Design activities, performed either in parallel or in sequence, constitute a design process. Some of the examples of these design activities include analysing, choosing, communicating, deciding, decomposing, defining, developing, discussing, documenting, drawing, evaluating, exploring, generating, integrating, inventorying, judging, justifying, managing, modelling, negotiating, observing, optimising, presenting, reading, reflecting, searching, selecting, simulating, solving, specifying, structuring, taking initiatives, talking, testing, thinking, unifying, validating, verifying, and writing (Reymen, 2001, p.13).

Up until the past two decades, most of what was known about design activity and the design process derived from studies of individual designers, presuming that it is less complicated and thus easier to study. However, even when a designer is working alone, it can be argued that design is still a social activity that occurs through interactions with other people and other objects in the environment. Most design is the result of group effort, and as the nature of design projects becomes more complex, designers seek new ways of working together, often through collaboration and co-operation with people inside or outside the discipline. With increasing research interest in recognising design as a social process, a growing number of researchers have been developing models to describe the group design process and list of activities during the design process. They recognised that a design process does not only consist of content-related activities such as generating ideas and evaluating solutions, but also include process-related activities such as planning and controlling of the project and meetings.

These activities fall into two categories: activities related to the problem solving aspect and the management aspect (Figure 1). The ‘problem solving’ activities include introducing, accepting, rejecting, clarifying, refining, evaluating ideas, while the ‘management’ activities include briefing, scheduling, and planning tasks. For example, Olson et al. (1996) distinguished these two types of activities as the ‘problem-solving aspect’ and the ‘organising the work aspect’. Similarly, Milne (2000) categorised them as ‘information-related’ activities and ‘process-related’ activities while Stempfle and Badke-Schaub (2002) referred them as ‘content related’ activities and ‘process related’ activities.

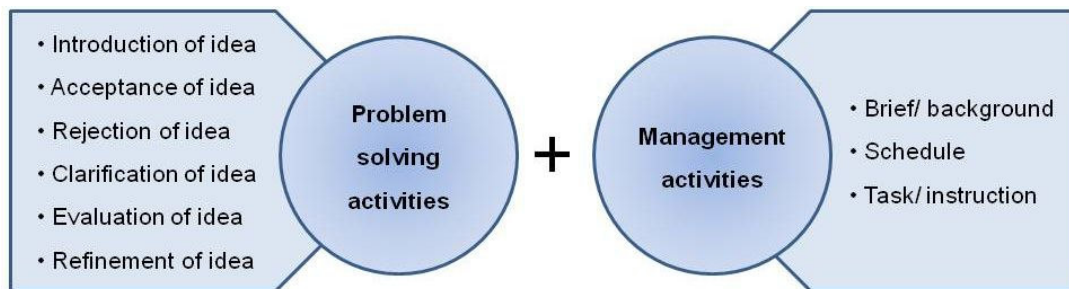


Figure 1. Two types of design activities

3. Research overview

The client company chosen for the observations was a UK-based retail organisation which sells parenting and baby products. Founded in 1960s, it has grown internationally and expanded its product range from babywear and babycare products to children’s toys, clothes and maternity wear. For the past few years, the organisation has been struggling with its weak performance and losing customer loyalty. Out-of-date brand positioning and the design of its product range were identified as the main problems. In order to regain customers’ confidence and create an up-to-date organisational culture, the new management of the organisation decided to invest in design-related areas. Among these, three major design projects were given to different design companies, which were considered leading design companies in their own areas. The design projects included 1)

redefining the organisation's brand profile and re-creating its brand position, 2) changing its brand identity including a new logotype, typography, and colour palettes, 3) designing a new store format and guidelines.

A senior team from the client company was involved throughout all three design projects by participating in design presentations and giving feedback to designers. The client company's CEO, business strategy director, marketing director, and design director were involved in the three design projects, and a senior design consultant was appointed as a mediator, facilitator, and advisor for better design outcomes. Figure 2 illustrates the relationship between these design projects.

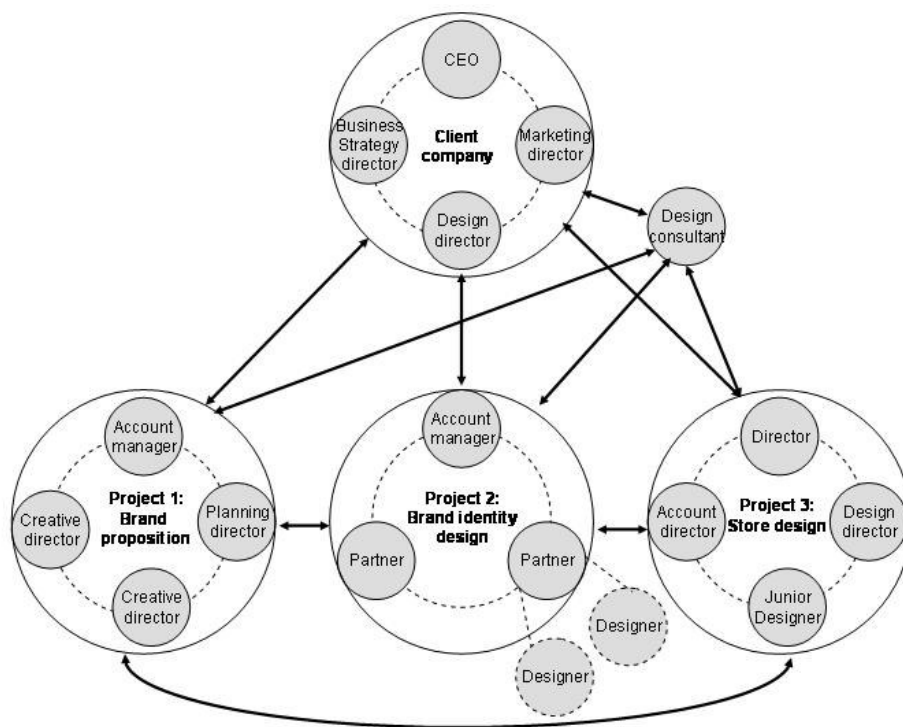


Figure 2. The structure of the three design projects

The three design projects were chosen for the observational study because they represented the complex nature of design collaboration in design practice. Each project had its own design process, from concept development to detailed design and its implementation. However, because the design outcomes must

deliver a coherent message representing the overall brand identity (the story) of the client company, constant communication among the members of the three design projects was important in order to share the core theme, update their knowledge and apply it into their own design outcomes. The chosen design projects also covered a wide range of design disciplines including design strategy, graphic, product, and interior design. Previous studies of narrative in the design context have been focused on a single design discipline, mainly in engineering or computer software design. By comparing the analysis results of the role of narratives during the design meetings, the similarities and the differences of narrative styles, such as structure, element, and the role of narratives, between the three design projects can be identified.

4. Research method

Meetings were recorded by a digital voice recorder to capture verbal conversation. Where possible, a digital camcorder was used to enhance the understanding of the context of conversation by including non-verbal activities. Overall, the data set consisted of 14 meetings, over 30 hours of voice-recordings, along with video-recordings of 5 meetings. Field notes were made during each meeting and used as a supplement. Recorded data from the design meetings were transcribed into continuous written texts, then were segmented according to the intervention by speaker. At the analysis stage, the working definition of narrative was applied to extract narratives from the transcription, and a total of 28 conversation units were identified as narratives from the transcripts. Table 2 provides an introductory list of narratives.

Table 2. Summary of narrative

No	Story title	Summary
1	All about the client	Chatting and gossiping about the first encounter with the client.
2	The receptionist	The lead designer's personal experience of the warm welcome from the receptionist at the client's office.
3	Italy	The designer's personal experience of an independent shop she visited when she was in Italy.
4	The push chair	The lead designer's imagined personal experience.
5	Mary Poppins	A well-known children's story about a nanny who uses her magic to get everything get done and looks after the children perfectly.
6	Company history	The lead designer told the story of the company's history.
7	Shop assistant	The lead designer talked about the assistant he met in a store he visited.
8	Maternity photo	The design consultant talked about an interesting photograph he'd seen of a very pregnant woman.
9	Orange	The client's CEO's personal story why he doesn't like orange colour.
10	Being a mother	The client's marketing director's personal story of being mother.
11	Founder's chair	Humorous episode of the company's founder with his chair.
12	Car and snow	Humorous episode about the design consultant after the last meeting.
13	HP	A story of episodes on how HP manages to be innovative.
14	Barbar	Well-known children's story about an elephant family.
15	Customer journey	A notional scenario of potential customers' reactions as they entered the store.
16	Building project	Story of the design consultant's past project.
17	Sliding door	Story of how the proposed design idea (sliding door) could go wrong.
18	Music in stores	Personal experience of being influenced by music in stores.
19	French Museum	The project manager's story of being at a French museum.
20	Airport music	Personal story of being influenced by music at a busy airport.
21	Clients episode	Background of clients, where they are from and what they think, characteristics of each client.
22	Being a dad	Story of a friend of a participant, whose personality changed after being a dad.
23	Restaurant	Personal experience of tough parenting, difficulty of having dinner out.
24	Weekend	Personal experience of tough parenting, not being able to relax at weekends.
25	Cinema	Personal experience of tough parenting, difficulty of going to cinema and finding nanny.
26	Mass	Personal experience of touch parenting, children making mass at home.
27	Happy time	Personal experience of parenting, bringing happiness.
28	Scenario	Creating advertising scenario of parenting.

5. Research findings

5.1. As a way of understanding the design project and its process

Participants, in particular designers who were in charge of each of the three design projects, seemed to think of their design project and presentation as a narrative. Expressions that are related to narratives such as ‘story’, ‘play’, ‘cast’, ‘setting’, ‘theatre’, ‘drama’, ‘telling a story’, ‘(client) story’ were used to explain the nature of design projects. For example, during the store design project’s presentation, clients criticised that the design idea was too gentle and not strong enough to compete with other stores. Then, the design consultant says, “... This is just the theatre in which the play takes place. So the most important thing is obviously the product, overwhelmingly important. They are the stars, if you like, they are the casts so are the stars, and then the idea, which is the play, which we saw that this morning with (Designer i), this is the place to enable that play strong.” This statement indicates his cognitive understanding of the design projects as narrative elements.

The design projects were also described as a form of narrative, a journey where a group of people solve a certain design problem. The structure of design meeting also follows narrative structures: in many cases with beginning, middle, and end. For example, at the brand identity design team’s first meeting with clients, the designers led their design presentation by describing what they had as background (beginning), the concept (middle), and their work (end). When discussing the background, they began the presentation by explaining:

- What they have done (in time/logical order),
- What they’ve asked to do (in logical order), and
- What they’re going to do (in time/logical order).

When analysing the position where the client company is now, they constructed a time related narrative, the ‘company history’ story (story no.6), to provide better understanding. This narrative adapts a typical

narrative structure by describing 60s (good), 70s (best), 80s (slightly down), 90s (dramatic down), now (down) and positive future. Figure 3 illustrates the structure of the 'company history' story.

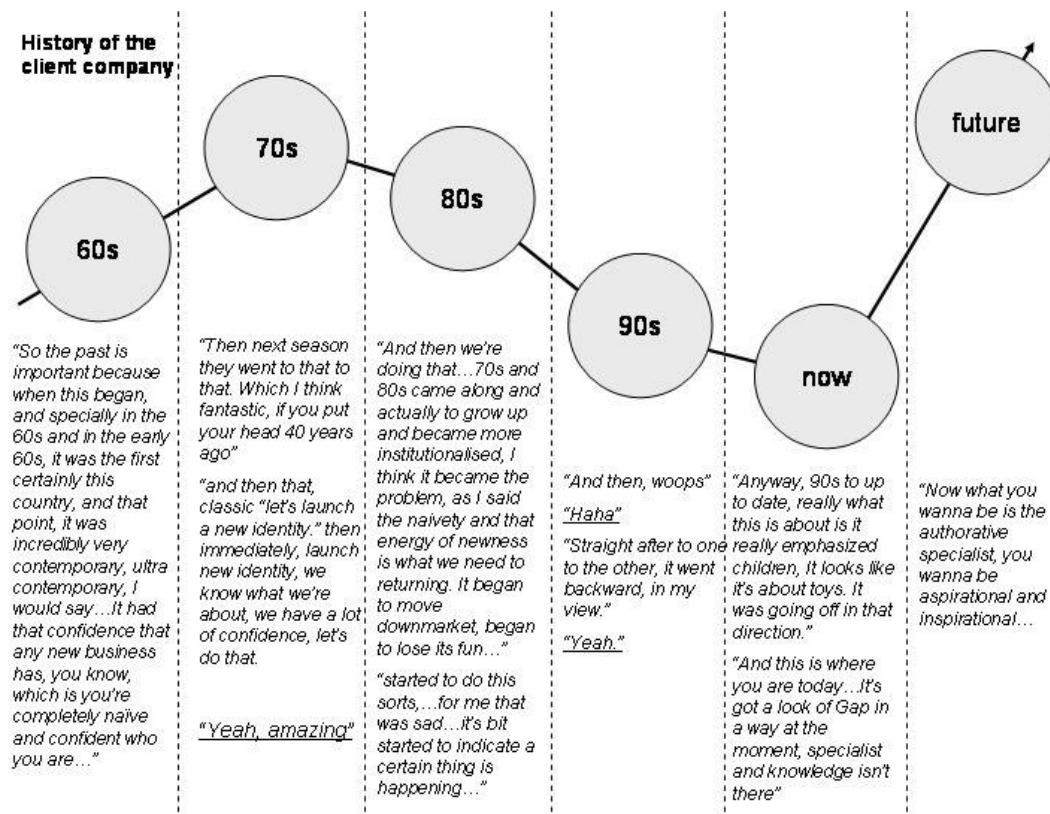


Figure 3. Applying narrative structure to explain the history of the client company

During this meeting, the designer also expressed his cognitive understanding of the presentation structure by saying "Let me follow my story, otherwise I'll lose the plot."

5.2 As a way of assisting problem solving activity

As previously discussed, design activity can be categorised into two groups; design activities concerned with problem solving process and management activities concerned with managing the design project. The various roles of narratives that were identified from the observations also supported both problem solving activity and management activity. To assist the problem solving activity, narratives were generally used

either to anticipate or describe customers' needs or design outcome or to recall past experience or events. The following list illustrates the various roles that narratives played to support problem solving aspect of design activity.

- **Stories are used to understand the needs and desires of clients and customers:** *the 'all about the client' stories* (story no 1), *the 'being a dad' story* (story no.22)

Throughout the process of the design project, all three design teams spent a considerable amount of time sharing the background of the client company and the characteristics of each client members. This was often done by telling narratives that associated with the clients. For example, a considerable amount of the first internal meeting of the brand design project was spent on chatting and gossiping about the first encounter with the client, what it was like meeting new people, making hasty judgements and assessments about where they were from, what they thought, what they were like and how successful the encounter was in starting to make relationships with them as individuals. Particularly at internal meetings, episodes with clients were told in all three projects. Narrative was used as a way of understanding the client company, the personality of individual members of the client team, the project background. Informal stories were used often as a way of generating ideas and entertaining the design process. In a more constructed meeting environment, these stories were difficult to find. However, observation results demonstrate that sharing stories about their clients is often how designers understand their project in reality.

- **Stories are used to anticipate the cognitive and emotional reaction of clients and customers about the design:** *the orange story* (story no. 9), *the being mother story* (story no.10)

Narrative was also created when designers anticipate the potential reaction of the client about the proposed design concept. Particularly, stories predicting the intentions and thoughts of the CEO of the client company. For a large proportion of time the meeting focused on the stakeholders (characters) as much as the design projects itself. Through narratives, team members often anticipated the potential reactions of

customers of the design outcome. First person's voice was frequently used when describing customer's feeling such as 'I don't want to feel xxxxx'. Designers used a form of narrative structure to describe their design ideas. For example, during a concept development meeting with clients of the store design project, the junior designer used a form of narrative to describe customers' journey as they come into the new store by using expressions such as "...You come in and see...."

- **Designers tell stories to describe and illustrate design concepts, ideas, rationales, and hypotheses:** *the customer journey story* (story no.15), *the Mary Poppins story* (story no.5)

During design meetings, narratives were often used as examples how the design ideas can be used when designers describe how customers would use the design. Particularly, during a meeting of the store design project, the designers used the notional scenarios of a potential customer' reactions as they entered the store. By telling stories that contains a number of scenarios as if the rest of the participants were the 'potential customers', the designer compared the entrance to a proscenium arch in a theatre and talked about how a customer would see the scenery as they came through. The design consultant built on this idea of using a narrative of a customers 'journey' into the store. He emphasised that this was the way to appreciate the design proposals that the designer was making. By illustrating the customer's journey, the designer opened up the potential use of the proposed design.

- **Designers remember and interpret relevant past experience with similar products or with previous processes in the form of narrative:** *the building on the customer story* (story no.16)

At one meeting of the store design project, the clients were not sure about a particular design idea proposed by the design team. While examining its feasibility, a designer told a story referring to past experience of a successful project. By giving the example, the designer reassured that when they used the similar approach at one of their previous design projects it worked well. The design consultant then told his story about an architect he commissioned to design his previous company's building in the late seventies. He had suggested creating a vertical vista throughout the building as well as horizontal ones on

each floor. The point was to connect all the different floors and levels of activity into one big volume so that people could feel a sense of the whole space. Then when they went up or down stairs they were doing it within a single transparent volume. The design consultant commented that taking this idea might be useful in making the volume of the client's big main store a presence rather than a series of floors and departments which it currently was.

- **Stories advocate and illustrate chosen ideas with rationales, demonstrating their value: *the customer journey story (story no.15)***

During the store design project meetings, narratives were often used as a dominant means of illustrating the design ideas with rationales, demonstrating their value. Proposing the design of interior, shape and arrangement of furniture and customers' journey in the store were expressed as narratives in the form of scenarios. When the customer journey story was told, the participants often responded with personal preferences of design elements again in the form of narratives.

- **A coherent index of significant past events and discussions are summarised in the form of *narratives: the orange story (story no.9)***

During the concept development meeting of the brand identity design project, the design team and the client team could not agree on which colour they should decide as a main colour. The CEO of the client company explained how the brand's colour had been changed many times since he joined the company. He said that the brand used to have a strong theme, then while going through various changes such as 'blue' and 'green', the brand lost its own identity. The changes were illustrated in time and logical order through a narrative form. Then the CEO explained why he disliked the suggested colour scheme by describing that the colour reminded him of his mother's kitchen cabinet and his childhood memory. The 'orange' story was born, it entered the experience of the designers, and those words referred to that story which then became an instrument to add to, or measure, other story experiences.

- **Stories are used to capture and understand the real world context:** *the restaurant story (story no.23), the weekend story (story no.24), and the cinema story (story no.25)*

At the first internal meeting of the brand proposition design project, male designer told stories about how completely different his “post-baby” life was. There was always something to be done, some disaster to avoid, or some breakthrough to enjoy. Nothing was what it had been, and you could never switch it off. All the other parents agreed saying that life involved more work now—that you didn’t get enough sleep that you had to be more responsive. There was not much leisure, and your wife wondered why you were not doing more to help her. One of the designers mentioned an acquaintance that he had always considered rather shallow and brusque. Now that this acquaintance was a father, he seemed wiser, more generous, more sympathetic.

This conversation helped the designers to capture and understand the real world context of parenting and created the inspiration for the work that came next. It was all about the reality of raising children, the ups and downs of parenting. After long exchanges of parenting stories, the team came up with the client company’s brand proposition and the radio advertisements that won accolades and a coveted prize.

5.3. As a way of assisting management activity

Design as a social activity consists in the construction of social agreements. The findings from the observations of the three design projects provided evidence that narrative can be a mechanism that aids this construction, thus assisting design activities that concern management of the design project and its social process. The following suggests the list of roles of narrative to support management activity.

- **Designers often motivate themselves with stories by giving personal meaning to a given design project:** *the ‘being a dad’ story (story no.22)*

It was often found that designers invented their own narratives or referred to existing narratives related to their work or to their clients during design projects. Sometimes, a story inspired both designers and clients. At other times, it can be a management tool for communication, overcoming obstacles to understanding. During the meetings of the brand proposition project, narratives were identified most often. It was the main way of exchanging, expressing, and sharing their ideas of what the client company stands for. A number of episodes based on the designers' personal experience of being a parent were presented in narrative forms and expressions. Messages from each narrative formed their strategy of brand proposition later, and also created new narrative for an advertising campaign.

- **Sharing organisational stories helps to build teamwork:** *the receptionist story (story no.2) and the shop assistant story (story no.7)*

During the first presentation meeting with the client team, the lead designer of the brand identity design project told a story based on his personal experience of the warm welcome from the receptionist at the client's office. This experience made a big impression on him about the quality of the client company. They would be warm and open to work with. The receptionist story was told at the internal meeting with designers and reused at the following client meeting. This story was used to show client their understanding of project, and clients' culture by using episodes and to build teamwork between designers and clients, thus it can be claimed that sharing organisational stories puts designers and their clients on the same side.

- **Stories create friendly atmosphere:** *the car and snow story (story no.12)*

During the observations of design meetings, it was found that design meetings were not always spent discussing the design project. Occasionally conversations among participants were directed into the topics that are not directly related to the design project. Stories were often shared to create friendly atmosphere, which provided a sense of togetherness as a team. This was often found before and after design meetings. For example, the 'car and snow' story was told after the client and designers meeting of the store design

project. It was a particularly tough meeting because clients did not like the presented design concept. As the meeting came to its end, the design team’s project director noticed it was snowing outside. He was prompted to tell a humorous story that the design consultant had told him about visiting the client a week before. The design consultant had left after a meeting with clients in heavy snow. He drove an expensive car by one of the most famous brands in the world. As he drove down the hill from the meeting his car turned into a sledge and was out of control. He managed to slide it into the side of the road. He was passed by many other car brands that he had despised, all perfectly in control and driving down the hill with no difficulty. After hearing this story, designers and clients who were at the meeting all laughed and continued the conversation about unusual weather in the UK and the problems they have because of it. By giving a sense of human relationship, the car and snow story created a friendly atmosphere. During clients meetings, funny episodes were told to ease the formal atmosphere of meeting room before and after meetings.

This section provided different roles of narratives that aid a wide range of design activities. Table 3 summarises the role of narratives that concerns group-based design activities.

Table 3. The role of narratives in group-based design activities

Design activity	Focus	Role of narrative
Problem solving activity	Imagination: future	To understand the needs and desires of clients and customers To anticipate the cognitive and emotional reaction of clients, colleagues and customers about design To describe and illustrate design concepts, ideas, rationales and hypotheses To provoke more design ideas (Baek, 2006)

	Knowledge: past	<p>To remember and interpret relevant past experience, with similar products, or with previous processes</p> <p>To advocate and illustrate chosen ideas with rationales, demonstrating their value</p> <p>To summarise a coherent index of significant past events and discussions</p> <p>To capture and understand the real world context</p>
Management activity		<p>To motivate members of the design team</p> <p>To build teamwork</p> <p>To dissolve conflict and ease atmosphere (Baek, 2006)</p> <p>To create friendly atmosphere</p>

6. Conclusion: the role of narrative in design thinking

Narrative is not simply a literary form, but a basic property of the human mind. It dominates human discourse and is fundamental to our understanding of human experience. It can offer important ways of encoding human truth and experience and, in turn, sharing knowledge and insights with others. In design world, the role of narrative can be interpreted in a number of ways, depending on which perspective it is analysed from. This study focuses on the role of narratives in design thinking, concentrating on how the narratives supported design activities. According to the observation findings, the content of each narrative served to support both problem solving and management activities in the design process. During the observations of the three design projects, it was also found that designers used narratives as a way of understanding design projects. Taking this finding into account, the role of narratives can be summarised in three categories:

- as a way of understanding design projects and its process,
- as a way of assisting problem solving activities, and
- as a way of assisting management activity.

During this study, different types of narrative were found in design thinking, ranging from abstract level to fuller and more complete level. The unconscious intention behind the use of narratives also changed during each stage of the design process. At the pre-design stage, both clients and designers developed a design brief which represented the design issue, the existing reality. Narratives were constructed to anticipate the needs and desires of clients and customers. Much time was spent in understanding the project and creating constructive empathy between clients and team members at this stage. Narratives about the project and about the clients were collected and shared among group members to embody and transfer knowledge, insights, and information. However, this finding has to be treated as a general rule because in reality the distinct phases have large overlapping areas during implementation. For example, in the early phases of the design process, the briefing phase extends into the concept development phases and even into the design and planning phase.

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