

Once Upon A Sponge: a case study on research through design

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Introduction

Creative platform Papairlines developed the project *Once Upon A Sponge* in order to investigate the evolving role of design, the new responsibilities of the designer and “research through design” as a tool in the digital age. The process and outcomes of the project are presented in the following case study.

Design in the Digital Age

Since the turn of the century, design has been gradually exploding into new directions. An attempt for industrial designers to redefine industrial design in a post-industrial age has been a burning issue and is partially owed to the relocation of production and the exponential growth of scientific and technological developments.

Design has always been the evident expression of creation, novelty and innovation. Once, the blending of craft, aesthetics and the realisation of opportunities given by mass production placed the designer in the forefront of technology and innovation. New available materials, novel manufacturing techniques and methods coming out of World War II were bursting towards the public domain [1], forming into products that would complement basic human needs [2]. Here, the produced commodities tend to cover the visceral and behavioural levels of design, being aesthetically pleasing and functionally sound [3]. To a great extent, today, having passed from the industrial to the information age, these levels continue to be part of design and through new media technology they are applied in a new medium, utilising digital tools that allow faster and more efficient work.

What is rather interesting though is the rising number of designers who attach and explore meaning in their produced work, thus touching the reflective level of design [3] where form does not follow function, but form follows idea [4]. This indicates a shift within design from the material (form) to the immaterial (concept), a characteristic of the digital age where information is a given and our mode of operations heavily influenced by virtual representations. The immaterial calls for “design mindfulness” with sensitivity to social and cultural surroundings along with a focus on services rather than things [5], even if objects are the final manifestation of an idea.

The exploration of meaning has been vital in a whole new range of design “genres” where traditional design disciplines become the medium for expression of cultural phenomena, social trends, new uses of technology and forecasting the immediate future through the development of blue-sky concepts with given means [6]. In this sense, designers use their way of thinking – design thinking – and design skills to address intangible ideas and concepts through a tangible and comprehensive manner. Design has been deploying its skills in fields like critical theory – communicating social and cultural phenomena, service – developing immaterial products, strategy – adding “bigger picture” design considerations in decision making, innovation – producing new scenarios through design and facilitation – collaboratively developing solutions with potential users, just to name a few.

These new “genres” share a holistic approach to complex issues, problems and phenomena. They mostly involve the participation of non-design related disciplines within a designer's

brief, and designer's participation in non-design projects, making design part of the strategic planning process. This interdisciplinary orientation holds promise for the future as a response towards an ever-complex array of problems that require more than one "ways of seeing".

It is in this light, using its heritage of narrative, ideas generation, prototyping, facilitation and diversity, design attains the role of conveying meaning to the public domain through shaping experiences.

One could argue that design in the digital age is a comprehensive "cultural glue".

Designer in the Digital Age

Traditionally the designer was always considered to have the vision, the imagination and the elasticity to identify, adapt, integrate, include, consider and celebrate the constrain as an integral part of the design process and a creative catalyst in moving forward and problem-solving. Not only is he an ideas' generator but also has the capacity and the responsibility to turn them into reality in the form of an object, a service or an experience.

On the hypothesis that we are now living in an ideas centred economy, the designer is inevitably becoming more intrinsic to the evolution of society, synthesising solutions through thought and action [7]. In that respect, the designer's responsibility has extended beyond the material qualities to the non-tangible project requirements of understanding and connecting with his audience through the offering of a complete experience rather than just a single product.

His role has substantially evolved from being a form giver [7] towards a more complex and dynamic one, that of interpreting a constantly changing reality. As Sean Donahue states "*... in this model, design and the designer are integral to the concept from its inception. The model utilises designers' command of form and communication to develop direction and focus*" [8]. Acting as the middleman between research, science and the real world he is conceiving and devising scenarios and strategies that help decode, communicate, humanise and implement concepts. Teaming up with scientists, designers open scientific progress up to the world, acting as constructive collaborators [7].

To further enhance the user experience, the designer intentionally imbues ideas with rich underlying cultural, social references and archetypes, which he later uses to embed narratives and tell a story. Stories can make facts significantly more relevant and coherent to their intended audience, but can also influence the interpretation people give to facts by delivering a context in which they fall into [9]. Therefore, story telling is an invaluable asset in the hands of the designer as a means to engage on a more personal level and enable him to project desires, aspirations and needs. However, for a "future story" [9] to be accurately communicated in order to achieve its intended purpose the designer needs to fully understand the recipients, their world and the context in which they operate.

As a consequence of his new responsibilities, the new designer has also grown to become more extrovert, open to collaboration and co-design schemes, seeking the feedback and the participation of his audience in the process of making. Whether working on his own ideas or acting as a facilitator between initial concept and application, appropriating, strategising and planning, the designer is responsible for the overall impact of the end result on a visceral, behavioural and reflective level. The role of the facilitator is one that requires great skill and expertise, which often stretches further than making the process easier into undertaking more complex responsibilities. The characteristics of a successful facilitator can be reflected through his ability to make people feel included and understood, his willingness to act selflessly in order to help achieve collective objectives and his adaptability to step up as team leader or step down as flexible team player whenever required [10].

To achieve an in-depth understanding of the greater context the designer uses a number of research tools and methodologies to assist this process, namely qualitative, quantitative or even ethnographic research. However, it has proved equally if not more vital to use the very act of design as a means of investigation. This form of research is often referred to as «Research Through Design».

The main difference between design in the traditional definition and design functioning as a research tool lays on the goals and outcomes of each. A “research through design” project is not only responding to the requirements and constrains of a specific brief but it is also aiming to address and investigate a broader spectrum of questions over a period of time. The work produced for this purpose, is later intended for use as a case study through which the designer can evaluate his proposals, examine the relevance of the assumptions, endorse lateral thinking and generate new questions.

Critical reflection is a fundamental aspect of the “research through design” process as it focuses on assisting the designer in linking the questions to the outcomes. The volume and diversity of work produced in the course of such a formalised study provides the designer with a wide range of solutions and at the same time challenges the different design disciplines to critically articulate their role and input in the research process. The outcomes of such an investigation are not necessarily marketable “products” but they can form a powerful tool for researchers, academics, marketers and the public alike in order to better understand the value of their contribution towards a complete solution [11].

Once Upon A Sponge: The Case Study

The Concept

Part of Papairlines’ field of work is to experiment with different research methodologies that promote lateral thinking and prototype scenarios through design. *Once Upon A Sponge* is a self-initiated project exploring the connection between constrain, design thinking and their impact, for which Papairlines embraced the role of the facilitator. Further to generating the concept, they coordinated a group of creatives towards shaping a meaningful designed experience for the public. In addition to presenting a range of newly designed objects, the main scope of this project was to research how an object can tell a story, whether constraints can act as a stepping-stone for moving forward and whether design today can take on a more active role.

Papairlines, in order to bring the multifaceted character of design in the digital age to the forefront, invited eighteen designers to reflect, conceptualise and construct unexpected imaginative functional objects based on a constrain. In addition to showing a curated collection of objects, the project intended to engage with the public in an informative and educational way, in order to make it aware of the presence of design in everyday life. *Once Upon A Sponge* attempts to expose the process and methodologies behind design, from the initial stages of concept generation to the end result. Thus, through the project brief Papairlines aspired to receive submissions that help develop an emotional connection between the user and the object through story telling, as the project title implies.

The use of an exaggerated material constrain was deemed appropriate to communicate how design can take on-board a specific restriction. Furthermore, it demonstrates the power and resourcefulness of design thinking while creating a family of objects with common origin, shifting the viewer's focus from materiality to idea. The concept of “form follows idea” becomes a prerequisite for the realisation of the objects and the uniform starting point, a democratic medium for expression.

In the quest of identifying the most appropriate typology that would best communicate the concept, Papairlines considered a number of materials under specific requirements. It had to be a familiar and widely recognizable everyday object as well as an inexpensive and accessible raw material. Malleability, visual impact, diverse material properties and bold colour scheme were central to the decision. The typology that encapsulated best all the above was the yellow and green kitchen sponge, a neglected everyday object whose directness as a raw material overcomes its mundane aspect as a product.

To demonstrate the potential of the material, as well as to set a standard in regards to submission quality and finish, Papairlines designed a prototype in the form of functional headphones (images 1 & 2). This prototype used the sound absorbing property of the sponge and along with a number of fabrication techniques provided food for thought to the participating designers.



Image 1. In-flight entertainment system



Image 2. In-flight entertainment system in the making

Once Upon A Sponge as a project was realized in the form of an exhibition between May and June 2012. An exhibition is an open and accessible format that allows for a direct dialogue with a diverse audience. It provides an interactive and tangible experience for the visitors and can showcase a coherent thematic range of objects, directly deriving from a constrain-led design thinking process. The project was presented in metamatic:taf, a gallery and cafe space in the heart Athens' creative community, supporting interdisciplinary initiatives that reach out to diverse audiences.

The Designer Submissions

The designers participating in *Once Upon A Sponge* responded to the brief with at least one submission. Papairlines were pleasantly surprised by the wide range of themes and aspects covered by the produced work, using the sponge constrain as a creative means of expression. Retrospectively, the submissions, some of which are discussed below, could be categorised in three groups based on: the examination of the material properties, the manufacturing techniques and the meanings they convey. Although the objects focus on one of the above categories, on a secondary level they tend to cross over to more than one.

For the first category, some of the material properties used as a starting point for discussion by the designers were absorption, elasticity, texture and transparency. *Hardbowls* by Jazzt Design (image 3), are “a series of woven surfaces that find their place in the entrance of a home, reverse the characteristics of the sponge”. The designers wove strips of sponge, which were later dipped in liquid glass, resulting in the unexpected subversion of the tactile properties comprehended by the viewer only upon touching the object. On the other hand, *Mellow* by Christina Biliouri (image 4), examines opacity. Using the shape of a perfect cube,

the material density and changing thickness affect the form when lit, darkening the edges and transforming the light glow on the faces from “tangerine to amber and from orange to saffron”.



Image 3. Hardbowls by Jazzt Design



Image 4. Mellow by Christina Biliouri

The second family of submissions concentrates on manufacturing techniques and technical solutions used by the designers to assemble the raw material. *Sponge Bag* by 157+173 Designers (image 5), connects individual sponges with a purpose printed ribbon, reconstructing the archetypical paper bag through a shell-like surface, “retaining the bag’s flexibility and freedom of movement, baring resemblance to a used paper bag” that in this occasion doubles up as packaging and carrier for delicate goods. *Sponge Basket* by Vassilis Mylonadis (image 6) applies a traditional wicker basket weaving technique to produce a familiar yet unexpected visual effect. *Clean Data* by Zaxos Stathopoulos (image 7), more than using the metaphor of acquiring knowledge, is a laptop case “constructed of 48 sponges, sewn together with a few hundred meters of thread” retaining its construction elements visible, making an evident connection to the assembling steps. *Faces* by Ritsa Anastasiadou (image 8), a table-top earring stand, requires an intricate die-cut mold to replicate a female profile.

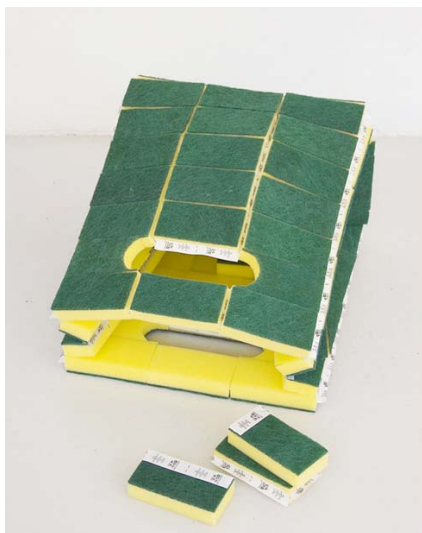


Image 5. Sponge Bag (left) by 157+173 Designers, detail (right)



Image 6. Sponge Basket by Vassilis Mylonadis



Image 7. Clean Data by Zaxos Stathopoulos



Image 8. Faces by Ritsa Anastasiadou

In the final group, objects focus on narrative rather than function and the ability to develop a psychological and emotional connection with the audience. *iSponge* by Sotiris Lazou (image 9), builds upon contemporary culture, making a smartphone case out of a single sponge, exaggerating the craze and lifestyle that comes along with a technological product. *No Noise Backgammon* by DEDE Dextrous Design (image 10), merges the archetypical backgammon game play and the typical sound nuisance attached to it, into a silent experience. *Giant Sponge* by Kanella (image 11), a sponge turned dish dryer, supersedes the raw material without removing it from its context. Instead, it creatively subverts its form and function offering a compelling visual narrative. *Soft Drink* by CTRLZAK (image 12) presents a series of containers where the liquid is absorbed rather than contained, thus “*cancelling the object’s form*” provides a novel experience to the user through a stimulating and fun new behaviour.



Image 9. iSponge by Sotiris Lazou



Image 10. No Noise Backgammon by DEDE Dextrous Design



Image 11. Giant Sponge by Kanella



Image 12. SoftDrink by CTRLZAK

The Exhibition Design

The invigorating, lively theme and objects submitted had to be accompanied by a casual yet meaningful experience on a very limited budget. The entire setup ought to be fun to explore, open and engaging, encouraging interaction and adding to the element of surprise that derives from the objects.

In order to achieve the above, the visitor's experience was broken down and articulated in different layers allowing one to choose the depth of his involvement with the exhibition. The communication material was subtle, yet descriptive enough to evoke curiosity. The main exhibition space was carefully curated to add meaning to the overall experience without distracting the attention from the exhibits. An interactive sponge installation was set up to engage with the public, while the addition of a reading room offering relevant literature provided a sanctuary for those visitors curious about the greater context of the project. This layered exhibition experience was woven into the spatial layout (image 13).

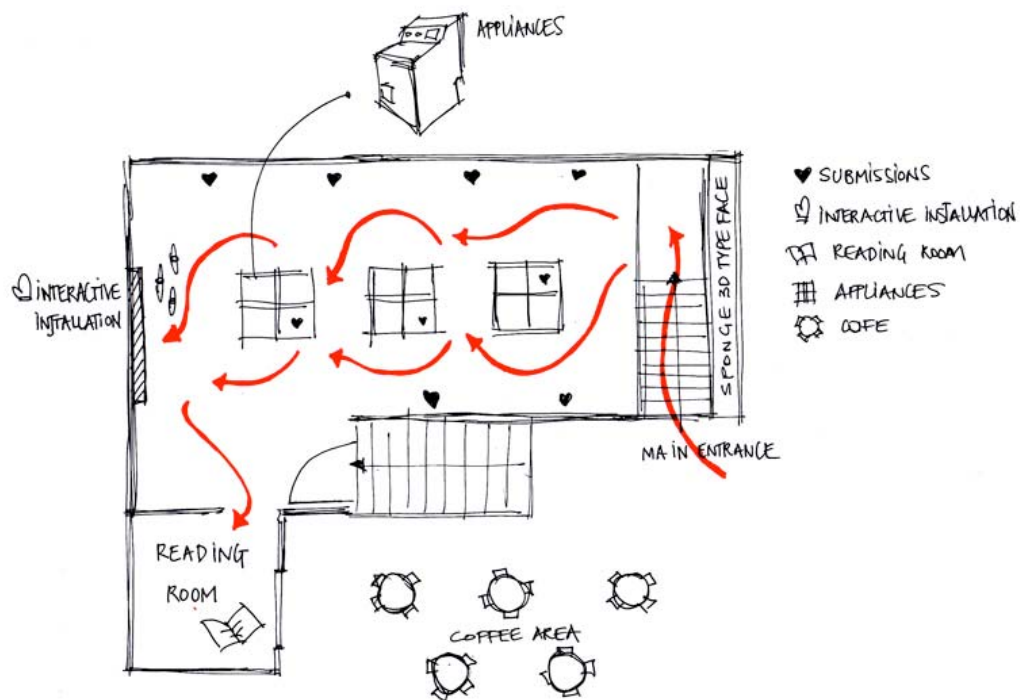


Image 13. Exhibition space layout

The communication material was developed to capture the essence of the exhibition. For the main communication image on the press release, the exhibition title appeared in the form of a sponge 3D typeface, giving a subtle first hint of what to expect (image 14). The look and feel of the catalogue given as a free handout for the duration of the exhibition drew visual references from the sponge and was shaped to become a casual souvenir. The press kit (image 15) carried affordances of Papairlines as a “paper airline operating design flights”. Thus, it was packaged in the form of an airline sick bag, containing an invite-passenger boarding pass, Papairlines branded give-away material, an exhibition catalogue and a kitchen sponge specimen, indirectly inviting the recipient to become pro-active.



Image 14. Main communication image



Image 15. Press Kit

The spatial design was a key aspect to immerse the visitor in the experience and was developed around retaining a surprising factor. In the main entrance of the exhibition space stood the actual 3D typeface title creating a familiar visual link for the visitor before he witnessed the full range of objects. Operating on a limited budget, Papairlines team had to be very resourceful regarding materials and solutions, considering sponsorship in kind as a more feasible option, and therefore built a supporting network of companies and individuals. In this context, the display plinths were white goods donated by a recycling company, which made a one-month stopover in the exhibition space on their way to the recycling factory. Ovens, refrigerators, washing machines and dryers were white-washed and polished, appropriated and unified, stripped from their branding and characteristics, adding to the subliminal level of the exhibition and offering an intended domestic context for the exhibits (images 16 & 17).



Image 16. Exhibition view



Image 17. Display plinths

Complementing the submissions, the wall mounted interactive installation *Check-in Message Board* was strategically located to be visible from inside and out of the gallery space in order to foster the involvement of the public. This curated participation process renders the visitor a creator rather than a passive spectator and contributes towards a meaningful and memorable experience. In the form of a 3m x 1.5m board *Check-in Message Board* (images 18 & 19) uses 340 threaded sponges, each one revolving around its vertical axis, becoming a pixel that takes up a green or yellow colour. Thus, the board transforms into a duotone “pixelgram”, a temporary canvas for each visitor to alter and affect the space through writing a message or creating a pattern.



Image 18. Check-n Message Board



Image 19. Check-in Message Board Detail

Once the work on the board was complete, the visitors were encouraged to photograph their creation and share it with Papairlines on different social media platforms. The image submissions contributed towards populating a digital library of analogue messages, expanding the exhibition's virtual presence.

The final element in the main exhibition area was a wall graphic presenting the research questions along with a short text outlining the underlying ideas of the project (image 20). Adjacent to the main space was the reading room (image 21), which was designed around the 40m of uncut sponge material, straight out of the production line, provided by one of the exhibition sponsors. The coarse green side was used to clad the walls and floor, whereas the soft yellow part was cut in half, rolled and tied in two seats. A selection of literature on critical theory, design and visual explorations allowed the visitor to delve into the theory behind the exhibition, offering a perspective of design to non-designer visitors. The reading room provided space and time for the visitor to reflect upon the exhibition experience.

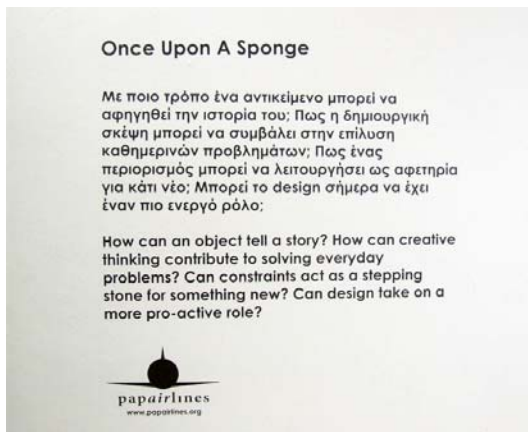


Image 20. Wall vinyl graphic



Image 21. Reading room

The Outcomes

The interactive *Check-in Message Board* proved particularly popular with visitors throughout the course of the exhibition. Papairlines collected a large number of image submissions containing messages and designs (image 22), the categorisation and study of which leads to very interesting observations. Most conveyed messages expressing one's emotions, immediate response to a stimulus or even a comment reflecting upon the content of the exhibition. Interestingly, there were far more text than artwork submissions portraying abstract forms of expression. The majority used the dark green side of the sponge as background and the yellow for the message, raising questions regarding the visual impact and legibility of the different colour options. The large number of images received proves that this interactive installation manages to actively engage the visitor, increasing the overall time spent in the exhibition and helping by-pass the "intimidation" of a gallery space.



Image 22. Check-in Message Board image submissions

The casual and fun mood of the exhibition was a positive surprise to many of the visitors who found themselves using and exploring the products through touch, as well as participating in conversations regarding their connotations. An exhibition visitor stated that "...*observing the other visitors and their responses, it felt as if the creativity of the designers, was passed on to the audience most of which were pleasantly and creatively surprised leaving the exhibition with a huge smile!*", while another added "...*such a great break from reality. I haven't seen so many happy people in the same place for a long time!*". A number of comments were referring to the freshness, humour and positive character of the content as well as its relevance to a wide audience not necessarily professionally or otherwise related to design. As Kanella, one of the participating designers, mentioned, "*The exhibition is really fresh! That's what friends that visited say... even though they are not in design, they seemed really impressed!*" a statement also enforced by an 3M Hellas employee, who added "*A very creative event that you should not miss*".

The project received considerable interest from design related press including a feature on one of the most prestigious international design blogs and an upcoming article in an established Asian design publication. Furthermore, it proved largely popular with lifestyle

publications, national newspapers, weekly magazines, music TV channels and various radio shows, which helped relate to and access a more diverse non-designer audience. Further to attracting more visitors to the exhibition space, these articles, features and interviews provided Papairlines the opportunity to analyse the context of the project and communicate its main focus in depth.

Once Upon A Sponge sparked a very interesting online debate not only around the material and its connotations, but also on creativity as a form of expression. Indicatively, there were over 19.000 likes and approximately 100 comments on a single blog post just displaying images of the submissions, whereas Papairlines' social media page, hosting updates on the project, exceeded a weekly viral reach of 12.000 online visitors for the duration of the exhibition in Athens. This virtual engagement with the project outside the gallery space highlights the lasting impression of the experience to a large number visitors. Although the exhibits were just prototypes, there were a number of sales inquiries. The generated buying interest highlights the capacity of this research process not only to provide a wide range of feasible scenarios under a very restrictive constrain, but also an interesting and direct way to collect immediate feedback in many levels regarding their effectiveness and impact. An Asian manufacturer's enquiry on the possibility of producing *iSponge*, demonstrates the potential to further explore and develop some of the ideas into polished marketable solutions. An unexpected response coming through a social media post by the official account of a large sponge manufacturer in the US, commented on the creativity of the objects in relation to the material and referred their followers to an online article on the project. This reaction indicates an interest, on behalf of the industry, in the process and results of "research through design" as a tool for indentifying new product and service opportunities.

Following the exhibition in metamatic:taf, the project was selected by Industrial Design curator Alexa Kusber to be hosted in the parallel event program of the inaugural Santorini Biennale of Arts 2012 as it *"...feeds the collective imagination... (the designers) appear to be concerned with enhancing our understanding and knowledge and, most importantly, creating a stronger creative consciousness through design. A desire that design can help people to evolve and create new behaviours and new forms of translation of old behaviours in relation to the object. I think this is an important message to be engaged with and the exhibition has created an unpretentious pathway for the viewer.."*

Conclusions

For the *Once Upon A Sponge* project, Papairlines set out to use design and its competences as tools to research the story telling qualities of objects, the limitations and opportunities as set by a constrain, the evolving role of design today and convey the results to the public through the experience of an exhibition.

As evident through the designers' submissions, a narrative can fuse semiotics, humour or even contemporary culture commentary to denote use and application as well as signify arising cultural issues by connecting to the familiar. It often uses metaphors to draw parallel meanings and expose the production process inviting the user to appreciate the effort put into the object's creation. A narrative can also be built around simpler references such as ornament, object personality and given name.

The use of the exaggerated sponge constrain in this project underlines in a very direct manner the ability of the designer to work with limitations and not around them. The presented solutions illustrate that having to comply with a specific restriction urges resourcefulness, boosts creativity and inevitably leads to more elastic interpretations and diverse scenarios. Through the analytic but sometimes vast process of research and development of a design scenario, constrain can provide the necessary direction and focus needed to make critical decisions and help a project evolve.

Depending on the level of understanding and expertise a constrain may require, the designer is increasingly reaching out to other disciplines seeking expert advice and collaboration. In this new interdisciplinary approach sciences become more relevant and understood, design more informed and change-savvy and the potential for innovation more likely.

This project, as perceived by visitors and industry professionals, presents how creative thinking can be used to shift the attention from the material product to the immaterial process. Exposing and studying this process offers an interesting insight on how design as a medium affects not only one's surroundings and everyday habits, but also one's perception and mood, magnifying the emotional impact of a designed experience.

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