

# THE VALUE OF DESIGN RESEARCH

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## THE INCLUSIONS AFFORDED BY A VALUE-LED DESIGN PROCESS FOR TECHNOLOGY-NATURE HYBRIDS IN A WALLED KITCHEN GARDEN

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### ABSTRACT

*This paper describes the importance of a values-led approach within a design collaboration in a National Trust garden in Nottinghamshire, UK. The project demonstrates the power of values to shape not only the designed artefacts but the whole design process.*

*The work responds to reports from the National Trust and other organizations of people's increased disconnection from the natural world, and seeks to challenge the perception that technology is instrumental in fueling such detachment.*

*The primary contribution of our value-based and critically engaged design process is the creation of prototypes that embody values and act as a focal point for reflection and re-encounter by the stakeholder organization. A process that itself acts as a continuous prompt for renewed consideration of interpretation approaches and organizational messages.*

*The research involves the design of technology-nature hybrids for interpretation of a Walled Kitchen Garden, to support connection to nature. Designs are grounded in organizational values drawn from National Trust and researcher-designer values drawn from critical theory of technology. The project explores an area of intersecting and overlapping values and discusses the tensions experienced working in this space. The project illustrates how the inclusion of values and critical philosophy opens up new possibilities for the use of materials and technologies to increase our connection to nature.*

*Keywords: Values-led design, technology-nature hybrids, interpretation*

### 1 INTRODUCTION

This paper discusses a values-led design process for interpretation in a Walled Kitchen Garden, managed by the National Trust. The research responds to concerns documented by the National Trust and elsewhere, about an increasing disconnection of people from the natural world, arguably heightened by technology. It questions whether different kinds of hybrid interpretation technologies, which provide a conduit to nature, might emerge when particular values are brought to the fore. The study thus serves as a critical and revelatory case about value-led design and the technology-nature schism.

The work is concerned with how prioritizing specific values affects the design process, the resulting artefacts, and stakeholders. The project happens in a space where values intersect. Some of the values are brought by the researcher-designer and are informed by a particular set of literature drawn from critical theory of technology and contemporary natural history writings. Other values abide within the philosophy of the National Trust, the most preeminent of which is the goal of protecting the nation's heritage and open spaces "for ever for

everyone" (National Trust 2013). In addition the gardeners bring values specific to gardening practices. A more detailed account of the values stemming from Trust, researcher and gardeners will be discussed in order to present a picture of this crossover space.

The paper explains how these values came together in the design of garden interpretation. It goes on to describe the impact of this value-led design process on the organization. We argue that a process that foregrounds values, has the potential to create interpretation artefacts that embody values, but we believe the design process also has value beyond the designs themselves. Although the experience has been positive it has not been without points of tension, which will also be discussed.

## 2 METHODOLOGY AND LITERATURE

The mixed methods approach, which will be explained further in the paper, began with a literature review, incorporating selected writings from theorists including Heidegger, Borgmann, and Feenberg. The literature, précised below, was used to establish grounding values.

### 2.1 LITERATURE CONTRIBUTION: HEIDEGGER

According to Heidegger, to be human is to dwell in the fourfold of earth, sky, divinity and mortality. When this fourfold is gathered together, 'things' come to presence, and we see their essential nature. Humans act as "world disclosers" by presencing the fourfold into things, thereby drawing attention to the 'thing' in itself. As the thing presences it "stays for a while" (Heidegger 1971) and the interruption causes us to become present to ourselves (Edwards 2005) as well as 'the thing'.

Heidegger contrasts 'things' with technological devices that neither interrupt, nor linger. These products are so effortless and easy that they slip into the background and disappear in use. (Ibid. p.460) Heidegger argues that technology gives a slant to the way we see the world, which affects the way we relate to ourselves. Technological devices are liberated from their context and their past, and so become much more flexible to change. Technology unlocks, encouraging a kind of revealing where things are viewed as resource or "standing reserve". Technology threatens, "all revealing will be consumed in ordering" (Heidegger 1976 p.33) so that everything will continually present itself as a raw material to be harnessed. Heidegger argues that this changes human relationships to things but also frames the world in such a way that humans themselves become standing reserve, which diminishes their potential to act as world disclosers.

Sometimes things gather through social practices, but presencing makes something a "thing", rather than an ordinary object. Heidegger describes "a thing thinging", when a gathering around everyday things "temporarily brings into their own both the thing and those involved." (Dreyfus & Spinoza 1997 p.166) A specialized form of this is "shining forth" which occurs when our "demeanor changes" in response to the thing. Spinoza and Dreyfus cite the example of turning off from a busy street into the calm of a cathedral. (Ibid. p.168).

The design sensibilities drawn from Heidegger encourage "gathering", "presencing" and interruption to reveal the garden, whilst avoiding the tendency to present the garden as standing reserve. One aim is to see whether designs can help set up conditions in which 'things thing' or 'shine forth'.

## **2.2 LITERATURE CONTRIBUTION: BORGMANN**

Some of the Heidegger's criticisms of technology reoccur in Borgmann's writings. He also makes distinction between technological 'devices' and 'things'. Devices require little effort, skill and engagement to use so the machinery of the device slips into the background, and its commodity comes to the fore (2000). Devices are detached from their context, which makes it easy for them to co-opt everything as a raw material or resource (Ibid.). Hence "the sacredness of a temple becomes a resource for tourists." (Borgmann 2010 p.31) The easy availability of this commodity provides instant but short-lived gratification because there is only weak human engagement in the interaction. Borgmann (2000) contrasts this "paradigmatic consumption" with "life-sustaining consumption", which involves effort and engagement, and often "burden" and "delight". "Life-sustaining consumption" is associated with focal things and practices, grounded in context and community. If technologies leave space for other engagements focal things have the potential to "break the spell of paradigmatic consumption" (Ibid. p.422). Borgmann's work emphasizes the value of context and engagements within designs.

## **2.3 LITERATURE CONTRIBUTION: FEENBERG**

Feenberg believes democratic rationalization (2010) is needed to counteract the power of controlling technical systems. Democratized technology which, embraces a greater range of values (Ibid. p.53) will make it possible for people, rather than the just technologists to determine the meaning of technologies. He argues that this is particularly true when certain values are deemed too important to be traded against other values. When things are taken beyond the bounds of "trade-off" they become asserted within the technological codes and technologies come to embody these values (Ibid.). Feenberg argues the tensions that appear to force us into trade-off positions evaporate as technical codes become concrete. He illustrates with the example of how, over time, "safety" has become an unchallenged part of the technological code. If codes are produced democratically we may be able to build substantially different kinds of technologies.

Feenberg links this to Instrumentalization Theory (2010), which has two interacting aspects; Primary instrumentalization decontextualizes revealing affordances and Secondary instrumentalization recontextualizes, integrating the social environment (2010 p.100). This involves interaction between "systemizations", the network of things that make up a "world", and "valuative mediations," the norms that inform the cultural horizon of that world (Ibid.). So the world of this garden includes plants, gardeners, visitors, buildings, tools and interpretation, and the valuative mediations include the values of National Trust, and Gardens Team and wider societal values about gardens and environment. In the past networks were short and values of the "world" were easily communicated. In technological times values have often been lost in long complicated networks.

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The contribution from Feenberg is to the design process. Many voices must be included in the design process so that interpretation technologies reflect the values of community in which they are situated. This involves an inclusive process directly connecting gardeners, volunteers, visitors and designers so that the "world's" values are embedded within designs.

Theoretical contributions from philosophy of technology were supplemented with insights from contemporary natural history texts, to discover what experiences in nature communicate about connection to nature.

#### 2.4 LITERATURE CONTRIBUTION: NATURAL HISTORY WRITINGS

Roger Deakin's writings on charcoal burners, joiners and willow growers describe knowledge embedded in context, acquired through physically engaged labour in a mix of pleasure and exertion reminiscent of Borgmann's focal practices and life-sustaining consumption. Sensory engagement is another strong seam running through natural history literature and is particularly affecting when the writing is personal, documenting direct experiences, as in Jean Sprackland's account of walking on a snowy beach. Historically and culturally situated writings, such as Robert Macfarlane's description of travelling "sea roads", recall the mortality and divinity in Heidegger, and they emphasize ingrained context. This paper can only summarize some insights, but the texts reinforce the relevance of context and multiple engagements, especially sensory engagements.

The literature review prompted the initial approach to the National Trust and once the connection was made with the Gardens Team, NT values were brought into play.

#### 2.5 NATIONAL TRUST VALUES

Some values were evident in public documents (2014; 2013; 2012; Moss 2012) and internal communications, but the greatest understanding of NT values came from spending time in the garden, talking, trailing gardeners and watching interactions. The gardeners' values were manifest in their practices and conversations.

The importance of conservation and public access are at the core of the Trust's philosophy. Connection and engagement are also reoccurring themes, clearly explained in two quotes from the most recent Annual Report:

"Bringing places to life – our aim is make sure that our visitors see us not just as a provider of nice days out. We want every visit to be...a gateway to deeper experiences that help people make personal connections with places and better understand our heritage." (2014 p.9)

"We want to inspire them (people) to care about special places in our countryside and to enjoy them as much as we do. We want visitors...to connect with nature and to leave more aware that we depend on nature as much as nature depends on us." (Ibid.)

National Trust values sustainability, and has been proactive in tackling children's disconnection with nature. In the gardens, plant varieties are conserved and contributions are made to the National Seed Bank. Regional and national collections of fruit and vegetables are nurtured in recognition of their cultural,

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historic and biological value and organic principles are practiced. This sets the scene for identifying a convergent space.

## 2.6 THE RESEARCH CONTEXT: THE CONVERGENT SPACE

The prime foci of NT gardens are nurturing and cultivating that resonates with Heidegger's concept of dwelling. The Trust seeks to challenge paradigmatic consumption, indicated in the desire to provide more than "a nice day out." The focus on life-sustaining consumption marks a point of convergence, as does NT's dedication to historic, cultural and emotional contexts, described as "Spirit of Place."

More specifically the Trust has commissioned two reports addressing children's connection to natural places and is actively seeking ways to support connection. This shared concern drove the collaboration to design interpretation for the garden. The first designs, 'Rhubaphone' and 'Audio Apples' emerged through a generative, reflective design process, supported by semi-structured interviews and ethnographic accounts.

Research Through Design was adopted because it fitted the inclusiveness advocated by Feenberg and the generative nature gave space to reflect, and respond to different inputs throughout the process. Prior to getting underway it was anticipated that gardener and volunteers would take the lead in a participatory design process, perhaps through workshops. But once in the garden this did not seem to fit the context because it didn't match the gardeners approach to other projects. For example, earlier in the year the gardeners decided to make a new form of woven supports for the sweet peas. They discussed a plan; a couple of people made a prototype; the team chatted and reflected on the design over lunchtimes; and then the adapted design was constructed. There was space for input from a range of people as the test pieces were on view to all. As a result of witnessing this style it seemed an informal generative mode was most appropriate to context. Feenberg's focus on the context and cultural norms influenced a way of working that paid attention to practices in the garden.

## 3 DESIGN

### 3.1 VALUE-DRIVEN DESIGNS: RHUBAPHONE & AUDIO APPLES

Clumber Park holds the National Collection of rhubarb and the "Rhubaphone" aims to draw attention to the particularity and cultural significance of the varieties by presenting them side-by-side, so that differences might be noticed. Holding the rhubarb triggers audio in which the Head Gardener talks about that variety. Letting go of the stem stops the audio. The interaction was designed to encourage touch because the tactile qualities contribute to the rhubarb's individuality. The frame is made from oak from the park and the rhubarb labels reference plant labels on display in the garden museum so materials and design were used to ground the design in time and place.

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Figure 1 - Rhubaphone

Image: Alex Johnson



Figure 2 - Rhubaphone in use

Image: Alex Johnson

The "Audio Apples" are wooden apples containing digital stories, which play when the apple is plucked. The design aims to take people away from gravel

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paths, to a part of the garden where its presence might be felt viscerally because of the sensation of walking into a new world; a kind of 'shining forth'. The apples are hung in the canopy of a mature orchard where grass is left to grow long and branches create enclosed, enveloping spaces. The maturity of trees hints at longevity and continuity and the space affords a sense of intimacy. In this context, visitors can listen to gardeners and volunteers describing personally significant experiences. Other recordings include diary entries from a former and current gardener.

The interpretation is intended to draw attention to the gardeners whose practices bring the garden to presence. The audio opens up worlds and causes 'interruption' and reflection on the garden.



Figure 3 – Audio Apple

Image: Alex Johnson

## 4 IMPACT AND OUTCOMES OF A VALUE LED PROCESS

### 4.1 IMPACT OF VALUES ON PROCESS

Initially the designer-researcher made prototypes in response to the observations and conversations from the garden, particularly those related to values and messages. These objects were intended to spark feedback, conversations and new ideas. Over time gardeners have made more suggestions about development of the existing artefacts as well as proposals for new designs. The ethos may have facilitated this organic form of participation. One of the team reported "delivering things incrementally has helped".

### 4.2 IMPACT OF VALUES ON DESIGN OF ARTEFACTS

The "Rhubaphone" is the main focus of this section because it has provided greatest opportunities for gathering feedback.

The "Rhubaphone" has been well received by the Gardens Team and visitors alike. One gardener said it fitted very well with the values and ethos of the Trust because of the contribution to visitor experience and engagement. Other team members commented positively about the way it engaged visitors, particularly

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as it fired up conversations in groups, and was a good catalyst for conversations with gardeners.

Love and pride in the garden is evident in gardener's conversations and actions so attention to detail and the use of materials rooted in the grounds were mentioned as significant: "the fact that every part of the rhubaphone has been so well thought out and so well executed, and nothing is random or left to chance, or "Oh well, that'll do",...that's really helped, I think, in that trust process."

Visitors described the Rhubaphone as "fun", "novel" and "surprising." One person echoing NT ambitions stated, "it brings it more to life." Commenting on the use of rhubarb as interface the visitor continued, "You've got the actual rhubarb, you've got the stems there. You know its more real." Others commented on the interaction and appropriateness of design "I thought (it was) great to actually touch, so you are not only touching the rhubarb but you are touching it to make it do something. I think that is really good for learning."

The natural materials were thought to add to the design's appropriateness but there were mixed feelings about its location. Several gardeners and visitors felt the location wasn't right; "I find here it is kind of odd. An old garden suddenly having modern technology..." Some suggested the garden itself would be a more appropriate location. "If there was a version that we could have outside...next to the rhubarb collection, that would be great, wouldn't it?" Moving the rhubarb to an outdoor location beside the rhubarb beds would address some philosophical tensions associated with separation from immediate context, though the presentation of cut stems is still problematic.

Feedback on the content varied with some believing it was pitched too strongly to adults and others saying it was an appropriate length pitched at the "right level." Suggestions about content have motivated another design aimed more squarely at a younger audience. Some people listened to every recording in full, but most listened to short excerpts about a few varieties.

The "Rhubaphone" goes some way to embodying the NT values and contributing to interpretation of the garden's "Spirit of Place." Many people do notice the rhubarb in a new way, commenting that they had no idea there were so many varieties. However engagement is somewhat superficial because it does not offer more meaningful, active engagement beyond the moment of encounter. This might raise awareness of rhubarb diversity but it doesn't communicate wider messages about the value of collections and conservation, and doesn't push for deeper engagement as encouraged by Heidegger and Borgmann. This will be discussed further later in the paper.

#### **4.3 IMPACT OF VALUES ON THE ORGANISATION**

Some of the most significant outcomes related to the team. Individuals reported that the work inspired and "really opened our eyes and minds", prompting team conversations about interpretation. Stories from the garden were valued in the interpretation and this had a knock-on effect on the team. One gardener reported the design process increased the team's sense of value in their own stories. Another talked about the opportunity of the interpretation to communicate the "great stories" they have to tell. The incremental development of artefacts offered spaces for on-going dialogue amongst the team about



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values, messages, interpretation and engagement, so a catalysing artefact left on the kitchen table had value beyond itself.

## 5 TENSIONS AND DIFFICULTIES

The tensions came from trying to keep all values in-play. Sometimes values seemed to conflict even though overarching values were in harmony. As researcher-designer it was very easy to be pulled towards “smooth”, “easy” and fun technological solutions and I often felt I was being sucked away from the philosophical values, and had to make a concerted effort to re-ground. I might be playing my part illustrating Feenberg’s portrait of technological rationality as the dominant paradigm forming the cultural horizon.

The values drawn from theory drove a process that was appropriate for the place. However it was harder to stay true to the values in the artefact design because there are so many tensions. In order to draw attention to the rhubarb it was cut and taken from the ground. In order to make present the gardeners in the continuity of the garden their voices were captured and separated. Both of these acts could be understood as commodification, but whether “paradigmatic” or “life-sustaining” seems to be determined by the frame the person brings. The rhubarb has become a commodity for delivering information, but at the same time it inspires sensory stimulation, which creates a pause; the opportunity to converse and reflect. Changing the context of the rhubarb awakens us to its presence. Some might argue a display of (non-interactive) rhubarb might work as well, but in autumn there is a display of apples in the adjoining room and visitors commented that they had spent more time with the interactive rhubarb than non-interactive apples. That doesn’t answer to quality of the engagement.

The visibility of technology caused tension as I struggled to balance the hybrid nature of the artefacts. Borgmann and Heidegger express concern at the invisibility of technology that slips from view but the invisible technology of the rhubarb drew attention and prompted questions. Some people were as interested in the technology as the rhubarb and this felt uncomfortable.

The Audio Apples have caused less tension, because there seems to be greater congruence of values in the design. Maybe this is because of the different character of the hybrid. The nature of different hybrids will be addressed in future work.

The impact of the artefacts is another source of tension. They are in keeping with the Spirit of Place and embody some of the values of the Trust, but they are insufficient to sustain the deep, active engagement needed to build lasting connection to nature. Further work is needed to explore potential hybrids that improve the quality of connection.

## 6 CONCLUSIONS

Our conclusions with the work thus far is that the continuing presence of the design project in the garden and wider park has raised visibility and facilitated unplanned encounters with stakeholders. For design more generally, we would also conclude that while the technology-nature hybrids have intrinsic value as interpretation artefacts, the primary contribution of our value-based and critically engaged design is a continuous prompt and focal point for re-encountering and re-presenting the voices of gardeners, volunteers, visitors,

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nature and other stakeholders. Beyond any finalized artefact, the design process yields a productive and continuous revealing of stakeholder voices in a dynamic voyage of technology-nature discovery, with hybrid objects seeding new ideas for further interpretation, and invoking greater participation from stakeholders.

The inclusion of values and critical philosophy opens up new possibilities for the use of materials and technologies in increasing the connection to nature. A focus on the finalized artefact is a limited concluding point. The dynamic and critical approach in the design process means inclusion is never done, and the representation of those voices in one or more designs is never finalized. Put negatively, any artefact highlights only a few possible relations amongst the stakeholders, while many others are left unrealized, or even suppressed. Put positively, the values, technologies, places and people are always in-play, and we must constantly strive to reveal them - this paper included.

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