

Shorelines: revealing experience in digital practice

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1. Introduction

This paper presents on-going practice based research which is investigating issues arising from a collaboration between two practitioners who combine digital technology and physical materials in their art making. It seeks to illuminate the ways in which our engagement in creative processes is inseparable from our physical experience of *being in the world*. How we sense, perceive and remember these experiences shapes the way we select and modify thought in order to develop new ideas.

The latest generation of digital artists instinctively know more of *digital* making in the virtual world than crafting using *physical* tools and materials. Digital tools are increasingly designed to be 'low floor high ceiling' – accessible to the novice with little practice and yet offering creative potential to the more experienced practitioner (Shneiderman, Fischer et al. 2006). Software provides access to the expertise and technical skill's of others (Dormer 1994); the level and quantity of which is beyond that which most practitioners could acquire in a lifetime. According to Sennett (Sennett 2008) to master a physical crafting skill to the level that it becomes tacit knowledge requires 10,000 hours of practice – the equivalent of 3 hours practice per day for ten years! It is no wonder then that hand crafting skills are declining as many practitioners find their creative voice using digital tools and methods of production. If there is less hands on physical sensory experience in digital creative practice, what is the affect on the resulting artwork? For most artists heightened sensory perception of physical experience is fundamental to the performative act of making, both in the use of materials and tools to craft them. In many digital creative processes the physical bodily interaction of maker is mediated by the machine, distancing the artist's hands from the created artefact. Research has shown that visual artists using digital technology frequently regard this as an inhibiting factor in their ability to communicate emotional expression (Treadaway 2006). The result is work that is perceived to be dull and homogenous, lacking variety and personal qualities that are conveyed through the makers touch (Penfold 2007).

2. Research

The influence of sensory experience in digital creative practice has been the focus of recent and continuing research at University of Wales Institute Cardiff (UWIC). The following sections describe instances from 'Shorelines', a practice-based research project involving practitioners who work with a combination of digital and physical processes. The project is part funded by the Carnegie Trust for the Universities of Scotland and has involved the artist Alison F. Bell in collaborative art making with Dr. Cathy Treadaway, Research Fellow at Cardiff School of Art and Design, UWIC. Through a process of shared physical experience of coastal locations around the UK a body of work is being prepared for exhibition which will combine both collaborative artworks and individual responses to the environment. The intention is not to

represent the location but rather to investigate how physical experiences stimulate the imagination and influence the development of new artworks. The research methods used to acquire data are qualitative and rely heavily on analysis of video recorded reflection on practice by the artists as well as photographic documentation, sketchbooks and research journals. Bell was selected for participation in the project following her contribution to a previous case study that had identified her interests in this specific area. The collaborative process of art making has been found to be useful for testing claims made in case study research interviews; it enables the researcher to empathically engage in the creative process of art making described by the artist.

Bell is a textile artist. Her practice integrates hand and digital processes and is informed by her experience of being in situated in a given environment. She makes hand painted, stitched and digitally printed artworks for exhibition frequently inspired by the shoreline. Using digital photographs, scanned surfaces and Photoshop® software her artwork has developed in visual detail since integrating digital processes. More recently however her textile work has involved shibori techniques in which wax resist and manipulated surfaces have been sculpted into three dimensional structures or 'pods'. These forms have evolved from ideas stimulated by debris washed ashore by the sea. Both the material qualities achieved through the shibori process and structure of the sculptural works has been informed by these found physical objects.

[Figs1 & 2]



Fig.1 Shibori Silk Pod - Alison F. Bell
6ins x 2.5ins x 2ins, silk habotai, dye, pigments and wax



Fig.2 Shibori Silk Pod in seaweed - Alison F. Bell
6ins x 2.5ins x 2ins, silk habotai, dye, pigments and wax

Treadaway is an artist /researcher with a background in surface pattern and ceramics. Work being developed in this project is providing opportunity to explore art making using digital printing, ceramic surface and rapid prototyping technology.

Four locations have been used to date for the research sessions: two on the Scottish coastline and two in Wales. Each investigation has included time spent engaging directly with the environment through collecting and arranging found items as well as drawn, photographic and video documentation. Following each session, a collaborative digital image has been made in which both artists have created a shared response to the time and location. The images have been developed in a co-located situation immediately after the experience and later by using the potential of the technology to share layers of digital images when both artists had returned to their respective studio spaces in different parts of the UK. In addition to this, each artist has continued to develop their own individual work related to the 'Shorelines' theme.

Although the research is not yet concluded, early data analysis is revealing how a whole range of sensory stimulation, not just vision, influences the creative decision making that leads to the development of visual ideas. The following sections provide specific instances from the project to illustrate this and explain how the collaborative process is leading to the development of new work that interconnects physical and digital making processes.

5. Touch and sound

Each of the investigations reveals evidence of the importance of touch and the tactile qualities of objects handled during the session to stimulate visual representations. In each of the investigations collections of objects such as pebbles, wood and bone were made from the shoreline. In the first investigation a seal bone was used to make a drawing on the sand because it felt pleasing in the hand and made a comfortable but unusual drawing implement. Video data from the second investigation documents a discussion about the tactile qualities of various pieces of driftwood [[video clip: touch_experience.mov](#)]. In the third investigation a collection of unusual pebbles of varying size and texture were collected and later arranged systematically according to shape, colour and how they felt to hold. In each of these investigations these artefacts act as boundary objects, capable of rekindling memory of the location through the sensation of touch and are kept safely or arranged systematically as mementos of experience in a specific location. As the project has progressed so the artist's have found a common focus and appear to identify and hone in on similar kinds of objects. Further research will be necessary to clarify

whether this is due to social reasons (the influence of the collaborative process and verbal communication) or whether the shared experience of being in a given location is providing the practitioners with a common focus.

The research data also reveals how sound plays an important role in the development of visual ideas. In the second investigation both practitioners reflect on the sounds they are experiencing; Bell is documented video recording the sound of the sea on her mobile phone while Treadaway makes audio recordings that are later used to make expressive drawings and three dimensional digital sketches. This theme recurs on several subsequent occasions in the recorded data: Treadaway makes drawings in a sketchbook of sounds experienced when sitting in a cave [Figure 3] and in the third investigation collects a range of sound experiences on the shoreline through a series of expressive pencil drawings in her sketchbook.

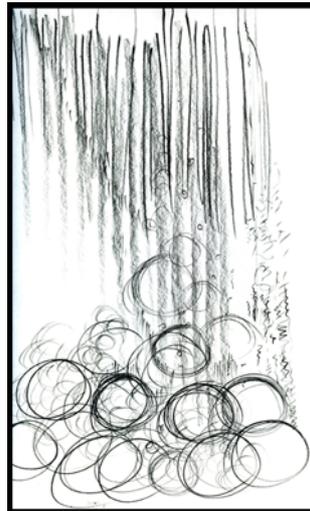


Fig. 3 *Sounds in a cave* – pencil drawing on paper (18cm x 28cm)

Touch and sound continue to influence the development of new works arising from this project. Using Freeform® 3D modelling software and a haptic tool, Treadaway has been crafting works that combine sound and touch through 3D printing. She uses the haptic tool to sculpt expressively into the surface of the virtual clay whilst playing back sounds recorded on location, using the tool in much the same way as a pencil was used to make drawings of sounds physically in two dimensions in the sketchbook [[video clip 'Haptic_tool_drawing.mov'](#)]

5. Collaboration

In each session a collaborative arrangement of found objects has been collaged on the shoreline in a documented performance that was later used in the development of visual ideas. In the first investigation the seal bone, which was selected for its tactile qualities, was used as both a drawing implement on the sand and also as a component of the collage. Elements from this collage were integrated within the collaborative digital artworks *Wind* and *Surface* [Figures 4 & 5]. Both images integrate a shared visual, tactile and sound sensory response to the location.

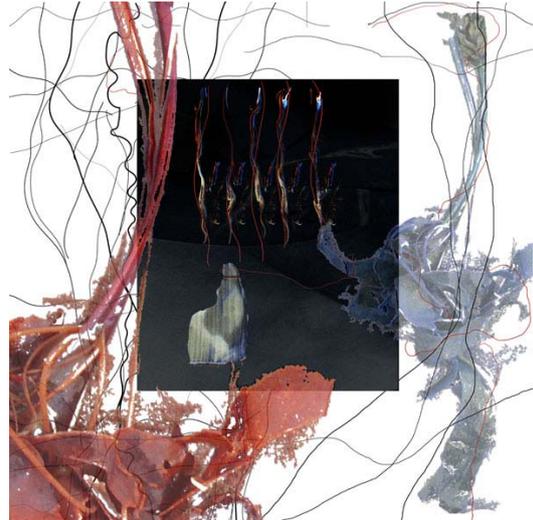
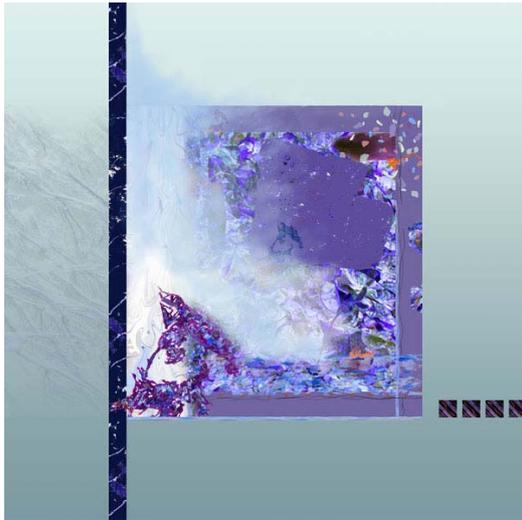


Fig. 4 *Surface* and Fig. 5 *Wind*, Treadaway & Bell, digital image 2007

In the third investigation two collaborative digital images were made while both artists were present taking it in turns to contribute to the development of the images. Previous collaborative images had been made in layers using Photoshop® with both artists working in their respective studios. The recorded video data reveals how closely aligned the intentions of the collaborators had become in the development of the image on screen. While one was working digitally the other was planning her contribution to the image; however the image was frequently manipulated specifically as the other intended before she had opportunity to vocalise or make the changes herself. This common intention to adjust the image in the same way may have arisen from having shared the physical time and location that originally inspired the work. Alternatively it may have arisen out of previous experience of working together providing understanding of each others intentions, values and visual language. Further research will be required to clarify this; however it seems likely that mutual physical experiences enabled greater focus in the process of developing the artwork collaboratively.

6. Making by hand

Previous research has indicated that many art practitioners use hand making processes to stimulate their imaginations and to break out of fixated thinking when working digitally (Treadaway 2006). The stimulation of sensory experience in traditional making contrasts sharply with the analytical and structured cognitive processes frequently involved in using computer aided design (CAD) software. Frustration with working with digital tools and their lack of haptic sensitivity is frequently noted in the research documentary from this project. It is likely that those who are experienced in making by hand acquire greater haptic awareness and are more likely to find conventional input devices such as mice and graphics tablets frustrating in their lack of sensitivity. Treadaway's practice has included evaluation of a haptic tool to draw in three dimensions. By moving the pen and working with the force feedback resistance provided by the tool it is possible to craft, mould, shape, carve and emboss virtual models. A 3D printer is being used to translate the virtual model in physical form, providing a physical means of capturing emotional and bodily responses to the shoreline experience through digital drawing. [Figures 6 & 7., video clip FDM_3D_printer.mov]

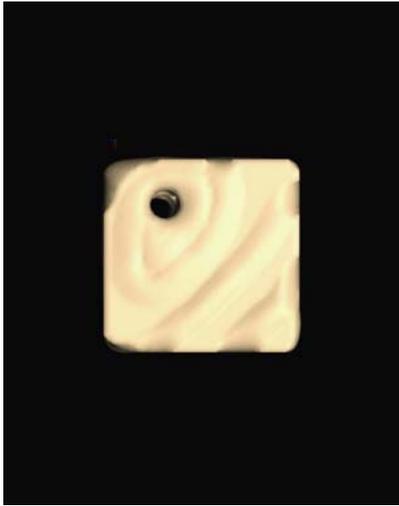


Fig. 6 (Left) 3D computer model and Fig. 7 (Right) 3D digitally printed form (15cm x 15cm x 5cm)

7. Future work

Aspects of hand use involved in hand-crafting and digital processes, including the role of prehension, grip, pressure and fingertip sensitivity will be the focus of the next stage in the project. How the artist's sensate body informs creative decisions and enables emotional content to be communicated in the artwork will be explored further through the video documentation of a series of interactive artworks; these will be shown in 'Shorelines' an exhibition featuring collaborative and independently created artworks by Treadaway and Bell in 2010.

8. References:

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