CONCEPTS, WATER AND REFLECTIONS ON PRACTICE
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Abstract
This paper discusses the nature of the conceptual structure in art practice, by example. It draws on insights gained from a practice based research (PBR) approach to making art. The PBR methods used include Reflective Practice and are briefly described. They have informed an understanding of the conceptual structure as an instance of problem framing. This is demonstrated by two creative examples, taken from two interactive artworks. These were informed by an evolving conceptual structure concerned with water. Keywords: practice, Reflective Practice, practice based research, conceptual structure, framework, interactive art, interaction design, color.

My approach to creating interactive artworks is a practice based research (PBR) approach drawing on Reflective Practice methods. In making art I rely heavily on a conceptual structure: the framework or ‘backbone’ to the art. In this paper I describe how this conceptual structure is also a form of problem framing – one of the methods of Reflective Practice. I then describe examples from my PBR and reflect on the value of the conceptual structure for interactive practitioners and researchers.

Problem Framing with the Conceptual Structure
PBR is research that revolves around practice. For me, the practice is creative and concerned with making interactive art systems. PBR and Reflective Practice methods have been used by digital artists to generate knowledge [2]. Reflective Practice is a research methodology proposed by Donald Schön [3] that can externalize some of the aspects of that creative practice, such as by making the implicit knowledge and expertise that practitioners hold, as well as their process of decision making, explicit. Reflective Practice methods also support the process of problem formation in uncertain, ambiguous and unique situations – situations where rules and standards do not yet exist. Here the practitioner reflects on prior experience and draws on their ‘know-how’ to frame a new understanding of the situation. This informs their subsequent action and thus changes the situation. That is, the process of problem framing and problem solving feed into one another, iteratively. Critical, reflective thought is integral to the cycle.

For me, the process is loosely described by the spiral figure in Fig.1. I begin by forming a concept. This has meant studying and interpreting a situation to generate a unique, creative agenda for my artwork. This concept or agenda can also be considered a problem. I respond to the problem by creating artifacts such as sketches. I then reflect on these responses. Where reflection on the newly framed situation or artifact finds it unsatisfactory, the situation is reinterpreted and the problem is reframed:

In each instance the practitioner allows himself to experience surprise, puzzlement or confusion in a situation which he finds uncertain or unique. He reflects on the phenomena before him, and on the prior understandings which have been implicit in his behavior. He carries out an experiment which serves to generate both a new understanding of the phenomena and a change in the situation [4].

Thus the reflective thoughts feed back into the concept/problem to redefine the way it is understood, and the process iterates as subsequent actions are guided by this redefined conceptual structure.

With each iteration the concept is explored. This is through sketching and creating prototypes as well as the artworks themselves. Creation is guided by drawing on my own expertise as a creative practitioner. For example, it can involve drawing on prior experiences, finding analogies or creating metaphors. Some of the creative artifacts, particularly working prototypes, are also evaluated in field studies at this stage of the cycle. The study findings are then also reflected upon.

The process of reflection involves writing memos and keeping journals and blogging. These trace my evolving understanding of the situation and changing conceptual structure [5]. In this way the conceptual structure is the initial problem, frame and understanding of the situation; and it is also iteratively explored and re-defined or reframed. The interactive artworks Glass Pond (2005) and +now (2008) share the same evolving conceptual structure, as shown in the following example.

Example
My current body of interactive art work started with landscape studies in 2003. This focused on a lake. An early interpretation of the lake framed it in terms of a “reach axis” (2003, Fig.2.a.) This conceptual structure maps an understanding of the place along a trajectory. The trajectory travels from the bank, along the lake’s silt base, up through the water to its surface with reflections, shadows, ripples and water lilies, then through overhanging branches to the sky and stars. To me, the trajectory is analogous to the gesture of a hand reaching into the lake and to a gaze traveling through it.

Thus my interpretation of the site is represented by an abstract idea of it, that is, the conceptual structure. This conceptual structure frames my understanding of the site in a way that helps me to make a creative work. For example, it refers to body gesture (reaching) and seeing (gazing, transparency), both of which are concepts that relate to the landscape and to interaction. In general, the conceptual structure is an abstraction of the landscape that guides a creative response. These creative responses include the interactive artworks themselves as well as montages, diagrams and sketches towards them.

The process continued such that the act of making the montages etc. and my journal reflections on them reframed my thinking about the landscape. I subsequently became interested in the point at which reflection and subsurface objects, shadow and ripple, all coincide in the eye of the observer. Thus the conceptual structure became concerned with perception and ambiguity in interpretation. A photograph from the site capturing this idea is shown in Fig.2.b. Like the reach axis, the concept of “perceptual ambiguity” also revolved around aspects of water and in this way it can be seen as an evolution of the earlier concept. However, it is a more focused on the perceptual aspects, in particular what occurs at the water’s surface: mirror-like or transparent, sky blue or shadowed, calm or rippling and so on.

The conceptual structure is a new way of looking at and understanding a situation, bounding and defining the area of aesthetic inquiry to frame it as a prob-

Fig. 1. Iteratively reframing the conceptual structure. (©Jen Seevinck)
lem. In this example, the conceptual structure of water has framed a new understanding of the landscape to focus on the lake and the transparency and experience of its water. Two creative responses to this concept of water are now described.

Firstly, Glass Pond (2005) is an interactive art system that takes its name from the calm, mirror-like surface of the inspiring water landscape. Touching the river sand interface can reveal areas of “dappled light”. This object is informed by water’s ability to reflect. It is an interactive version of photographs taken at the site created by rendering a black silhouetted view of participant interaction with the sand (taken from a live video stream of their gesture, the sensor input) on top of a photo (Fig. 2.e.). The dappled light object explores the mirror aspect of the water. While this was found to be enjoyable and highly evocative of water [6], the work was overall too static. In 2007 I returned to the lake site to study the water surface. My understanding evolved as I focused on the currents on the lake and the behavior of sunlight on their peaks (Fig. 2.d). This informed the visual aspects of +-now (2008), another interactive art system. Like Glass Pond, +-now is concerned with the concept of water. It also has an interface of sand. However, unlike its predecessor, +-now has dynamic, colorful imagery projected directly onto its fine white beach sand. Bright highlights in this augmenting, colorful image evoke the behavior of light on water currents, as observed at the lake site. These were achieved using a combination of procedural computer graphics techniques for 3D modeling and color theory. The computer graphics primary colors of red, green and blue add to make white light and by selectively (and procedurally) adding these primaries, I created dynamic, white highlights on the tips of the geometry - bright peaks which correlate to the sparkling of light on the water (Fig. 2.e.).

The choice of color was also informed by knowledge of how it is perceived; namely that complementary colors will appear brighter, more vibrant when adjacent to one another. Thus the selection of primaries was biased towards green and red. Lastly, in my experience, blue tends to recede and fade out quite quickly in projected images, while green will persist and often be the last to fade to black. This is another reason for prioritizing the red and green primaries.

The conceptual structure described in this paper is concerned with the perception and behavior of water. It has evolved from the reach axis through to perceptual ambiguity. This evolution is due to iterative reframing.

**The Value of the Conceptual Structure**

In this paper I have drawn on my Reflective Practice to describe the nature of, and exemplify, the conceptual structure in interactive art. I have described it as an abstraction, poetic interpretation, a creative effort that can inform multiple creative responses. I have shown that it is a form of problem framing and that it functions in a PBR approach of iteratively reflecting on practice. Its ability to frame problems is a key point for the interactive artist and designer: like Reflective Practice, the conceptual structure can be used to address complex or ambiguous situations — those without rules or standards. Thus it has the ability to support entirely novel investigations; something which Schön has argued the predominant, Positivist, Technical Rationalist model of research cannot do, addressing instead only the clearly bounded problems [7].

As has been shown here, the conceptual structure can also trace and rationalize creative decision making. In so doing it makes more of the creative process explicit. This helps to clarify the role of the artwork in generating knowledge, something which is of value to the practice based researcher.

Finally, the conceptual structure is also intimate and, unlike the interactive artwork, exempt from public scrutiny. For example, I find it important to evaluate participant interaction with prototype and final interactive art systems in order to understand more about the interaction experience I’m creating. As I have found, and as experienced by Costello [8], this brings its own challenges — for example, aesthetic decisions, albeit interim, are scrutinized and the creative impulse can suffer. On the other hand, the conceptual structure is not publicly reviewed. I have found it to support the unchecked, creative exploration necessary for good and innovative work. Thus not only is it a rationale that binds the elements of a creative work together, the conceptual structure has also been the ‘soul’ of my work — personal and independent of third parties, it has sustained the artistic integrity of my work while practical, theoretical and research approaches are reconfigured.

**References and Notes**

4. Schön [3], p. 68.
7. Schön [3], p. 49.
9. Additional color images of Glass Pond and +-now are online at the authors website <www.smArtnoise.net>, accessed 3 February 2012.