The painted river project: Art meets science – communicating cultural transformation through community engagement

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Abstract. The Painted River Project intuitive sees art and water science join forces to engage directly with community by painting a new future for our river systems. The project was designed to communicate the need for cultural transformation towards a real understanding of the role water and our river systems play in underpinning human health and wellbeing, including our connection to the natural world and the health of the planet. The key aim of the (PRP) is to actively engage the community, through site-specific participatory art-making, science and water testing and through this to explore our shared connection to water and place, through creative and scientific interaction. The human-centred nature of art provides the ‘cultural window’ through which to view scientific knowledge by advancing tangible ways to view complex problems and as a ‘call to action’ to help inform innovative approaches. In August 2017, the first instalment of the (PRP) was held at the Duck River, Auburn, in Western Sydney as part of RiverFest, an initiative of the Parramatta River Catchment Group (PRCG). At the event, the community were provided with paint, canvases, easels and facilitators who helped guide the artistic process and the production of paintings that expressed ‘their future vision of an unpolluted river’. As a result, 128 different artworks were produced by a hugely diverse range of community members.

1. Introduction

As a society we are increasingly separating ourselves from nature - the Painted River Project (PRP) is an initiative that seeks to provide not only an opportunity for reconnection, but a workable platform to shape interactions and relationships that support collaboration towards shared visions for the future. A key aim of the project is to highlight the nexus between nature and culture by rethinking how we live. Art and design both express and create culture, and by joining these disciplines with scientific knowledge we can help to progress new levels of understanding and better ways to communicate the need for cultural transformation. Culturally, it is important to support ever diverse communities by providing pathways to move beyond complex and often seemingly intractable problems. As members of modern society we have a generational responsibility to begin to repair the damage and build a sense of collective accountability towards more regenerative cultures.

“We have lived our lives by the assumptions that what was good for us would be good for the world. We have been wrong. We must change our lives so that it will be possible to live by the contrary assumption, what is good for the world will be good for us. And that requires that we make the effort to know the world and learn what is good for it.”

Wendell Berry, From The Long-Legged House (1969) [1]
Art and visual story-telling is embedded in our understanding of history and of human culture. Pictures link us with our past but also help societies make sense of the present by providing a cultural timeframe and in expressing who we are. In a chapter entitled the Lost Art of Seeing from Robert Pogue Harrison’s book, Gardens: An Essay on the Human Condition the author provides a link to past practices and what is engendered within the Painted River Project. He recounts a young person watching a nature documentary on a mobile device while walking through the most exquisite garden totally oblivious to the sensory beauty around him. Pogue Harrison points to the importance of the visible world, the sensory human connection we once had with nature; he also outlines, how, as a species, we are looking at more and more images than at any other time in history yet we are losing the ability to truly see. What Pogue Harrison suggests is that we must ‘knowingly’ open our eyes to appreciate the beauty around us, but also, I contend the reality of what is in front of us right now [2]. A foundational idea behind the PRP is – consciousness raising – and for all of us to become conscious of the effects of the things we do. As Stephen Boyden wrote in his book The Biology of Civilisation, “While the main threats to humankind today are the consequences of the human aptitude for culture, our only hope for overcoming them lies in this aptitude” [3]. Richard Horton, editor of the Lancet, puts it another way, “human cultures contain both the threat and opportunity for human flourishing” [4].

Art and visualising place combined with scientific knowledge can help form part of this consciousness raising through a reconnection with nature and the visible world leading to a deeper understanding of the uniqueness of place and their eco systems.

In Australia in January 2019 at Menindee Lakes just south of Broken Hill (part of the Darling River), severe prolonged drought, water usage pressures and mismanagement saw “what experts think caused the death of a million Menindee fish” [5]. In the recent federal election, water security and bungled water buybacks fed into the politics of climate inaction, diminished water quality and issues such as fracking, leaving communities frustrated and crying out for action. Prior to this, in late 2018, we saw the likely PFAS contamination of the once pristine Jervis Bay (NSW) with “public health warnings appearing on signs around the Bay” [6]. Media reports have revealed that for decades, “chemicals from firefighting foam used at the nearby Jervis Bay Range Facility have been leaching into waterways and subsequently out onto local beaches” [6]. These are just some examples of the health implications and pressures facing communities that rely on our rivers and watersheds.

2. What is the painted river project?

The Painted River Project is a new initiative that sees art and water science join forces to engage directly with community by painting a new future for our river systems. The PRP is a research project designed to communicate the need for cultural transformation towards a real understanding of the role water and our river systems play in underpinning human health and wellbeing, including our connection to the natural world and the health of the planet. The key aim of the PRP is to actively engage the community, through site-specific participatory art-making, science and water testing to explore our shared connection to water and place, through creative and scientific interaction. The human-centred nature of art making provides the cultural window through which to view scientific knowledge by advancing a more tangible way to view complex, often seemingly intractable problems, but also as a ‘call to action’ to help inform new and innovative approaches.

In August 2017, the first iteration of the PRP was held at the Duck River, Auburn, in Western Sydney as part of RiverFest, an initiative of the Parramatta River Catchment Group (PRCG) and Cumberland Council. Auburn is one of the most highly urbanised locations in Australia. At the event, members of the community were provided with paint, canvases, easels and facilitators who helped guide the artistic process and the production of paintings that expressed ‘their future vision of an unpolluted river.’ Over the course of the day, 128 different artworks were produced by a hugely diverse range of community members. As a way of breaking down the community’s fear of participation and to encourage people to join in, the project funded a small team of practising professional artists to paint alongside them at the event. This proved beneficial as it normalised the activity and demonstrated not just the joy of the painting process but the creation of an artifact and
potential outcomes. Once a few people began to paint their version of the river the level of participation gained its own momentum and people were keen to join in.

In considering the river, its ecology and the uniqueness of each place and how to best engage with communities, it is important to have an awareness of the cultural demographic of each particular place. It is also important not to make assumptions around cultural practice, belief systems and people’s aspirations for the future. The suburb of Auburn that surrounds a key section of the Duck River is one of the most multicultural suburbs in Australia with significant groups of Chinese, Nepalese, Afghan, Lebanese, Pakistani and Indian Australians. According to the 2016 Australian Census, only 29.5% of Auburn’s population were actually born in Australia. To illustrate this further, only 4.5% of people had both parents born in Australia and 84.6% had both parents born overseas [7]. These diverse groups and their cultural practices and relationships with water usage and rivers, as well as their relationship to nature and urban environments, must certainly be taken into account.

The PRCG is comprised of several councils, state government agencies and a variety of committed community groups working together to improve the long-term health of the river and its tributaries. The recently launched Parramatta River Master Plan (Ten Steps to a Living River) sets out a positive long-term strategy to make the river swimmable by 2025 and more accessible to the millions of people who live within 20 minutes of the river. Central to this plan is to improve the way we manage the river system and water quality by placing the community at the heart of the process supported by the concept -‘Everyone has a role to play in keeping the river clean’ [8]. One remarkable story of survival is the Bar-tailed Godwit which has been adopted as a mascot of the Parramatta River. Although the river is disturbed and polluted, this critically endangered bird flies from the northern hemisphere (having been recorded travelling 11,000 km in a single flight) to feed in Parramatta river mudflats and mangroves on molluscs, worms and insects. The sick waterways still teem with life pointing to nature’s regenerative powers [9].

The Painted River event was also supported by The Planetary Health Platform, University of Sydney, Sydney Environment Institute and Cumberland Council, the local government responsible for that particular section of the Duck River. Since then, Cumberland Council have begun the process of integrating the community engagement outcomes of the PRP into their long-term strategic plan for the rehabilitation of the Duck River wildlife corridor. The Duck River is a tributary of Sydney Harbour, one of Australia’s most famous waterways. It also hides a painful truth. It is highly contaminated from current and historic human activity. Its waters, sediments and aquatic life have accumulated metals and other pollutants. Although the waters of Sydney Harbour are rich with fish, human consumption is not recommended, this includes the Duck River [10].

The participatory model of the PRP and the running of the (painting) event at the Duck River in 2017 provided Cumberland Council’s strategic planners with a physical and creative outcome in which to initiate a two-way conversation with the community. The works produced at the event represented painted visions from a broad cross-section of the community and also enabled the planning team to gather diverse inputs and views from people who might not otherwise have participated in more formal workshops, focus groups or written public exhibitions. The planning team were pleased that they were also able to engage directly with a broader demographic, including young people and community members limited by language and who expressed that their aspirations were given a voice via their paintings.

As part of their ongoing strategic plan, the Council has committed to enhancing and expanding the existing open space and to continue to consult the community about their aspirations and use of the area. Following on from the initial feedback, in 2018 the Cumberland Council’s planning team curated a follow-up exhibition and feedback event as part of a larger festival (figure 1). The approach taken was to showcase a number of the river paintings produced by the community in 2017 and test their views one year later. Images and art trigger conversations and it was important to discover if initial views had shifted or new perspective could be gleaned.
Figure 1. Illustrates the active process undertaken by Cumberland Council strategic planners to garner and map community views in 2018) (Images reproduced courtesy of Cumberland Council).

This active, cumulative process proved successful in garnering and mapping community views and also in renewing interest in the planning and future use and health of the river and wildlife corridor. This ongoing feedback in response to the paintings is an important extension in quantifying better ways to communicate the need for transformative sustainable cultures. As images and cultural artifacts, they live on as testament to a cycle of participation. From a community engagement perspective and from the work undertaken by Cumberland Council strategic planners, they have identified several learnings as a result of the PRP; some of those include the ability to capture views from those who may otherwise be excluded; creating greater awareness about the significance of place both in, and for the community; supporting the community directly in the process of place making; providing greater equity in the decision-making processes; and reconnecting the community with the visual, sensory, recreational, creative and physical characteristics crucial to strategic planning. This work is ongoing.

3. Background and methodology: design thinking for planetary health
Design thinking is a design methodology that provides a framework for understanding and solving complex problems and the principles in the formulation of the PRP. Fundamentally, design thinking is a method of transformative thinking, which supports idea generation to form innovative real solutions. In many cases, it starts with a solution and through collaborative processes works backwards to reframe a particular problem. Over the past twenty years the slow emergence of design thinking and the application of design processes to fields other than design has found its way to multiple disciplines like business, product development, communications systems, the arts, social enterprise and sustainability. There are also many parallels with other recognised design modes such as systems thinking and social design. Design thinking (human-centred design) when applied, cultivates collaboration and diversity and in turn stimulates complex problem-solving across disciplines. Design thinking’s human-centred approach advances collaboration, diversity and therefore inclusion, forms part of the fundamental framework of the PRP that also includes notions of shared understanding, shared commitment, shared benefits, a shared culture and most importantly, our shared future. A visual representation of the goals and aspirations can be seen in (figure 2).
Figure 2. Envisaging a new future places people and the river at the heart of community and provides an opportunity to actively reengage with nature by encouraging collaboration towards shared future. (Leo Robba, 2019).

The generally accepted methodology of design thinking and a human-centred approach “comprises five fazes, which have been defined as discovery, interpretation, ideation, experimentation and evolution” [11]. An illustration of design thinking’s relevance in interpreting and expressing ideas relating to human health and natural systems can be seen in the key elements that form this ‘designed’ approach. Those are “human-centred, research based, knowing the surrounding context, collaboration, optimism and non-linearity and experimentation” [12]. Design thinking also positions “need at the centre of the design challenge” [12] and aims to unlock creativity to aid innovative solutions. This idea of need forms the central design challenge of the PRP which in turn helps form the question, how can we develop creative ways to support a new community conversation to form a broader collective narrative that feeds a culture of transformative - thinking and action?

If we acknowledge, as stated earlier, that design both expresses and creates culture and that life’s systems are underpinned by ‘interconnectedness and interdependence’ [13], then it stands to reason that in order to create meaningful change we must communicate not just need but a layered system that provides multiple pathways for cultural transformation [13]. Like many indigenous communities Ian McHarg’s conviction that “all humans are linked as living organisms to all living and proceeding life” [14] expresses this interdependence and parallels with Stephen Boydens’s bio-sensitivity triangle that visualises the co-benefits and relationship between human health and ecosystem health [15].

4. The project’s structure: helping build transformative cultures
The PRP’s core conceptual framework is underpinned by Planetary Health principles which is defined in The Lancet as ‘a new science for exceptional action’ [4] which encompasses ‘the health of human civilisation and the state of the natural systems on which it depends’ [16]. Planetary health’s guiding principle is to safeguard the health and wellbeing of current and future generations and the good
stewardship of Earth’s natural systems. Put in more practical terms, it links ‘the things we do’ with the ‘health of people’ and the ‘health of the planet’ and is further defined by how we manage ourselves to leave no one behind. Figure 4 is a conceptual diagram developed to visualise an overview and system of challenges and pathways for cultural transformation.

Figure 3. Draws a direct connection between human activity (the things we do) with the health of natural world (our planet) and human health. As a framework, it seeks to illustrate a common language and a shared need for a change in people’s perspective through a shift in values, intentions and behaviours and by linking each person’s own health to the health of the planet. (Anthony Capon, Leo Robba, 2017).

Alongside the planetary health framework outlined in figure 4, there are four pillars that guide the PRP as a research project; these are visualising and reconnecting with the uniqueness of place; through science, visualising water health; through design, communicating community engagement and our shared responsibility; and through the digital realm bringing together art, science, design as evidence community participation and in disseminating the message of cultural transformation to a broader audience. These ideas and principles also closely align with the United Nations Sustainability Development Goals, numbers 6, 3, 11, that seek to provide a blueprint for clean water and sanitation; ensure availability and sustainable management of water and sanitation for all; good health and wellbeing and to ensure healthy lives and promote wellbeing for all at all ages; sustainable cities and communities and to make cities and human settlements inclusive, safe, resilient and sustainable [17].

5. Project’s structure and conceptual framework
The PRP has been designed to provide a working model for meaningful community engagement by empowering local communities to come together in order to tell their own stories, through art and science. Human stories, with common threads that not only take account of the effects of how they live, but also stories that help define the uniqueness of their particular place. Communities need pathways in order not only to acknowledge the history of contamination but to enable a move away from exploitative behaviours and the current mindset of unseeing, and therefore unknowing. They need pathways that help them re-engage with nature and the fragile ecosystems that sustain us by
building a plexus that fosters creativity, adaptability and resilience. Figure 4 provides an overview of the conceptual framework that guides the community engagement processes towards change.

Figure 4. The conceptual framework is modelled on a stretch of river and the notion of flow and of a journey. As a graphic, it models IDEO’s design thinking structure and their five-phase process, discovery – interpretation – ideation – experimentation – evolution. The five phases are needed to help communities in the process of picturing and of telling stories about the uniqueness of their place and crucial in building the message towards transformation and consciousness raising. (Leo Robba, 2019).

By picturing their river and the true state of the water quality, they may envisage a new, healthy future for their communities. Through the running of multiple Painted River events we can begin to stitch together a patchwork of collective experience and shared sense of purpose by hosting a ‘virtual river’ online that digitally records and acknowledges each community member’s participation. The dedicated site will be an active resource that brings together the paintings, the water science data, videography and indigenous storytelling. By socialising participation, human experience and new meaning we can also give voice to competing issues around water security, farming and diverse enterprise as well as drawing together a network of diverse communities and creative thinkers.

6. Conclusion
The Painter River Project aims to record a collaborative collective response that provides different perspectives and as a way of constructing a larger narrative that feeds into a growing understanding of the need for cultural transformation. In the introduction of Designing Regenerative Cultures, Daniel Wahl writes “we need a new way of thinking, a new consciousness, a new cultural story” [13]. Wahl’s idea of a new consciousness and cultural story is what the nexus of art, design and science together can provide. It can help us reflect, reframe and rethink ‘how we see ourselves’ and ‘our relationships with others’ [13], not only by relearning to really look at where we live, how we live, and the things we do, but also by engaging directly as communities in a targeted way to highlight specific issues—issues directly related to our survival and ones that we can all understand. To begin to heal the health
of our watershed and river systems we need to galvanise communities around issues that are personal to them so that they as a collective can begin to piece together a long-term, embedded cultural narrative. One for us – and future generations

Acknowledgments
This research was initiated as part of a collaborative process and was supported by Cumberland Council, and with input from their Strategic Planning team which includes, Nyambura Mwaniki, Frances Hamilton, Monica Cologna, Lisa Yuan and Jennifer Ryu. I would also like to acknowledge the support of the Parramatta River Catchment Group, Sydney Environment Institute and Professor Anthony Capon, Head of The Planetary Health Platform, The University of Sydney.

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