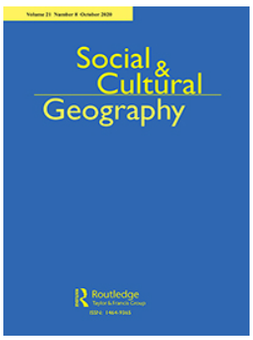

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Blue space as caring space – water and the cultivation of care in social and environmental practice

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ABSTRACT

This paper studies three sites or 'landscapes of care' in Leeds, Bristol and London where water and associated built and natural environments are used to co-construct and facilitate forms of social and environmental care. Our research narrates the ways in which blue spaces are cultivated for the production of particular forms of caring bodies and sensibilities. Interpreting care as both a doing (caring for) and emotion (caring about), we draw attention to the diverse practices and distributed nature of care in these environments. Our paper has three main insights. First, we draw attention to the role of water as both a material and site of care. Second, we identify a range of more-than-human benefits associated with blue spaces and how these emerge via collaborative, non-linear and reciprocal forms of care. Third, we argue that by understanding how care works in everyday social practice, new forms of ecological care and pro-environmental ways of living with the world can emerge.

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PALABRAS CLAVE
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L'espace bleu en tant qu'espace de soins – l'eau et la culture de soins dans la pratique sociale et environnementale

ABSTRAIT

Cet article étudie trois sites ou « paysages de soins » à Leeds, Bristol et Londres où l'eau et ses environnements associés, construits et naturels, sont utilisés pour co-construire et faciliter des formes de soins sociaux et environnementaux. Notre recherche explique les différentes manières selon lesquelles les espaces bleus sont exploités pour la production de formes particulières de soins des corps et des sensibilités. Tout en interprétant les soins comme étant à la fois actifs (soigner) et émotifs (se préoccuper de), nous attirons l'attention sur les différentes pratiques et la distribution des soins dans ces environnement. Notre article a trois perspectives principales. Tout d'abord, nous attirons l'attention sur le rôle de l'eau comme étant à la fois un matériau et un site de soins. Ensuite, nous

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identifions une série de bénéfices plus qu'humains associés aux espaces bleus et la façon dont ils émergent à travers des formes de soins collaboratives, non linéaires et réciproques. Enfin, nous soutenons qu'en comprenant comment les soins fonctionnent dans la pratique sociale du quotidien, de nouvelles formes de modes de vie peuvent naître avec un souci écologique et des bénéfices pour l'environnement dans le monde.

El espacio azul como espacio de cuidado — el agua y el cultivo del cuidado en la práctica social y ambiental

ABSTRACTO

Este documento estudia tres sitios o 'paisajes de cuidado' en Leeds, Bristol y Londres, donde el agua y los entornos naturales y de construcción asociados se utilizan para co-construir y facilitar formas de cuidado social y ambiental. Nuestra investigación narra las formas en que los espacios azules se cultivan para la producción de formas particulares de cuerpos de cuidado y de sensibilidades. Al interpretar el cuidado como una actividad (el cuidar) y una emoción (el preocuparse), se llama la atención sobre las diversas prácticas y la naturaleza distribuida del cuidado en estos entornos. Este trabajo tiene tres ideas principales. Primero, se hace hincapié en el papel del agua como material y como lugar de cuidado. En segundo lugar, se identifica una gama de beneficios más-que-humanos asociados con los espacios azules y cómo estos surgen a través de formas de cuidado colaborativas, no lineales y recíprocas. En tercer lugar, se argumenta que al comprender cómo funciona el cuidado en la práctica social cotidiana, pueden surgir nuevas formas de cuidado ecológico y maneras de vivir con el mundo a favor del medio ambiente.

Introduction

In this paper, we present and examine three cases of water-based social and environmental care practices. Through the examples, we focus on the enactment of waterscapes of care, variously positioned towards the facilitation and cultivation of individual and social transformation. Examining how care works in the co-construction of caring blue landscapes from the perspective of nurturing care agents, we narrate the agencies of water in the co-production of caring landscapes; the role of embodied care practices; and the indirect, yet interdependent nature of care assemblages and how these contribute to social and environmental change. Our broad objective is to highlight relations and interdependencies associated with blue space and social agents in the construction of both landscapes of care and caring bodies. Our focus is on three water-based programmes in the UK which pursue social and environmental change via interactions with blue space. The paper has three main contributions:

- First, we expand understandings of care to include the role of water and other nonhumans (e.g. boats and water wheels) as active agents in cultivating and performing care.

- Second, we engage with and advance literature on 'blue space' and well-being by identifying how the benefits of blue space caring practices are not restricted to humans.
- Third, we argue that by understanding how care works[1] in everyday social practice, we identify possible routes towards new forms of ecological care and pro-environmental ways of living with the world.

We suggest that these findings have relevance not only for care scholarship and theory, but also for policy and the everyday delivery of care in settings of need.

The paper structure is as follows. Following this introduction we review geographical scholarship on care. We pay attention to the way the concept has been deployed in feminist theory and how this is being applied to nonconventional settings. Our review is particularly concerned with the role of nonhumans in the construction of sites or landscapes of care. The empirical section presents our analysis of care practices across three examples where humans, water and blue space more generally are co-collaborators in the production of social and environmental change. The paper concludes with a review of overall themes, reflections on the cases and suggestions for further research.

Caring matters

> …without care we would fail to thrive. Yet, despite its centrality to all aspects of our lives, it is remarkable how marginalized care is. (Milligan & Wiles, 2010, p. 736)

Care provides researchers with a lens to examine a range of social, political and environmental practices and contexts. Within geography and the social sciences more broadly care is often defined as a form of support delivered or provided through physical (i.e. caring for) and/or emotional (i.e. caring about) labour (Bowlby, 2012; Conradson, 2003; Held, 2006; Kittay, 2001; Milligan & Wiles, 2010). Within this literature, the concept of care has often been applied to activities such as child-care and housework and other forms of emotional labour (Boyer, Reimer, & Irvine, 2013). Feminist thinkers, in particular, brought this form of care-work to scholarly attention by demonstrating the pervasiveness of care throughout society and in everyday life (Cox, 2010; Lawson, 2007). Yet, while this research made the role of care-work more visible, it also exposed the multiple forms of relationships and inequalities associated with care including how care-work tends to be gendered, devalued, and un- or underpaid (England, 1996; McDowell, 2008; Tronto, 1993).

Use of the concept of care as an analytical device is not without contention. For example, scholars in areas such as disability studies have criticised the dependent-laden notions of care and tend to avoid the concept in favour of other ways of analysing the agency of disabled people and their relations with various support groups, institutions and individuals (for a review, see: Kröger, 2009). However, when 'being "cared for" is a condition of all beings' (Puig de la Bellacasa, 2017, p. 205), we argue that it is too crucial to social and environmental relations and too powerful an analytical tool to be ignored. As Joan Tronto argues, care is…

> everything that we do to maintain, continue and repair our world so that we can live in it as well as possible. That world includes our bodies, ourselves and our environment, all of which we seek to interweave in a complex, life-sustaining web. (Tronto, 1993, p. 103)

For Tronto, care is present across the diversity of our engagements with the world ranging from everyday practices of getting through the day to addressing seemingly intractable global concerns. From this perspective, relations of care are not isolated from the density of and intricacies that make up any social situation. Moreover, how care works is rarely straightforward, uniform or unidirectional and need not be a disempowering notion framed by one-way dependencies. For our research, we are particularly interested in the spaces and practices of care associated with programmes for social change including the nature or quality of facilitated encounters (Pitt, 2018; Valentine, 2008) which might contribute to beneficial social and environmental outcomes.

Interdependencies of care

Recent scholarship has advanced understandings of the concept of care beyond dualistic and dependent relations between care giver and care receiver. This thinking moves towards wider recognition of 'a complex network of actors and actions' (Milligan & Wiles, 2010, p. 737) involved in the relations of care implied by Tronto's definition. No longer portrayed exclusively in terms of one-way dependence, care is now seen as embroiled within relations of interdependency (Fine & Glendinning, 2005; Groenhout, 2004; Kittay, 2001; Milligan & Wiles, 2010; Tronto, 1987; Watson, McKie, Hughes, Hopkins, & Gregory, 2004). Interdependency, as such, signals an interest in the complex systems of connection and reciprocity present in any care situation (Holt, 2013). Yet, interdependency and reciprocity of care does not necessarily mean an equality of relations. Rather, multiple forms and expressions of power inequalities are likely to be present in any care relation (Bowlby, 2012). What is more, it is rare that an individual carer will receive an equivalent or uniform exchange of care from the one cared for (Puig de la Bellacasa, 2017). Rather, they will more likely be cared for by others and in other ways. Care providers, in other words, are also care receivers, but often in indirect ways. Exploring these interdependencies, as we do in this paper, means being open to the vast complex of care at play in any caring situation.

Landscapes of care

Scholarly attention to the contexts and situations of care often signals an interest in taking account of wider social, material and place-based characteristics associated with care practices. Building on research in health geography and writing on sites of therapy and well-being, there is now a robust literature examining various 'landscapes of care' – the spaces through which caring practices take place (Conradson, 2003, 2008; Milligan & Wiles, 2010). Research into the sites and spatialities of care has widened what we know about care including how and where care practices occur. For example, in addition to sites such as the home (Milligan, 2009), nurseries (Boyer et al., 2013), hospitals and other sites of health care (Ge, El Hawashy, & Taha, 2011; Keogh & Gleeson, 2006), landscapes of care might include locations such as cafés (Warner, Talbot, & Bennison, 2013) parks

(Laws, 2009), community gardens (Milligan, Gatrell, & Bingley, 2004; Pitt, 2018), drop-in centres (Conradson, 2003) and arts spaces (Hall, 2013) among other informal locales (Duff, 2012). Central to this work is recognition that these are not fixed sites, but rather, relational accomplishments where place and care are co-constituted (Ivanova, Wallenburg, & Bal, 2016). For example, a site such as the home shapes and mediates the specific caring practices through the presence of particular material and social component parts (i.e. what the home is as well as its social dynamic). Meanwhile these care practices go on to influence the way people come to perceive, experience and understand their homes (Milligan & Wiles, 2010; see also: Wiles, 2003a, 2003b). Care relations, in other words, are co-produced and circular as they are 'located in, shaped by, and shape particular spaces and places…' (Milligan & Wiles, 2010, p. 736; see also: Bowlby, 2012). For example, in a relational study of the 'enabling places' associated with recovery from mental health illness, Duff (2012, p. 1389; see also Duff, 2011) suggests that therapeutic and restorative places are made up through a 'web of associations' between social, material and affective resources. Healthy, positive and restorative experiences and outcomes are thus 'nurtured' and not 'innately therapeutic' but rather, are 'cultivated' and individually experienced (Duff, 2012, p. 1393–1394). Till (2012, p. 5) suggests that these resources contribute to a 'place-based ethics of care' where processes of caring are understood as 'ethical and political practices'. Our research engages with and advances these relational examinations of care and place.

Drawing on advances in Science and Technology Studies and Non-representational Theory, care scholars have also begun to take seriously the role of the nonhuman actants in the co-construction of caring sites and assemblages (see Armstrong, 2006; Gorman, 2017; Miele & Evans, 2010; Puig de la Bellacasa, 2010).

By assemblage, we highlight analytical thinking that centres on the relations between 'heterogeneous yet connected component parts of the city' (Buser, 2018, p. 769; McFarlane, 2011a, 2011b) and the coming together of diverse (more-than-human) 'bodies, forces, spaces and objects' (Duff, 2016, p. 63) in particular caring situations.

This research shows that care is always situated in material contexts which influence the nature of the relation. Taking the example of soil, Puig de la Bellacasa (2017, p. 161) demonstrates how humans 'are not the only ones caring for the earth and its beings' but rather, she shows how along with worms (and other organic and inorganic material) 'we are in relations of mutual care'. Understanding the interdependencies associated with (soil) care in this way suggests we need 'to consider the many ways in which nonhuman agencies are taking care of many human and nonhuman needs…' (2017, p. 161 see also: Puig de la Bellacasa, 2015). Care work, as such, is not an endeavour exclusive to humans but is distributed across more-than-human agencies, where caring for can support both human and nonhuman existences. Such a perspective transforms and extends Tronto's understanding of agency away from a human 'we' (i.e. everything that we do) and towards a more-than-human 'us' (everything that is done) (Puig de la Bellacasa, 2017).

Within the frame of this paper, such thinking suggests that the specific characteristics and affects of water (and water environments) can have significant implications for the nature of caring practices situated in watery settings. In this sense, water and its associated material and discursive contexts are non-neutral agents in the practice of care and in how care works.

Water and care

There is, of course, a long history of water care and being with water as a means of physical and emotional healing. Drawing on Roman and Greek belief in the restorative qualities of water, the Victorians re-invigorated the appreciation for and practice of congregating around and immersing in mineral waters and baths (Strang, 2015). Places such as Bath or Lourdes became sites of well-being where 'taking the waters' meant providing sites where individuals could reap the health benefits associated with water (Foley, 2010; Gesler, 2003). By the late 20th century, leisure and tourist industries brought more people into direct and active engagement with water through sports such as swimming, surfing, paddling and other activities (Anderson, 2012, 2013; Foley, 2017; Strang, 2015). Yet, as Kearns, Collins, and Conradson (2014) note, blue space can also isolate and detain (as in the case of island prisons and sites of quarantine) and does not necessarily always produce positive outcomes or relations.

Recently, researchers have examined the physical and emotional health contributions made by these forms of being in, with or near water. Health geographers, often drawing on earlier research and experiences of green space, have sought to understand and account for the specific well-being attributes associated with 'blue space'. In this work, a blue space is commonly referred to as any ocean, lake, river, fountain, stream or other accessible surface water within an environment (Volker, Matros, & Claben, 2016). Within urban areas, adequate blue space is commonly seen as a key contributor to a city's overall sustainability and quality of life (Volker et al., 2016), providing for both environmental quality (e.g. ecosystem services) as well as social and mental well-being through opportunities for leisure, relaxation and recreation (Finlay, Franke, McKay, & Sims-Gould, 2015; Raymond, Gottwald, Kuoppa, & Kyttä, 2016). Foley and Kistemann (2015, p. 158) point to the ways in which – much like green space – blue spaces can be 'health-enabling' landscapes which support the well-being of human inhabitants (see also Coleman & Kearns, 2015; Foley & Kistemann, 2015). Other scholarship has focused on the therapeutic experiences and well-being potential (both physical and mental) associated with coastal areas (White, Alcock, Wheeler, & Depledge, 2011; White, Pahl, Ashbulby, & Herbert, 2013). This growing area of scholarship is building a robust case for the therapeutic connections between people and water.

The predominance of blue space literature focuses almost exclusively on human benefits. In the language of care, it narrates largely one-way systems of dependency (i.e. how people benefit from water). However, in addition to the direct health benefits for humans, interactions and engagements with water (e.g. through recreation) are also said to contribute to increased awareness and care for the environment and ecological well-being (Strang, 2015). Such claims correspond with the notion that direct connection with nature can facilitate a form of ecological citizenship framed by pro-environmental attitudes and behaviour. Yet, Hannah Pitt (2018) warns that contact alone is unlikely to facilitate strong ethical concern for nonhuman well-being. Drawing on Gill Valentine's work on encounters (Valentine, 2008; Valentine & Sandgrove, 2014), Pitt suggests that in order to understand how interactions and physical connection might produce moral ethical concerns with nonhumans, one must move beyond contact and examine the nature and quality of these relations. In this paper, we seek to advance understandings

of blue space by applying a more-than-human concept of care that draws out the co-constitutive and distributed nature of care relations.

Water-based socially engaged practice

In this section, we examine three cases of water-based social practice (Leeson, 2017) where collaborative processes and 'aesthetic experience' serve to challenge orthodoxy and conventional beliefs (Kester, 2011, p. 11). Each of the cases discussed here reflect the work of partners who participated in an AHRC-funded research programme entitled Towards Hydrocitizenship (2014–2017). This arts-led research project interrogated the ways in which citizens and communities relate to, with and through water. The research sought to critique and advance ideas around 'community' (e.g. what they are, how they function) and the role of water assets and issues in community relations. Broadly, the concept of 'hydrocitizenship' references the wider notion of ecological citizenship, which sees the need for transformations in how society works at individual and collective levels, as essential if humans are going to generate more ecologically sustainable forms of living (Dobson, 2003; Roe & Buser, 2016). Our focus on water reflected an effort to narrow the concept towards one (albeit central) aspect of ecological thinking – relations of water. Nevertheless, our engagement with water and communities of water was diverse and included individuals who manage and maintain urban water infrastructure, communities and residents impacted by flooding, sea level rise and coastal erosion, advocates of water heritage and environmental management, as well as nonhumans such as eels and other species which inhabit local waterways, amongst others. Moreover, as Towards Hydrocitizenship was situated in the AHRC's Connected Communities programme, non-academics (e.g. artists, community facilitators, social enterprises, etc.) were involved as collaborators in research design and processes. The central analytical focus of our paper is made up of three of these partner organisations – Canal Connections, My Future My Choice and Active Energy. These projects were selected for participation in the research as each demonstrated creative, socially engaged approaches to working with people through the context of water. The first two – Canal Connections and My Future My Choice – are registered charities that work predominately with young people in order to benefit society while Active Energy is an informal collaboration led by artist Loraine Leeson and focuses on the needs of older people. Each of these programmes (to varying degrees) demonstrates elements of social entrepreneurship, meaning their 'primary mission … (is) one of creating social value by providing solutions to social problems' (Dacin, Dacin, & Tracey, 2011, p. 1204). Yet, in this paper, we do not evaluate or measure the impacts of these projects. Rather we examine 'why' and 'how' our partners facilitated caring blue spaces.

Researchers collaborated and engaged with Canal Connections, My Future My Choice, and Active Energy at regular intervals over three years. Leaders of each programme were formal project partners in the research. As such, we were able to have an open dialogue and learn from numerous informal discussions at project meetings and related events. In addition, researchers served as participant observers at a number of community events, workshops and presentations led by the three organisations (e.g. public launch of Active Energy's water wheel and participation in National Mills Weekend). Ethical approval to

work with these organisations was organised by individual researcher universities and was updated and amended along with new opportunities.[2]

In this paper, we report on a smaller, more specific set of work in order to draw out particular understandings of care. In the final year of the project, we conducted three semi-structured interviews with leaders at each organisation. Interviews lasted between 2 and 3 h (over a period of 2 days during project meetings) and were designed to explore and understand the role of water and care in these contexts. In this way, our questions centred on learning about the spaces and (more-than-human) relations facilitated through each programme and how these might relate to diverse notions of care. Interviewees were enthusiastic contributors and did not want their organisations and names to be anonymous. In addition, the paper draws on participation and observation at three partner-facilitated events. This includes a boat tour of Leeds canals led by Canal Connections (November 2016), a 'learning ships' workshop and tour of Bristol harbour facilitated by My Future My Choice (January 2017) and participation at the launch of Active Energy's Water Wheel (May 2017). Each observation lasted a full day (approximately 8 h) and was intended to examine and understand how our partners framed their practice. During these events and observations, the university team was briefly introduced to programme staff and participants (where present). We did not ask questions or interact with participants in a significant way, as our intent was simply to observe how these programmes worked. Moreover, for this research, we did not attempt to gauge effectiveness or measure participant impacts. Rather, this research centres on 'why' and 'how' our partners facilitated encounters in and with water. Specifically drawing on our framing of care, analysis details the function of (watery) spaces in engagement practices, the role of embodied encounters and identification of the various flows[3] of care within these contexts.

Following a brief introduction to each partner, we examine a range of care relations across these analytical frames. Our objective is to draw out the relations and interdependencies between blue space and social agents (our partners) in the construction of enabling places (Duff, 2012) and particular landscapes of care and caring bodies.

Canal connections

Trevor Roberts is a former police officer who set up Canal Connections in 2012 for the purposes of demonstrating the potential of Leeds' waterways for social regeneration. By taking young teens (the majority of participants are 13 to 15 years old) on canal boat trips and placing them in diverse 'real world' situations, Canal Connections provides opportunities for disadvantaged or socially isolated young people to gain a diversity of experiences and life skills. Participants come from a range of backgrounds and programmes in Leeds including via engagements with the city's Youth Offending Team. In addition to providing benefits to participants, Trevor sees the project as part of a wider effort to care for and 'animate' the water spaces of Leeds (TR 9/11/16).

My future my choice

My Future My Choice (MFMC) is a Bristol based organisation that seeks to boost the confidence and aspirations of young people (generally ages 10 to 12). One of the

organisation's core programmes, 'Learning Ships' helps children explore Bristol's water heritage through boat tours of the harbour, visits with shipbuilders and participation in boat-building workshops. Led by Hugh Thomas, Learning Ships is designed to use Bristol's maritime history to inspire, increase aspirations and help build skills amongst young participants.

Active energy

Loraine Leeson is an artist with extensive background and experience in community arts and socially engaged practice. Active Energy is an ongoing collaboration between Loraine, volunteers and a group of older men based in Bow, East London known as 'the Geezers'. In 2017, after several years of design and construction work, the group installed a stream wheel in the Bow Creek (a tributary of the River Lea in London). The wheel uses tidal energy to oxygenate the water, contributing to improvement of the watercourse and a healthier ecology for the Bow Creek fish.

In the sections below, we focus on the recent work and experiences of Trevor, Hugh and Loraine (attributed interview quotes are indicated by TR, HT and LL, respectively). In our discussions and observations, all three emphasised interaction that brought individuals with little or no water experience to local watery spaces. Engagement with water tended to be explorative and open-ended and generally allowed for a range of participant agency. While there was no single unifying objective, our partners commonly described 'success' as the construction of quality experiences and situations where people would be able to explore and express their sense of community, belonging and citizenship.

Our empirical work is presented across three themes which speak to and advance the literature on care. In looking at situations of socially engaged (care) practice, we contribute to understandings of 'how care works' by drawing out the relations and interdependencies of care associated with the co-construction of particular landscapes of care. First, we look at how care emerges from situated local contexts and in particular how water is an active agent and collaborator in the production of specific caring landscapes. Second, we draw attention to care as embodied practice by detailing moments of making, touching, looking and other sensory engagements at work in our examples. Third, we examine the interdependencies and networks involved in water-care assemblages and how these relate to the potential for social and environmental transformation. These analytical framings emerged through discussion with community partners and analysis of data which included interviews and multiple informal conversations with Trevor, Hugh and Loraine over the course of the project and participation as observers in their activities and programmes.

Caring blue spaces

> 'Leeds owes its very existence to water…' (TR 9/11/16)

The conditions of Leeds waterways have changed significantly since the height of the industrial era. From Trevor Roberts' perspective, the canals were once the lifeblood of the city but today they serve as an edge-space largely forgotten and ignored.

> …water space goes right through the middle of Leeds … [but] nobody has really got any ownership of it. It actually acts as an area boundary… it's a boundary of everywhere so therefore nobody takes ownership of it…. (TR, 9/11/16)

By ownership and boundaries, Trevor is not suggesting that there are no canal users. Rather, he is referring to the way in which the canal has served as a territorial boundary for certain young people who may feel uncomfortable in certain parts of the city. During our discussion, Trevor noted how young people might be more inclined to participate in activities along the canal rather than within particular neighbourhoods which may be seen to be 'rival' territory. Yet, Trevor turns this overlooked and so-called unclaimed condition of the canals to his advantage. Working in this 'neutral territory', as he explained it, he has found a unique space in the city through which to engage individuals who may be suspicious of participating in activities within rival neighbourhoods. Cutting across the city, the so-called 'unclaimed' canals become connectors, allowing interactions with and through the city and opening up new ways of communicating with disadvantaged youth (TR 9/11/16). Within these spaces, Canal Connections facilitates exploratory and non-didactic engagements between people and water. According to Trevor, traveling at 5 miles/h on a traditional canal boat, young participants are given something they may otherwise take for granted – the time for self-discovery and to reflect on how their lives fit into this hitherto unknown urban landscape. Trevor is adamant, 'the boat is fundamental' he says, to opening up opportunities for something different and transformative to occur in the lives of disadvantaged urban youth.

Moreover, for some participants, this 'unexplored' environment can provide a spark of agency. As Trevor notes: 'We've done work with people [of disadvantage]… and actually just taking them out on a boat… they … start responding to that environment and say "well look at this rubbish there, that's wrong"… it's an activator for them to actually do something more…' (TR 9/11/16). This is one example of how participants in Canal Connections might connect to other canal users (e.g. those leaving litter). Trevor noted how, for some, these encounters provided a sense of awareness of the power of individual actions (not only to do harm, but to contribute in a meaningful and positive way). This notion of the environment as an activator coheres to other research which found that engagements with the environment can enhance pro-environmental behaviour (Wyles, Pahl, Holland, & Thompson, 2017).

Yet, not all participants will take to picking up litter. Rather, they will respond in their own way. During our conversations, Trevor recounted a number of instances where participants discovered new interests from the experiences with Canal Connections including, for example, managing the boat but also doing canal maintenance work, taking up photography (e.g. to produce visual histories of the canal) and cooking (one participant has gone on to train as a chef). These are forms of engagement and transformation that develop from the flows of the experience. The form of this transformation is not set out in advance. In other words, Canal Connections does not explicitly seek to get young people into photography, cooking or even canal maintenance. Nevertheless, the boat (as a frame for activity) provides opportunity for these and many other interests and skills to develop. Trevor claims that the canal space is particularly useful in stimulating new interests which can go on to influence a young person's life beyond the canal. Nevertheless, while there is a level of informality and

openness to these experiences, as an 'enabling place' (Duff, 2011, 2012) for social change and care, positive outcomes are not inherent to the canals but rather are carefully managed and nurtured. They are, in other words, the result of a relational association of social, material and affective resources situated in place.

There is, of course, a politics to this form of discovery. These canal spaces are situated within the ubiquitous cultural landscape of Leeds' post-industrial urban waterfront. As such, being on the water with Canal Connections means participating in a particular interpretation of urban heritage. This engagement with industrial heritage and maritime history was evident across all three projects. For example, during an observation event with MFMC, participants sailed through Bristol Harbour to meet boat builders and shipwrights, visit a replica of The Matthew[4] and cruise past Brunel's refurbished SS Great Britain. The message of the tour was difficult to miss – as Bristolians these young people are part of a celebrated lineage of explorers and engineers. Hugh Thomas explains, 'just taking the kids down the river on the boat and you get to Avonmouth and you say this goes everywhere in the world. From here you can sail anywhere…' (HT 14/10/16). In much the same way as Canal Connections, Learning Ships draws on the historic setting of the local water landscape (here Bristol's harbour) to provide the context within which participants explore their place in the world and, it is hoped, find inspiration.

In Loraine's work with Active Energy, it is no accident that the Geezers' stream wheel is located at Three Mills in East London – one of the oldest and largest tidal mills in the world. The site provides links between England's early industrial heritage and contemporary interest in sustainable rivers. Moreover, as a tidal tributary of the Lea, the Bow Creek provides a frame for action where water wheels can play an important role. The mill pool where the apparatus sits fills up at high tide. As the tide goes out and the pool empties, the wheel begins to operate and aerates the water. As Loraine says 'it uses old technology to drive new technology' (LL 8/11/16). This confluence of old and new draws on East London's tidal rivers and the area's industrial heritage to facilitate contemporary forms of environmental relating.

It is through these multiple relational practices of being with others (human and nonhuman) that a canal or river becomes a caring landscape. In Leeds, Bristol and London, we find spaces where caring practices are evident. This is caring both 'for' participants by providing new forms of engagement, sociality and inspiration, as well as supporting means of caring 'about' local water environments and histories. Moreover, across our examples, caring landscapes were facilitated by Trevor, Hugh and Loraine, but constructed in concert with the wider contextualised material and social assemblages of these spaces. Much like the way a home, as a context for care, will shape particular care practices that take place there (Milligan & Wiles, 2010), the rivers and canals in our examples frame the forms of support, engagement and encounters that take place. Within the next section, we take a closer look at the specific characteristics of moments of encounter and care taking place in blue spaces.

Embodied and sensory engagements with water

> …the idea of using hands … is a big part of the interest for us… Kids don't use their hands a lot you know. (HT 14/10/16)

Care is variously described as both an ethical disposition and a form of practice (Kullman, 2014). Care-work is often framed as attentiveness to the welfare of others (England, 2005) through processes of looking after (e.g. feeding a child) and other forms of physical and emotional labour (Conradson, 2003). In this section, we focus on particular physical forms of care where 'doing' means not only looking after, but also being involved in a process of becoming aware of oneself as well as (non)human others.

During our time with Trevor, Hugh and Loraine, we learned about and witnessed attention and promotion of embodied 'doings' with water. With Canal Connections, young participants actively engage with canal life by, for example, driving boats, operating and maintaining locks, making tea and cooking for fellow boaters, picking up litter, and managing canal side environments. Trevor reflects on the empowerment associated with these kinds of responsibilities:

> if somebody comes and says right there you are you can drive the boat and that's the first time that anybody's actually said you can do that, normally they say well you can't do that, you can't do this, you can't do the other, you're actually saying to someone here you are take this fifty foot boat away and drive it away and so you're giving them something. (TR 9/11/6)

Trevor sees the change this form of engagement can produce – something emerges which he calls 'the long view' where a young person is now looking across the water in a way that 'the entire environment slows people down' (TR 9/11/16). Jones argues that such bodily attunement reflects a form of intimacy through which we can come to know nonhumans and possibly 'complicate and change the way we think about them' (2017, 16). The long view which Trevor refers to is his representation of how some participants' bodies become more involved and more intimately connected to the watery space. For Canal Connections, this is a crucial step in building an ethics of care.

Hugh's work in MFMC engages a younger cohort of primary school children and does not facilitate quite the same level of agency and responsibility. Nevertheless, there is a central focus on embodied practices (often involving the hands) within these learning activities. For example, on our observation day (following the harbour tour) MFMC participants worked in groups to construct cardboard replicas of the boats they visited in Bristol's waterfront. This hands-on way of working is essential to the objectives of MFMC:

> …it is something that I feel people are losing as well in a big way and they are losing that, because of that they lose their contact, the immediate physical contact with the world … touch the world and alter the world and change the world…. (HT 14/10/16)

For Loraine's Geezers, a good deal of the physical labour was conducted by (younger) volunteers. However, engagement processes were centred on 'making'. It was not enough to meet and talk about tidal energy. Rather, the group mobilised to intervene and become active in looking after vulnerable others. For example, the Geezers' original objective when they started working with Loraine was to help East Londoners who suffered from fuel poverty. The prospect of tidal power seemed to be an untapped resource in tidal London. Drawing on her participatory arts background, Loraine facilitated inquiry and active engagement by enabling moments of encounter and ways of 'being with' and caring for other people and things that built on the enthusiasms and

interests of the Geezers. Calling on their earlier experience in construction and mechanics, the group worked with engineers and started to come up with their own wheel designs. These were further developed through renewable energy workshops held at a local (Bow) boys' school where prototype wheels were constructed.

At times, we noted how these sensory and embodied experiences facilitated new bodily connections with nonhumans. To be in contact with the weather, tides, the feel of water is to upset an everyday balance and create new rhythms. For Trevor, just being on the water was found to be an invigorating and disruptive sensation where alternate temporalities, perspectives, environmental conditions and concerns might come to the fore. Across these projects, engagements with the (non-familiar) materiality of water formed a critical part of how our partners sought to produce caring bodies (variously emotional, political and active).

Yet, we note that contact alone does not inevitably produce ethical concern and 'more caring relationships' with non-humans (Pitt, 2018, p. 255). Of course, this interference with the everyday we refer to above can be negatively felt by individuals for whom being within blue space landscapes might produce feelings of distress and discomfort (Bell, Foley, Houghton, Maddrell, & Williams, 2018; Thomas, 2015). Indeed, each partner noted how invariably, some participants were not comfortable participating in the spaces and activities they had designed. Moreover, there is nothing inherently 'therapeutic' about the spaces within which our partners work. Rather, positive experiences emerge via 'sociocultural-material-affective-sensuous configurations involving both human and non-human actors' (Bell et al., 2018, p. 128); it is the qualities of relating that matter. For example, in her research on community gardeners, Hannah Pitt counters conventional wisdom that direct contact with nature leads to more ethical regard and care for nonhumans. Other research has argued that embodied, practice-oriented encounters alone are unlikely to produce a particular pro-environmental subject, but rather, these experiences must be supported by ways of relating differently (Roe & Buser, 2016; see also Wyles et al., 2017; on the role of beach cleans as a means to raise marine awareness and pro-environmental behaviour).

Nevertheless, there is clearly a role for practice-based and embodied encounters in cultivating 'the desire to care' within environmental contexts (Jones, 2017, p. 7). As Bell et al. (2015, p. 61) point out in the context of the coast, critical here are the 'internally felt bodily sensations' which reflect the 'fullness' or 'wholeness' in the way people experience the therapeutics of particular landscapes of care. This, we argue, is an important characteristic of water which can facilitate multiple forms of bodily and sensory connection. Next, we reflect on the quality of these relatings and in particular their ability to bring to the fore reciprocal forms of care.

Interdependencies of care

These forms of social and environmental practice are situated in understandings of care for the world as 'interdependent' and reciprocal. In this way of thinking, humans and the environment do not occupy distinct spheres, but are intimately connected. Interdependence, as Pitt notes, 'suggests a non-hierarchical relationship in which others determine their own needs. Relationships of interdependence typify an ecological outlook recognising mutual benefits for humans and nonhumans' (Pitt, 2018, p. 266). Within the multi-directional flows of care we witnessed, the distinction between care provider

and care receiver was tangled and uncertain. Following Puig de la Bellacasa (2017), being aware of interdependencies means moving away from instrumentalist and exploitative forms of (human–nature) interactions and seeing the multiple flows of benefits. Such an approach to water would recognise how humans are entangled in relations of care and are obligated to care for water ecologies (see Puig de la Bellacasa, 2017, p. 192). While all three partners examined and facilitated more-than-human relations, these forms of interdependencies were most evident in the work of Trevor and Loraine. We focus on their work in the final analytical section.

For Pitt (2018), an ability to expose and explore human–nature interdependencies is part of what contributes to the quality of encounters with nonhuman others. Moreover, encounters which might foster new caring attitudes or perspectives are likely to require more than simple contact with the unfamiliar. Rather, transformation of this kind is forged through forms of sharing and meaningful exchange (Pitt, 2018; Puig de la Bellacasa, 2017; Valentine, 2008; Valentine & Sandgrove, 2014). Such relational and dialogical forms of encounters – 'the co-presence of bodies in real time' (Kester, 2011, p. 114) are crucial to the work Trevor does with Canal Connections. As noted above, young participants are involved in various forms of physical and material intervention such as maintaining weirs and canal side trails or driving a canal boat. Yet, these are not exercises in 'skills development' or navigational training for future canal boaters. Rather, they are points of contact where individual participants are put amongst the unfamiliar and given space and time to reflect. This may result in an interest in boating, or industrial heritage – but this is never mandated as participants are allowed to feel their way through the course of a day (a week, or longer) and find their own path of correspondence. Trevor's work takes advantage of the particular qualities and experiences the canals offer as a way of seeing what might contribute to the development of a young person's interests and skills. It is through an individual's self-exploration with the surrounding world where the reciprocity of care becomes evident. In Leeds, young people involved with Canal Connections emerge as new caring agents for a derelict landscape. Yet, it is within these spaces and through these experiences that Trevor sees people moving out of their own difficult personal situations associated with urban deprivation. For Canal Connections, blue spaces can have a significant role to play in the well-being of marginalised and disadvantaged young people. In this case, well-being is not measured in terms of physical or mental health, but rather by how the destabilising effects of the unfamiliar can lead to the production and genesis of desire for alternative futures (Amin & Thrift, 2013; Braidotti, 2013). Atkinson and Scott (2015, p. 78) note how creative destabilisation of the everyday can 'act as a catalyst for change' by opening participants up to new experiences and possibilities. Similarly, research by Wyles et al. (2017) on the impacts of beach cleans showed how meaningful engagement with the environment can produce positive changes in the behaviour of volunteers. However, without reinforcement, these intentions tend to be relatively short-lived (e.g. lasting only a week). Recognising this type of limitation, Trevor noted that in a perfect world, people who come through Canal Connections would stay on for several weeks and eventually could become mentors or the instructors themselves.[5] Yet, longer engagements are often limited by the nature of Canal Connections' funding, particularly funds for young offenders, which generally only support short-term encounters. Trevor reflected on these situations from his experience:

> So we actually gave somebody something that they didn't have before and then took it away from them which actually puts them further down the chain when they actually do that. (TR 9/11/16)

In these cases, canal boat encounters might actually lead to further frustration, anger and disillusionment amongst participants. This demonstrates how, following Pitt (2018), simply enabling encounters with nature (or the unfamiliar) does not seem to be sufficient to facilitate change. Rather, transformation requires some subsequent potential for the meaningful and thoughtful application of new concepts and practices.

In London, Active Energy seeks to provide opportunities for durational encounters with water. Research suggests that poor social relations can lead to a number of physical and mental health impairments (Luanaigh & Lawlor, 2008). According to the Office for National Statistics, in 2017 there were over 3.8 million people over 65 years of age living alone in the UK.[6] As such, there is growing concern about their quality of life and the susceptibility of older people to episodes of social isolation and loneliness (Milligan et al., 2016; White, de Sousa et al., 2011). Yet, as Milligan et al. (2016) have shown, increased social interaction can lead to improvements in mental health and well-being of older people. Working with Loraine, Age UK and local volunteers, the Geezers have met regularly over the last 10 years to work on energy-oriented projects in East London. As such, Loraine's work with Active Energy provides a crucial form of care for older men. Yet, the care flows are not unidirectional. The Geezers are not typically represented as care receivers, but rather, as agents of change and urban transformation – individuals who hope to leave a mark on the world and make it a better place. At the stream wheel launch event (May 2017), Jane Caldwell, Chief Executive at Age UK East London emphasised the value of older people's experience to the wider society, together with the benefits of creative and purposeful activities to those involved. As Loraine noted, 'those guys have a real desire for legacy and…for putting what they know, and their experience into something that happens that will affect people in the future' (LL 18/10/16).

Over the last few years, this altruism has turned to improving the water quality of London's Bow Creek. This tributary of the River Lea is prone to pollution from sewage during heavy rain events which results in extremely low levels of oxygen and the death of fish. The Geezers' stream wheel helps address this problem by oxygenating the watercourse through the sustainable energy. The wheel operates on tidal power as it blows air into areas of the tidal basin where there are low levels of oxygen. It is a form of correspondence between the Geezers and nonhuman lives as Bow Creek fish have come to depend on the care of humans for a cleaner and healthier ecosystem. This is a concept of water that includes humans within it (see Puig de la Bellacasa, 2017, p. 192) and sees human involvement in the care for blue space as essential. Speaking at the launch event, one of the Geezers reflected on the group's inquisitive approach 'we want to do things like this and find out about the world around us' (Participant, 3/5/17).

Of course, the impact of a single oxygenating wheel on London's riverine ecosystem is likely to be somewhat limited. Indeed, this work is necessary only due to a widespread lack of care and an overall disregard of the environment by others. As of yet, the Geezers and Active Energy have not yet pushed their message for a cleaner water system out towards the polluters. The challenge here is largely infrastructural as London's Victorian

sewer design allows sewage to enter the city's waterways during large storms (the city is working to address this challenge along the Thames through efforts such as the so-called 'super sewer'). Yet, for Loraine and the Geezers, it is perhaps more significant that new and multiple forms of social and material relating have been constructed. In this way, the water wheel is a provocation. For some who visit the site, it is possible that the wheel may be overlooked. Yet others might take notice and ask: why is such a device needed? Or, how can we live in such a way that the city's water is safe for all? These are questions that, while not answered directly through Active Energy, can become part of an everyday discourse about urban rivers.

Indeed, all three examples have provided opportunities to care for the environment. Yet, even within programmes of direct environmental engagement (e.g. nature walks or gardening), social (i.e. human) relations can be key to developing sensitivity to nonhuman issues (Pitt, 2018; Roe & Buser, 2016). In this sense, we can see how Trevor, Hugh and Loraine have also facilitated and nurtured enabling place encounters (Duff, 2012) and opportunities for intimate human–human interactions in order to stimulate and support quality relations with nonhumans. Transformation, in this sense, involves seeing oneself as part of an ecology of care that celebrates people's ability to learn from and support one another as well as from their entanglements with more-than-human others.

In summary, our analysis of these projects points to asymmetrical, non-linear and distributed forms of care practices that challenge conventional framings of care as the direct and dependent relations associated with (human) care giver and (human) care receiver. Indeed, interdependencies abound. Moreover, we see the various benefits of blue space as emergent and relational, situated within the entanglement of interactions with other human and nonhuman beings.

Conclusion

In this concluding section, we reflect on the forms of change and transformation these forms of care might produce before summarising the paper. Crucially here, none of our partners expressed interest in calculating the immediate impacts of these practices. While funding organisations often seek demonstrable proof, Trevor, Hugh and Loraine each resisted quantifications of their work. Hugh of MFMC, perhaps the most skills-oriented of the three, noted that the impacts of a young person's involvement might be visible over a 10-year time horizon. Evidence of change was most commonly presented via stories and narratives of individual change. As such, when we asked our partners to explain the impact of their programmes, they each regularly expressed a belief that there were aspects of this work that simply could not (and should not) be measured.

So, what can we possibly know about how lives are transformed from these kinds of non-pragmatic, non-linear care activities? We suggest that to understand the transformational nature of these forms of intervention requires a shift in perspective. Rather than see these projects as 'skills development' or efforts to reduce isolation, we interpret them as durational modes of inquiry where working with water (and others) can lead to moments of diffraction. Like the bending of light as it passes through an object – what comes out the other side is transformed (Barad, 2007). In this way, involvement with Trevor, Hugh and Loraine produces interference – the introduction of a new noise or an

obstacle which goes on to influence future trajectories. Diffraction and interference set up the possibilities for lines of flight (Deleuze & Guattari, [1980] 1988) and the possibilities for change and transformation.

This form of change is paralleled in thinking about the role of art in socially engaged and collaborative arts practices. According to Loraine, 'art changes the world by facilitating public discourse, something new, some new ideas are brought out into the open' (LL 18/11/16). All three partners talked about producing something 'new' and encouraging ways of thinking and caring differently. As Trevor explained, 'what we are doing is creating a space for people to have a conversation' (TR 9/11/16). Crucially, this is a form of conversing that not only involves people but also extends to the nonhuman (e.g. built form of canals and harbours, the fish of Bow Creek) whose 'voice' is nurtured into the fold of experience. This, we argue is where much of the affective power and disruptive potential of the encounters we narrate comes from. Grant Kester suggests that collaborative arts practice is well situated to challenge the status quo, to 'open space for forms of knowledge that challenge cognitive, social or political conventions' (2011, p. 11). Similarly, Atkinson and Scott (2015, p. 89) note how altering everyday 'material arrangements' (in this case, the classroom) can disrupt and unsettle and lead to 'a more open space of possibility'.

Precisely how (or when) this occurs is unclear; there is nothing certain and there are no guarantees. Indeed, positive encounters and beneficial experiences with and in blue space are not universal. As Thomas (2015) points out, social expectations regarding body type and image can result in the exclusion of marginalised individuals from blue spaces (e.g. larger bodies from the beach) as well as produce anxiety and distress. However, what we learned from encounters with our partners was that each believed that water provided a frame through which it is possible to increase sensitivity to the world and to expose and support forms of reciprocity and mutual care that make up everyday existences.

Crucially here, forms of environmental citizenship promoted in Canal Connections, MFMC, and Active Energy are not reliant on rights and responsibilities or exchanges based in social contracts. Rather, these projects work by highlighting the interdependencies of care within which we are all ensnared. Through careful and purposeful facilitation, participants 'take the waters' of blue spaces where caring with human and nonhuman others is not a responsibility, but is a condition of life. If we imagine care as a form of correspondence with the world – if social and environmental change means 'watching, listening and feeling – broadly paying attention to what the world has to tell us' (Ingold, 2013, p. 1), these practices demonstrate how such correspondence might play out in watery contexts. This is significant, we argue, because by understanding how care works – as more-than-human, embodied and interdependent – we forge a path towards more ecologically sensitive ways of being with the world.

In this paper, we have contributed to understandings of how care works by examining three cases of water-based socially engaged practice. Following Duff (2012), our intent was to draw attention to the contexts and resources that contributed to landscapes of care. We suggested that these were relational and more-than-human forms of co-production. Moreover, within our cases, we found an important role for sensory and embodied practice (touching, making and other forms of hands-on work with the nonfamiliar) in the production of caring bodies. Our work also underscored the interdependent and entangled forms of care present and how these contribute to the quality of

relating within each project. We see the paper as contributing to social research in three key ways. First, we have expanded how we might understand water and nonhumans in the construction of particular caring landscapes. This includes not only the materiality of water itself, but the surrounding and associated built form. Second, we have taken the literature on blue space forward by identifying and connecting the benefits of these sites and encounters beyond the human. Third, we argue that these projects point to forms of engagement and education that might lead to the construction of more caring forms of citizenship so urgently needed in times of great ecological change and crisis.

Notes

1. In discussing how care works in this paper, we are focused on three individuals who have taken on the role of nurturing and facilitating caring encounters rather than participants. As such, we make no claims that participants are experiencing care in the way suggested by these care agents.
2. Ethical approval for research discussed here was via University of Brighton, Bath Spa University and University of the West of England, Bristol. Note: the researcher who observed My Future My Choice had ethical approval and was certified through the Disclosure and Baring Service (DBS) as young people (ages 11–13) were present.
3. In this paper, by 'flow' we signal a metaphorical connection between movements of water via rivers and canals and the distributions of care between people via more-than-human contexts.
4. John Cabot's boat, sailed from Bristol to North America in 1497.
5. Our research did not interview participants and we did not seek to evaluate the long-term effectiveness of these programmes.
6. Source: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/bulletins/familiesandhouseholds/2017.

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