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## Public pedagogies of arts-based environmental learning and education for adults

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### Abstract

*This paper examines how current theorizing on public pedagogy can be used to understand scholarship on creative, arts-based pedagogies in informal environmental education for adults. In particular, the study applies Biesta's (2012, 2014) typology of public pedagogies to three bodies of literature: arts-based adult learning and education in the environmental movement, eco-art, and Tactical Urbanism, respectively. Each of these is about public art, displayed or performed in public spaces, and connected to environmental learning and education. The scholarship reviewed came mostly from Canada and Australia. In the public, democratic spaces of these countries, we found that arts in the environmental movement and eco-art could be characterized by Biesta's pedagogy of the public, and partially by a pedagogy in the interest of publicness. The performance of Tactical Urbanism corresponded most closely to pedagogy in the interest of publicness. The paper concludes with a discussion of directions for further theorizing and research on public pedagogy and arts-based environmental learning and education for adults.*

Keywords: environmental adult education; arts-based pedagogies; public pedagogy; eco-art; Tactical Urbanism; social movement learning

### Introduction

In the field of Environmental Education (involving mainly formal schooling), a variety of arts-based pedagogies have been practiced and documented for many years (Filho, Murphy & O'Loan, 1996; Inwood, 2008; Song, 2012; Turner & Freedman, 2004). Arts-based environmental education pedagogies have also been researched and debated in Art Education (Bequette, 2007; Gradle, 2007; Graham, 2007) and to some extent in Environmental Studies (Curtis, 2003; Curtis, Reid & Ballard, 2012). Arts-based approaches are also increasingly recognized as viable, effective options for adult

learning and education across the lifespan, as well as being a powerful avenue towards social change (Butterwick & Roy, 2016; Clover, 2005; Clover & Stalker, 2007; Hayes & Yorks, 2007). In environmental education for adults, these pedagogies are credited with helping to raise environmental awareness; promote problem-solving, critical thinking and creativity in addressing environmental issues; change individual and community behaviors toward the environment; and foster transformative learning, environmental sustainability and social change (Bequette, 2007; Branagan, 2005; Clover, 2000; Inwood, 2013; Ramsey, 2002; Roy, 2000; Walter, 2012). However, these arts-based environmental education pedagogies for adults remain relatively under-theorized and under-researched.

The purpose of this paper is to review the literature on arts-based approaches to adult environmental education through the theoretical lens of public pedagogy (Burdick, Sandlin & O'Malley, 2014; Sandlin, Wright & Clark, 2010). In particular, we aim to understand how various forms of arts-based learning and education for adults function as public pedagogy in the public sphere (Biesta, 2012; Welton, 2001) and public spaces (Ellsworth, 2005; Wildemeersch, 2012). We understand the arts to encompass both visual and performing arts. For this review, we have limited ourselves to the English language literature of North America and Australia, where the authors are based. We have selected three widespread forms of informal arts-based adult environmental education along a spectrum of political aims and educative intent. We move from art in environmental protest (radical politics and transformation of the social order) to eco-art (often not overtly political, but aims to promote conscientization), to the community-focused, "guerrilla" design interventions of Tactical Urbanism (liberal politics, no direct focus on learning per se). For each, we consider how the approach might act as public pedagogy, following Biesta's (2012, 2014) theorization of three forms of public pedagogy: *for the public*, *of the public*, and *in the interest of publicness*, respectively.

However, we do not take up Biesta's first concept of *public pedagogy for the public*, since this largely refers to the state instructing the public. This first concept is very useful as a conceptual foil for Biesta's other two public pedagogies, but is largely beyond the scope of this paper.

The first section of paper findings examines literature in Adult Education on how the arts, as public pedagogy, are seen to be generative, educative cultural codes for conscientization and social movement learning within environmental protest movements (Branagan, 2005; Clover, 2000; Walter, 2012). These catalytic cultural codes – found in demonstrations, marches, protest camps, the digital world and other social movement spaces – may include folk music, dance, comedy sketches, street theater and narrative sketches, culture jamming, creative costumery, poetry, puppetry, satirical song, photos, videos, internet memes and so on. Such art can be spontaneous, mobile, temporary and co-created by participants or may be more purposefully designed by movement leaders as "political art" to highlight particular environmental issues and provoke critical thought and action. We characterize this pedagogy, following Biesta's (2012, 2014) typology, mainly as a *pedagogy of the public*. However, we take issue with his contention that in this form of pedagogy, social and political problems necessarily become individual rather than collective learning problems. Although we acknowledge Biesta's caution that educational agents may facilitate their own learning agendas for political change, we argue that this form of conscientization and educative-activism (Clover, 2002) can also be an unpredictable, pluralistic, and liberatory collective learning process in the public sphere. As such, it can also share characteristics of Biesta's *pedagogy in the interest of publicness*.

The second findings section considers outdoor, public eco-art as arts-based environmental education for adults, again, as a form of both *pedagogy of the public* and *pedagogy in the interest of publicness* (Biesta, 2012, 2014). Many eco-artists see themselves as activist-environmentalists educating a citizen-public about environmental issues through their art. However, other eco-artists do not intend that the public conform to a particular interpretation of art, environmental issues or politics, but see eco-art as contributing to a more open, public and democratic learning process. Their artworks focus attention, create, reclaim, inform and re-envision possibilities for human-nature interactions, and have many educative outcomes depending on who is creating and viewing them at a particular time and place. In considering eco-art, we also note the anthropocentric bias of Biesta's *pedagogy in the interest of publicness*. That is, Biesta's conception of the public sphere is (ironically) “disrupted” by eco-artists themselves, who understand the ‘public’ to be not just the plurality of human beings, but also the plurality of “all our relations;” that is, the public includes non-human beings inhabiting the natural world as well.

The third findings section of the paper considers Tactical Urbanism as a form of arts-based *pedagogy in the interest of publicness*. Tactical Urbanism is based in deliberate citizen action for environmental change, but without an overt educational directive or specified political agenda. Tactical Urbanism is usually a disruptive, educative process, where citizens engage in milder forms of civil disobedience and social action to test out creative, alternative ways of using public space to improve their neighborhoods. Such collective public actions are led by unrelated citizens, can be spontaneous, temporary, mobile and unsanctioned, and are without purposeful ‘educational agents’ or ‘public pedagogues’. Tactical Urbanism exists in the public sphere, largely outside of the market and the state, and, in Biesta's (2012, 2014) terms, embraces an ethic of experimentation and human togetherness to show that alternative ways of being, acting and doing are possible. As such, of the three arts-based pedagogies reviewed here, Tactical Urbanism conforms most closely to Biesta's ideal of unfettered *pedagogy in the interest of publicness*.

The paper now elaborates on current theorizing about public pedagogy, explains the study methodology, and presents findings. This is followed by a discussion of findings, theoretical implications, and directions for research on the public pedagogies of arts-based adult environmental learning and education.

## Theoretical Framework

In the last decade, North American scholarship on public pedagogy and adult education has grown in leaps and bounds, led most obviously by the work of Jennifer Sandlin (Burdick, Sandlin & O'Malley, 2014; Sandlin, O'Malley & Burdick, 2011; Sandlin, Schultz & Burdick, 2010; Sandlin, Wright & Clark, 2010). In her own research, Sandlin (2010) looked at popular culture as a site of critical pedagogy (Giroux, 2004), and proposed that the disruptive, educative power of culture jamming allowed it to act as a ‘pedagogy of the unknown’ in public spaces (Sandlin, 2010). In this, she drew on Ellsworth's (2005) ideas of ‘transitional spaces’ (a relational practice in between self and public others) and a ‘critical transformational pedagogy’ focused on ‘embodied, holistic, performative, intersubjective and aesthetic aspects of teaching and learning...’ (Sandlin, 2010, p. 298). Sandlin (2010) argued that when the known ‘script’ of consumerism in corporate retail stores (Starbucks, Wal-Mart, Victoria's Secret, etc.) was disrupted by a costumed performance artist (‘Reverend Billy’ preaching the

‘Shopocalypse,’ accompanied by the ‘Stop Shopping Gospel Choir’), this caused dissonance, discomfort and critical learning about consumerism for spectators. That is, Reverend Billy’s performance, and culture jamming at large, were acts of critical public pedagogy involving the (unscripted, unpredictable) unknown; they were understood as arts-based public pedagogy which ‘jammed’ common cultural norms through disruption and disjuncture (DeLaure, Fink & Dery, 2017).

Other research on ‘urban art interventions’, ‘artistic and cultural interventions’, Tactical Urbanism (to which we turn later), ‘mobile radical theater’ shows similar patterns involving the artistic, educative disruption of public space and of citizens’ ‘common sense’ understanding of daily life (Brigden & Milner, 2015; Butterwick & Roy, 2016; Desai & Darts, 2016; Lydon & Garcia, 2015; Wildemeersch, 2012; Zorrilla & Tisdell, 2016). Many of these arts-based pedagogies are understood to create ‘a space for dialogue with people on the streets about the increased corporatisation of the public sphere’ and help to reclaim it from private interests in the service of participatory democracy (Desai & Darts, 2016, p. 183). However, as Wildemeersch (2012, p. 82) notes, the effects of these art interventions – designed to ‘shock the spectator to make him/her more reflective’ – are in fact unknown and paradoxical: ‘the one who interrupts, be it an educator, a designer, an artist, or an architect, never knows precisely what will be the effect of his/her act, since both the addresser and the addressee live in a world of plurality and difference’. Educators and artists may create disjunctures, but ‘cannot predict if there will be transformation and, if so, what it will look like’ (p. 82). In fact, as Wildemeersch’s (2012) research on cultural interventions in the public spaces of Leuven, Belgium shows, these interventions may in some cases involve ‘learning from discontinuity’ in anomalous, transitional spaces, and interruption of the “normal”, but others, by contrast, involve ‘learning from continuity’ and the ‘confirmation of the familiar’ (pp. 92-94).

In research and theorizing on public pedagogy, there is a profusion of definitions, nomenclature and concepts, but all seem to indicate the educative importance of these acts of disruption. As Ellsworth (2005, p. 41) puts it in discussing the ‘political public art’ of artist Krzysztof Wodiczko (whose work includes projecting disturbing, provocative images on the walls of public buildings; a mobile ‘homeless vehicle’ and so on), ‘..communicative instruments assemble with the force of pedagogy when they create their potential to disrupt habitual ways of inhabiting space and reconfigure ways of knowing both the inside and the outside – both self and society’. This is not the passive acquisition of knowledge ‘as a thing made,... the trafficked commodity of educators and producers of educational media...the decomposed by-product of something that has already happened to us’, but rather an active, ‘knowledge in the making’ as a ‘sensing of ourselves in the making; ... the root of what we call learning’ (p. 1). Public pedagogy thus becomes a ‘pivot place’; a hinge between ‘inside and outside, self and other, personal and social relation’ (p. 38). To exist as this place, it must be both creative and noncompliant (pp. 37, 165). As such, the designers of these ‘anomalous places of learning... shape space, time, experience, and objects with pedagogical intent. They seek, in other words, new ways of knowing that also transform knowledge, self-experience, awareness, understanding, appreciation, memory, social relations and the future’ (p. 37).

Noting the importance of Ellsworth’s and others’ work in theorizing public pedagogy, Burdick, Sandlin and O’Malley (2014) comment that much of the extant scholarship on public pedagogy cites the term ‘without adequately explicating its meaning, context, or location within differing and contested articulations of the concept’ (p. 3). However, the authors raise these and other important questions about public

pedagogy ‘to start the conversation’ (p. 10), not to provide a composite theoretical framing of public pedagogy. For this, we turn to the work of Gert Biesta (2012, 2014).

Biesta (2012) offers a framework of three variants of public pedagogy which can be used to understand informal adult education and artistic interventions in the public sphere, with the aim to ‘articulate a notion of public pedagogy that connects the political and educational and locates both in the public domain’ (p. 684). Drawing on Marquand (2004) and others, Biesta (2012, 2014) begins his argument with the decline of the public sphere, wherein neoliberal privatization of the public sphere and the rise of identity politics have consumed, constricted and controlled both the physical and relational spaces of public learning. Then, building on the work of Hanna Arendt and the idea of the public realm as the collective, plural ‘space where freedom can appear’, and a ‘citizenship of strangers’ who share a common interest in the world, Biesta (2012, p. 691) addresses the problem of how public pedagogy might be conceived in relation to ‘questions about citizenship, democracy and the public sphere’. To do so, Biesta (2014) proposes three forms of public pedagogy: (1) *pedagogy for the public*, (2) *pedagogy of the public* and (3) *pedagogy in the interest of publicness*.

The first, *pedagogy for the public*, refers primarily to the instruction of the public by the state. As Biesta (2012, p 691) explains: ‘This involves telling them what to think, how to act and, perhaps most importantly, what to be. Such a form of public pedagogy is therefore basically orientated towards the erasure of plurality and difference’. This coercive public pedagogy operating through the state’s “schooling of the citizenry” is normalized in regulatory laws, rules, ideologies, rewards and punishments and so on. However, Biesta (2012) also argues that we find this *pedagogy for the public* in ‘situations where citizens are being mobilised or feel inclined to teach each other a lesson, thus revealing the moralistic undertone of this interpretation of public pedagogy’ (p. 692). However, Biesta provides no further explanation of this concept enacted by non-state actors; therefore, we do not speculate on this non-state variant here.

Biesta's (2012) second mode of *pedagogy of the public*, captures Paulo Freire's conscientizing pedagogy for social change (i.e. Pedagogy of the Oppressed) which acts ‘within democratic processes and practices’, rather being imposed from without. Although Biesta describes this pedagogy with the (unfortunate) metaphor of ‘the world as a giant adult education class’ (thus re-inscribing the notion of learning taking place in classrooms rather than the informal spaces of the public sphere), his focus is clearly on informal adult learning and education outside of school. As Biesta notes, *pedagogy of the public* has no predetermined direction, but is arrived at through collective political learning and democratic activism. However, he also sees in it the danger of educational agents facilitating ‘a particular kind of learning aimed at a particular kind of understanding’ (determined by facilitators), and the imperative of learning, understanding and agency for political action (p. 692). The demand for learning, Biesta (2014) argues, has ‘the tendency to turn social and political problems into learning problems so that, through this, they become the responsibility of individuals rather than being seen as the concern for and the responsibility of the collective’ (p. 23). As a result, *pedagogy of the public*, like *pedagogy for the public*, negates the plurality of the public sphere and erases the ‘very conditions under which action is possible and freedom can appear’ (p. 23). In opposition to these restrictions, Biesta proposes a third form of public pedagogy; namely, *pedagogy in the interest of publicness*.

Biesta's (2012, 2014) *pedagogy in the interest of publicness* seeks to remove at once the (coercive) agents of adult education (i.e. the state and ‘political’ facilitators), the purposeful intention of educating (teaching), and the imperative for individuals to learn towards any particular political aim. These unfreedoms are seen to follow the

limiting logic of schooling, and are, as such, barriers to the public sphere as a quality of human togetherness; they are restrictions on Arendt's 'space where freedom can appear' and the unfettered 'citizenship of strangers'. In a *pedagogy in the interest of publicness*, citizens work together in Ellsworth's anomalous, transitional spaces – at the intersection of education and politics – against the erasure of plurality and difference. They share and enact a common interest in *publicness*; that is, a 'concern for the public quality of human togetherness and thus for the possibility of actors and events to become public' (Biesta, 2012, p. 693). In this public space, citizens reclaim 'public ways of acting in concert' and collectively engage in an 'experimental activism' aimed at 'the creation of alternative ways of being and doing, that, on the one hand, resist and push back the logic of the market and that, on the other hand, resist and push back incursions from the private sphere' (Biesta, 2014, p. 23). Thus, this form of public pedagogy has a political aim, but is not directed from outside the public sphere of human togetherness. Rather, it performs as a collective 'pedagogy of demonstration' where freely associating citizens (albeit with a moral imperative to protect the public sphere) '*demonstrate* that it is possible to do things differently; ... that there is *always* an alternative, that things not only *should* be done differently, but actually *can* be done differently' (p. 23, italics in the original).

In this third mode of public pedagogy, there are still educational agents, but these cannot be purposeful educators, cannot aim to instruct, nor have any particular political agenda for learning. As Biesta (2012) argues, the 'educational agent – the public pedagogue – is neither an instructor nor a facilitator but rather someone who *interrupts*' through 'dissensus' (p. 693, italics in the original). Biesta (2012) explains this motion of 'staging interruption' as a 'test' of publicness:

To 'stage' dissensus is to introduce an incommensurable element - an event, an experience and an object – that can act both as a test and as a reminder of publicness. It is an element that can act as a 'test' of the public quality of particular forms of togetherness and of the extent to which actual spaces and places make such forms of human togetherness possible. The aim of such interruptions is not to teach actors what they should be, nor to demand a particular kind of learning, but to keep open the opportunities for becoming public or, in Arendtian terms, to keep open the possibility of a space where freedom can appear (p. 693).

To illustrate this idea, Biesta (2012) gives the example of a 'permanent breakfast'. Here, one person simply organizes a breakfast in a public place for at least four other people, who then commit to do the same in the future in different public locations. Importantly, organizers do not ask for permission to hold breakfasts in public places. These breakfasts, Biesta argues, and indeed all such staging of artistic interventions in public places, serve as a political 'litmus test' for the 'publicness' of the space (p. 684). Permanent breakfasts occupy public space, but do not instruct: 'they are not study circles, discussion groups or political awareness meetings'; they do not rely on 'the superior knowledge of an educator', nor the facilitation of learning (p. 694). The breakfasts appear to be 'out of place', they 'stage dissensus' to reinvigorate 'core democratic values of equality and freedom' (p. 694); that is, they enact a *public pedagogy in the interest of publicness*, of the free performance of human togetherness in creating the public sphere.

We now turn to an explanation of our study methodology, followed by an application of Biesta's *pedagogy of the public* and *pedagogy in the interest of publicness* to our review of scholarship on informal arts-based adult environmental education for adults.

## Methodology

This is a qualitative conceptual study in the academic literature (Jickling, 2014; Xin, Tribe & Chambers, 2013). That is, it is a literature review seeking to clarify a particular set of concepts in adult education; namely, public pedagogy, and arts-based public pedagogies for adult environmental learning and education.

We now provide a narrative of our journey through the literature we reviewed and the decisions we made about which areas and works to include in our study. Both authors of this paper are artists (potter and architect, respectively), environmental activists and adult educators who have for many years integrated arts-based learning and scholarship into courses we teach in adult environmental education. Most recently, we have done this in a graduate course we co-taught in a new M.Ed. program in Education for Sustainability which partners with city planners and community groups. Driven by questions arising from our own experiences as adult educators (and learners), we sought to better understand the range of arts-based adult environmental education, and how it is has been conceptualized and researched in the literature of Adult Education.

We started our research by reviewing all the leading journals in the field for publications on this topic (*International Journal of Lifelong Education*, *Adult Education Quarterly*, *Canadian Journal for the Study of Adult Education*, *Studies in the Education of Adults*, *European Journal for Research on the Education and Learning of Adults*, *Convergence*, *Australian Journal of Adult Education*). We found that that there were few articles specifically on arts-based environmental education for adults, and most of what did exist focused on Freirian conscientization and educative activism in the environmental movement, the first area of our findings.

We then broadened our search to include academic journals in Environmental Education, a much larger field concerned mainly with K-12 schooling, but also with a rich area of scholarship on ‘free choice’ environmental learning in public spaces (Ballantyne & Packer, 2005; Falk, 2005). Here, we found almost no scholarship on arts-based approaches for adults. However, related work on children's learning led us to a third body of literature on ecological art (i.e. ‘eco-art’) in the fields of Ecology, and Art Education, respectively. It also led us to the artistic work and websites of eco-artists such as Marina DeBris, Jeff Hong and Lynne Hull who perform artistic interventions in public spaces. We made no attempt to cover the work of all such eco-artists in our review. There were simply too many. Instead, we examined the educational practices of an illustrative sample of eco-artists who appeared to us to be particularly disruptive, disturbing and dissonant as educational agents in the public sphere (Biesta, 2012; Sandlin, 2010), and who had a corpus of academic publications describing their work.

In examining the eco-art literature on large installations in public spaces, such as Dan Peterman's *Running Table in Chicago* and Wolfgang Weileder's *Stilt House* in Singapore, we then came across a third body of scholarship on Tactical Urbanism, a form of grassroots urban intervention which often involves small, temporary, non-sanctioned arts and cultural installations on public spaces. One of the authors had herself participated in Tactical Urbanism events, with inspiring results, and we both became interested in further exploring this area of scholarship. In a developing body of the scholarship on Tactical Urbanism, we found a rich and intriguing vein of public arts-based environmental learning and education for adults. Unlike eco-art and arts-based adult environmental education, Tactical Urbanism had no official artists, facilitators or explicit pedagogical intent, but existed mainly as direct citizen action to creatively reimagine, reclaim, occupy and physically reshape their local urban environments.



In our literature review, we did not count articles or themes or apply any particular named form of data analysis to the publications we reviewed. Instead, we relied on our analytical ability – in recursive, dynamic and holistic fashion (Merriam, 1998) – to identify common patterns and themes in the literature we reviewed, and thereby to generate composite findings in relation to our study purpose. When we submitted these findings as a manuscript to reviewers in this journal, they suggested that we theorize our findings more precisely in terms of public pedagogy. This made very good sense to us. (We also abandoned a summary of scholarship in Indigenous education which now seemed less relevant to the focus of this paper). We then re-analyzed our findings in terms of current theoretical insights on public pedagogy (Burdick, Sandlin & O’Malley, 2014; Ellsworth, 2005; Wildemeersch, 2012), primarily in relation to Biesta’s (2012, 2014) work. Our findings are elaborated in the next section.

## Findings

In this section, we argue, first, that arts as public pedagogy within environmental protest movements can be characterized primarily as a *pedagogy of the public* (Biesta, 2012, 2014). However, we add the caveat that this involves not only educational agents facilitating their own learning agendas for individuals (thus disallowing an ideal democratic space of freedom), but also the performance of unpredictable, pluralistic collective learning processes (which are liberatory). Thus, there is some overlap here with a *pedagogy in the interest of publicness*. Second, we consider outdoor, public eco-art as both a *pedagogy of the public* and a *pedagogy in the interest of publicness*. We note the anthropocentric bias of this latter characterization. Finally, we characterize Tactical Urbanism as the form of arts-based environmental learning and education which mostly closely resembles Biesta’s *pedagogy in the interest of publicness*.

### *Arts in Environmental Protest*

The area of social movement learning, and informal adult learning in the environmental movement in particular, is a rich arena for arts-based environmental education (Branagan, 2005; Reinsborough, 2010). Social movement learning refers to ‘several interconnected phenomena: a) informal learning occurring by persons who are part of any social movement; b) intentional learning that is stimulated by organized educational efforts of the social movements themselves; and c) formal and informal learning that takes place amongst the broad public, the citizens, as a result of the activities undertaken by the a given social movement’ (Hall, 2009, p. 46). In the environmental movement, such learning can take place through (but not limited to) visual arts, street theater, filmmaking, poetry, puppetry, song, dance and music. Here we provide illustrative examples of the arts as a *pedagogy of the public* within the environmental movements in Canada and Australia.

Along the inner harbour of the city of Victoria, Canada, for example, ‘Mr. Floatie’, a man costumed as a large piece of excrement, used humor and feelings of disgust to draw public attention to the dangers of untreated sewerage being pumped into the local waterway, and invited people to discuss sewage treatment proposals at various public events (Walter, 2012). In another example, community artists, environmentalists and sanitation workers in Toronto painted large murals (‘mobile canvasses’) critiquing the city’s waste management practices on the sides of garbage trucks (Clover, 2000). The city government then ordered the trucks whitewashed, causing political outrage,

”critical” dialogue and debate around democracy, censorship and City’s decisions on waste’, and the public positing of alternative waste disposal systems (p. 28). In another instance in Nanaimo, Canada, women who had created colourful quilts to protest the construction of a gas pipeline first wore their quilts in protest outside of public hearings (to which they were denied access), and then hung them surreptitiously on the walls of City Council chambers (Clover, 2013). As Clover tells us, the quilting project showed the ‘potential of the arts as an instrument of environmental adult education, of creative subversion, of public intervention and of engagement that confronts, includes, mobilizes, educates, and challenges for a better world’ (p. 61); that is, it opens up democratic, political space for dialogue when this is denied to citizens.

In Australia, among other scholar-activists, David Curtis (2003, 2009, 2011) has spent several decades developing and researching the possibilities for visual and performing arts in fostering public education for environmental restoration, natural resources management, and environmental science. In an early work, Curtis (2003) demonstrated how a community-based performance of *The Plague and the Moonflower* – a ‘musical pageant and ecological love story’ with orchestral music, choral singing, dance, theater and visual arts – was both educational and catalytic for a drought-stricken community in Armidale, Australia (p. 164). The performance left organizers, performers and audience members with a strong emotional attachment to the environment, a sense of shared community, increased environmental awareness and a better capacity for learning and consolidating their knowledge of environmental restoration (p. 167).

Music and song play a crucial role in creating alternative, counter-hegemonic narratives in other sites of popular environmental education as well. The connection between music and nature – including musical sounds in nature, the fusion of natural sounds and human music, and music inspired by nature – ‘can inspire environmental action and advocacy while also helping to foster empathy for the natural world’ (Turner & Freedman, 2004, p. 45). Canadian educators such as Doug Ramsey (2002) suggest that folk music and the lyrics of environmental crisis can also be used as part of a curriculum of environmental education. These are songs, for example, about the collapse of the Cod fisheries in Atlantic Canada and the Dust Bowl drought of Oklahoma, U.S. in the 1930s. Likewise, the folk songs of North American musicians such as Pete Seeger, Joni Mitchell, Bonnie Raitt, Joan Baez, Bruce Cockburn, John Prine, Tom Paxton, and more recently, Walkin’ Jim Stoltz, Livebroadcast and Dirt Farmer Band have not only educated the public about environmental issues, but have brought countless people together with a shared sense of commitment to environmental action and advocacy (Clark, 2008; Dreier & Flacks, 2014).

Groups such as the Raging Grannies (elderly North American women activists who dress in vintage “granny” clothing, write and publically perform protest lyrics about environmental issues to promote social change) similarly provoke public debate on environmental issues and disrupt stereotypes of elderly women (Roy, 2000). In another example of the catalytic effect of music and song for environmental education, for some 40 years, U.S. activist Pete Seeger, his music, and the sloop *Clearwater*, led a successful public education and advocacy campaign to clean up the once heavily polluted Hudson River in the state of New York, U.S. (Forbes, 2004; Ingram, 2008). Along with ‘My Dirty Stream’, ‘This Land is Your Land’, and ‘Where Have all the Flowers Gone?’, one of the songs Pete Seeger regularly performed was Bill Steele’s ‘Garbage’, with its clear and compelling environmental education content (excerpted here) (Steele, 1992):

Garbage (garbage, garbage, garbage) Garbage!

We're filling up the sea with garbage (garbage...)  
What will we do when there's no place left  
To put all the garbage? (garbage...)

Mr. Thompson starts his Cadillac and winds it down the freeway track  
Leaving friends and neighbors in a hydro-carbon haze;  
He's joined by lots of smaller cars all sending gases to the stars.  
There they form a seething cloud that hangs for thirty days.  
And the sun licks down into it with an ultraviolet tongue.  
Till it turns to smog and settles down and ends up in our lungs, oh,

Garbage (garbage...) Garbage!  
We're filling up the sky with garbage (garbage...)  
What will we do  
When there's nothing left to breathe but garbage (garbage...)

...

Garbage (garbage...)  
We're filling up our minds with garbage

....

In considering adult education literature on arts environmental protest, we thus see a good match with Biesta's (2012, 2014) *pedagogy of the public*. The educator-activists of arts-based environmental education have a clear political agenda for socio-environmental change, and promote a learning agenda for conscientization and activism around particular environmental issues. They hope that citizens will challenge common sense, hegemonic notions defining the public debate on environmental issues, and that this decolonizing of the mind's "garbage" will be catalyzed through music, visual arts, song, theater and so on. Educative-activism will also have the effect of opening up informed democratic debate in the public sphere, thus helping to protect it from encroachment by the state, corporate capitalism and neoliberal ideology (Clover, 2002, 2003). However, returning to Hall's (2009) definition of social movement learning above, we also know that such informal learning can be directed, but not controlled, especially in regard to "nonintentional" informal learning that occurs among public citizens affected by a social movement, but not necessarily part of it. As such, we see present here a fluid, dynamic and undirected learning, both individual and collective, and an overlap with Biesta's *pedagogy in the interest of publicness*.

### Eco-art

The practice and scholarship of public eco-art are vast and varied, and share a long history within and beside the environmental, feminist, Indigenous, other social justice movements, and most recently, in climate change activism (Blandy, Congdon & Krug, 1998; Guy, Henshaw, & Heidrich, 2015). Like the arts in environmental protest, eco-art can be positioned in the somewhat overlapping categories of *pedagogy of the public* and *pedagogy in the interest of publicness*. However, in comparison to art in environmental movement, we understand eco-art to be less uniformly and overtly activist in orientation: it is less imbricated in public protests, marches and other direct actions. On the one hand, eco-art as a *pedagogy of the public* refers to 'a movement that uses art that is restorative to promote awareness, engagement and activism around major environmental issues' (Song, 2009, p. 5). Such art may be created by artist-activists or ordinary citizens, where citizen artists are usually facilitated by educators. On the other hand, eco-art as a *pedagogy in the interest of publicness* is art where the artists, both

professional and lay citizens, may be inspired by nature and use natural materials and landscapes to create their work but do not have a specific political or learning agenda. Artists and citizens may simply desire to commune with nature through art: to find creative, experiential and spiritual ways to connect their self-identities with the broader non-human “public” of the earth and all its relations (i.e. animals, plants, rocks, insects, gods, water, sky, etc.).

In the first instance, eco-art as a *pedagogy of the public* may purposefully disrupt “common sense” knowledge and understandings of environmental issues and provoke new perspectives and environmental practices. It may help to encourage a creative re-imagining of the world, educate adults about environmental problems, and allow for innovative and creative solutions to emerge (Guy, Henshaw, & Heidrich, 2015; Inwood, 2010). In this sense, eco-art can be taken as a subsector of ‘activist public art’ (Duncum, 2011). However, it is not generally intended to be a part of collective public protests or educative-activism in the environmental movement *per se*; instead, eco-art simply involves the display or performance of art in public spaces, including both the human and non-human. The Green Museum (2010), perhaps the largest on-line “museum” of eco-art characterizes eco-art as:

a global movement that involves artists, community groups, scientists, arts professionals, students and educators, park and resource managers, government organizations, philanthropists and concerned citizens and countless other groups and individuals. We're doing what we can to interconnect people, information and ideas to help inspire the creation of more art that heals our communities and ecosystems. For the idea of sustainability to work, it needs to engage our culture effectively. Through collaborations with artists of all types, we can make existing remediation projects and environmental education more fun, beautiful, culturally and historically resonant and better integrated into our cities, parks and communities.

Examples of provocative public eco-artists positioned within a *pedagogy of the public* are Marina DeBris (‘marine debris’), who reuses plastic beach trash to create ‘trashion’ (trash fashion) and raise awareness of marine pollution; Jeff Hong, who superimposes cute Disney cartoon characters into scenes of pollution and animal cruelty (The Little Mermaid struggling on an oil-slicked beach; Mulan in a polluted Chinese city); and Aviva Rahmani, who creates large arts-based landscape restorations (Gabardi, 2014). Numerous public eco-art projects have used human trash as their material and educational inspiration. In Singapore, for example, artist Wolfgang Weileder constructed *Stilt House*, a traditional-style local house constructed of recycled plastic waste, in part to demonstrate sustainable building construction, but also to ‘draw attention to issues of urban conservation and the scarcity of the remaining kampong in modern Singapore, ... (highlighting) the inherent irony in the clearance of the kampong, a housing typology providing low technology ventilation to past generations’ (Guy, Henshaw, & Heidrich, 2015, p. 47). A further example is Chicago artist Dan Peterman’s *Running Table*, a 100’ long picnic table in the city’s Millennium Park, constructed of the equivalent of 2,000,000 recycled milk bottles, and focused on sustainable construction and food consumption (Isã, 2008). In this case, the generation of plastic trash by picnickers at the table continuously supplies the materials needed for its (infinite) extension, thus highlighting environmental problems of consumption and its impacts. All of these eco-artists hope to stimulate public learning and action on the environmental issues they engage through their art. As such, they have a (political) learning agenda for their audiences in keeping with a *pedagogy of the public*.

There are also eco-artists positioned more in the tradition of a *pedagogy in the interest of publicness*. These artists see themselves not so much as educating the public to conform to a particular version of reality, but as catalytic agents for a democratic educational process where they focus attention, create, reclaim, inform and re-envision through eco-art. Indeed they hope that their eco-art creations will be interpreted in diverse ways by diverse citizens with unpredictable outcomes, and that participants viewing or creating eco-art may sometimes simply commune with nature as a way of understanding it, spiritually, bodily and through all five senses. In the public sphere, eco-artists work to (Ecoart Network, 2011):

- Focus attention on the web of interrelationships in our environment – to the physical, biological, cultural, political, and historical aspects of ecological systems;
- Create artworks that employ natural materials, or engage with environmental forces such as wind, water, or sunlight;
- Reclaim, restore, and remediate damaged environments;
- Inform the public about ecological dynamics and the environmental problems we face;
- Re-envision ecological relationships, creatively proposing new possibilities for co-existence, sustainability, and healing.

The potential of eco-art as a *pedagogy in the interest of publicness* can be seen in the example of ‘trans-species’ eco-art of U.S. artist Lynne Hull, who creates art not only to educate humans, but also in the service of non-human species (Hull, 2016, Song, 2009). As Hull (2003) puts it, ‘I believe that the creativity of artists can be applied to real world problems and can have an effect on urgent social and environmental issues. My sculpture and installations provide shelter, food, water or space for wildlife, as eco-atonement for their loss of habitat to human encroachment’. To this end, Hull works together with environmental scientists, interpreters, landscape architects, and local communities to create artworks for both humans and wildlife in often remote natural areas. As explained by Song (2009, p. 6), Lynne Hull believes that:

her work is viewed and appreciated by both human and non-human audiences. She draws in viewers with the beautiful, balanced images that she creates, while also engaging them intellectually in thinking about how her work restores balance to the area and aids non-human species in the area. A goal is to evoke strong emotion and provide a clear call to action and awareness. For non-human observers, the works represent a carefully planned intervention that often undoes longstanding human abuses.

Thus, Hull’s installations in U.S. parks and other natural areas include, for example, *Desert Hydroglyphs* – rock carvings that capture rainwater for desert wildlife, *Raptor Roost* sculptures – perching and nesting sites for hawks and eagles, and *Floating Islands* – installations which restore habitat for a wide range of aquatic species (Hull, 2016). Song (2009, p. 11) aptly characterizes the eco-centric conscientization of Hull's eco-art:

Hull’s work raises hard questions, it elevates consciousness, and it asks people to move out of their customary patterns of thought and of behaviour...Most radical is her trans-species idea – if people begin to take seriously that other species have needs different from the human, if they are really confronted with that idea, then they are changed and will fundamentally alter their perceptions and perspectives on many issues. Once they recognise the truth of it, their position in the world changes, and they must *move over*, and

share the planet...Once they create a habitat for other species, they are making the profound admission that humans are not at the centre of the planet's life.

In sum, we understand eco-art as a *pedagogy of the public*, in many cases directly invested in conscientization and learning outcomes; however, these are less exact (more open to interpretation) than those of arts in the environmental movement. We also see eco-art as a *pedagogy in the interest of publicness*, wherein the concept of the public sphere can be expanded to embrace eco-centric perspectives on human identity, an identity constructed not only in relation to other human beings, but in relation to the natural world as a whole.

### *Tactical Urbanism*

Citizen experiences in Tactical Urbanism, our third site of adult environmental learning in the public sphere, appear to most closely approximate Biesta's (2012, 2014) *pedagogy in the interest of publicness*. 'Tactical Urbanism', a term attributed to Mike Lydon and Anthony Garcia of The Street Plans Collective (Lydon & Garcia, 2015), is increasingly used to describe citizen participation in strategic arts-based events or projects implemented in the urban public realm. Rather than positioning the community as spectators or onlookers, in such interventions, local citizens actively participate in and interact with environmental issues. Through the experience of participating in tactical public events, participants' awareness on an environmental issue is raised, as well as their agency to inspire long-term change, in creative and unpredictable ways.

Incorporating tactics to improve, activate, and adapt the urban environment, Tactical Urbanism is generally associated with small-scale, short-term interventions as catalysts for long-term change. Participatory, disruptive and policy-related projects and events provide learning opportunities for citizens and leaders by raising awareness of local environmental issues and consciousness of citizens as change-agents (Lydon & Garcia, 2015; Pfeifer, 2013).

Projects and events that fall under the banner of Tactical Urbanism are generally community-focused, citizen-led, informal initiatives. These are typically small-scale temporary interventions, aiming to inspire planners and municipalities to advance these experiments into piloting low-cost projects for local improvements. The intentions behind such projects are varied. Pfeifer (2013) offers a list of goals that includes boosting economic revitalization, improving pedestrian safety, and offering opportunities for citizens to connect with one another (i.e., in a 'citizenship of strangers'). We would add to this the implicit, but non-coercive goal of educating citizens and leaders. With the overarching aim of long-term physical change in the urban fabric through a legacy of continued stewardship, projects and events aim to become permanent or recurring features in the city indicating that the community (both citizens and leaders) have *learned* from the process. In this sense, we propose that the power of Tactical Urbanism lies not only in the achievement of the projects themselves, but through active participation of the community, powerful learning opportunities arise in the public sphere; in a 'space of freedom'.

Widely known examples of Tactical Urbanism include guerrilla gardening, park(ing) day, open streets, play streets, pop-up parks and parklets. Examples such have these have now been widely documented and shared on social media and through open access online guide books such as those produced by the Street Plans Collaborative (<http://www.street-plans.com/research-writing/>) or CoDesign Studio (<http://codesignstudio.com.au/getting-started/>). These publications serve as educative resources enabling citizens to take an active role in improving their cities, guiding them through a

range of possible community-led projects and events (Lydon, 2012). Taking the ‘learner’ beyond the level of ordinary citizen, Pfeifer’s (2013) Tactical Urbanism guide (2013) is specifically aimed at educating what we might call ‘citizen-planners’. Pfeifer’s guide identifies five themes emerging from an analysis of various case studies in Tactical Urbanism, which we have connected below to five sources of learning (p. 10):

1. ‘Working with citizen initiatives – responding to and learning from informal citizen-led tactical projects’. Here, citizens are the “teachers” from whom planners learn;
2. ‘Demonstrating what’s possible – using temporary projects to highlight opportunities for other actors’. Here, projects themselves become ‘teachers’ from which both citizens and planners learn;
3. ‘Getting internal buy-in – championing tactical projects and working with other municipal departments’. Here, a cooperative form of learning occurs as planners both ‘teach’ and learn from other planners;
4. ‘Adapting ideas to your context – integrating tactical projects and ideas from other cities’. Here, cities themselves are the ‘teachers’, enabling learning from other people, contexts and projects;
5. “Using existing resources – leveraging current policies and publicly owned resources to support and advance new ideas.” Again, this a cooperative approach to learning from others.

A commonly cited example of Tactical Urbanism illustrates the various forms of adult learning. ‘Open Streets’, an initiative formalised through events such as Miami Bike Days, was inspired by Bogota’s Ciclovía, where 112km of interconnected streets were closed to cars and opened up to people (Lydon & Garcia, 2015). Lydon and Garcia (2015, xv-xvii) explain,

As an event, Bike Miami Days was a success. And it served a much greater purpose. It allowed a few thousand participants to experience their city in an entirely new and exciting way. It also gave them a chance to imagine a different urban future, one where walking, bicycling, and the provision of more public space could be made easier...(The event) proved to be a critical tactic for building public awareness and interest in the city’s incipient bicycling strategy.

In this sense, Tactical Urbanism can be understood as a collective process of arts-based, experiential, citizen learning; that is, people learn by actively participating in the design, creation and/or experience of arts-based events and/or projects in the public realm. The projects and events are experiments in themselves, going through a series of iterations, as participants learn from the process, including learning from mistakes or failures. That is, they perform as a collective ‘pedagogy of demonstration’ where freely associating citizens show that it is possible to do things differently (Biesta, 2014). This idea is expressed directly in the Street Plans Collaborative (2012) online guide, which explains that ‘Tactical Urbanism projects intentionally create a laboratory for experimentation’ (p. 8).

In sum, under Tactical Urbanism, the urban environment itself is an outdoor experiential site for citizen action, learning and dialogue in the public sphere, with endless possibilities for imaginative, arts-based adult environmental learning and education. Tactical Urbanism’s lack of overt educational directive or specified political agenda, without purposeful ‘educational agents’ or ‘public pedagogues’, finds direction instead from groups of unrelated, freely associating citizens taking democratic action for

environmental change. Tactical Urbanism embraces Biesta's (2012, 2014) ethic of experimentation and human togetherness to show that alternative ways of being, acting and doing are possible, and as such, conforms closely to Biesta's ideal of *pedagogy in the interest of publicness*.

## Conclusion

As this conceptual review shows, there are no simple characterizations of public pedagogies and arts-based environmental learning and education for adults. All of the scholarship we have reviewed is about public art, displayed or performed in public spaces, and somehow connected to informal adult environmental learning and education. The contexts of the scholarship we reviewed are the democratic spaces of pluralist democracies, mostly in Canada and Australia. In the public spaces of these countries, as in the democracies of Europe, we found Biesta's *pedagogy of the public* enacted in arts in the environmental movement and in eco-art, and to some extent, a *pedagogy in the interest of publicness*. We found the potential for *pedagogy in the interest of publicness* most clearly in the performance of Tactical Urbanism.

However, we also appreciate that *pedagogy in the interest of publicness* is an ideal type, the possibility of which might only truly exist in pluralistic democracies, and then only as a model of freedom towards which citizens might strive. In fact, citizens inhabiting the public sphere of all societies, no matter how democratic and pluralistic, will suffer the inequities of race, class, gender and various other oppressions in unequal measure, and thus have unequal opportunities for public dialogue and participation, even in liberal democracies. That is, we need to consider who is allowed to speak most and loudest, and whose speech is taken as 'sensible' and most valued (for example, around Biesta's 'permanent breakfast' table). Voices of dominant majorities (men, whites, non-immigrant, educated classes, etc.) will likely be valued above others and carry more implicit "weight" in public discourse, even in spaces of freely associating citizens – the 'citizenship of strangers' – with a common concern for the world (Biesta, 2012). Oppressive systems of patriarchy, racism, classism and so on do not disappear through the good intentions of committed public citizens alone: they must be acknowledged, understood and "unlearned" by those who benefit and are privileged by them to the detriment of others. Anomalous places of learning – the pivotal places between self and other – are not neutral spaces, but are imbued with relations of power and privilege, as Ellsworth (2005) readily acknowledges.

It is for this reason that we see some moral imperative and educational necessity for arts in the environmental movement and eco-art as *pedagogies of the public* which promote conscientization and educative-activism, to address not only environmental issues, but also the interconnected oppressions of patriarchy, racism, classism, capitalism and so on (Clover, 2002). Perhaps only after these forms of oppression have been addressed through *pedagogies of the public* can we then not just imagine, but also begin to enact, a *pedagogy in the interest of publicness* in the newly created pluralistic, democratic spaces of our human societies (and indeed, of the 'public sphere' of our earth). To our knowledge, this democratic, public 'space of freedom' does not yet exist; however, this does not mean we should not strive for it as an ideal. Thus, in some respects, our characterizations of protest art, eco-art and Tactical Urbanism as *pedagogies in the interest of publicness* are predicated on a willful ignorance of the various axes of inequality and oppression which exist in our societies. We do this in service of an ideal type which we admire, and perhaps with some hopeful naiveté about



a better future. As best we can determine, many, if not most, of the proponents of, and actors in the pedagogies we reviewed are white, educated middle class citizens, likely mostly men too (although this is changing; in fact, eco-art is a somewhat feminized field of art).

We take a lack of theorizing on power and inequality to be a limitation of Biesta's (2012, 2014) theoretical work, and of our own analysis in this paper. We hope that others might extend this theorizing to provide a more comprehensive theory of public pedagogy which encompasses inequality and oppression in their various forms. We further hope to see theorizing which moves beyond North America and Western European democracies to understand how public pedagogies function within oppressive states with very restricted democratic spaces, often brutally repressive of civil society, communicative dialogue and citizen action (Holst, 2002; Walter, 2007), including the creation of public art.

In completing our review of the literature, we found many illustrative and inspiring examples within the three areas of arts in environmental protest, eco-art, and Tactical Urbanism, but very little empirical evidence to back up claims. We now better understand the motivations, pedagogies and intended outcomes of artists, activists and educators within the three areas, but much of this is taken on faith. We theorized how each might represent particular forms of public pedagogy following Biesta's typology, but beyond many descriptive case studies, we do not really know how these translate into practice. In fact, we are not alone in pointing this out; it is a common complaint in scholarship on public pedagogy as whole (Burdick, Sandlin & O'Malley, 2013). Questions about public pedagogy, as yet largely unresearched, include who the pedagogues are, what the pedagogical process is and what spaces it inhabits, what the various actors are intended to learn, who determines this learning, and how is it transferred to others, to what effect. Germane to the present paper is also the question of public pedagogy as hegemonic or counter-hegemonic; in particular, 'how does pedagogical public art convey political meanings to a broad audience without resolving itself in propagandistic techniques/ discourses?' (Burdick, Sandlin & O'Malley, 2013, p. 8). It is in this sense that Biesta's (2012, 2014) coercive, instructive *public pedagogy for the public* might be applied to frame research about the arts and public education denying climate change, the propaganda of mega-corporations around oil spills, food safety, nutrition and animal farming, public campaigns on the need to build expressways and roads rather than train tracks, and so on.

Finally, we acknowledge that Biesta's typology of public pedagogies breaks down, blurs and overlaps to some extent in our application to arts-based environmental learning and education for adults. We have provided no mutually exclusive, categorical fit between a given pedagogy and each arts-based approach. This is largely because we did not start with theory and look for cases to illustrate it; rather, we began with cases and looked for theory to explain them. As such, we have presented a somewhat messy analysis of the literature we reviewed. At the same time, however, the work of Biesta (2012, 2014), Ellsworth (2005), Sandlin, (2010) and Wildemeersch (2012) did help us to understand the three variants of adult learning and education we reviewed as public pedagogy. In the end, we believe our knowledge of these pedagogies is richer for it, and avenues for further theorizing and research made clearer for the field.

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