Leave more trace

Chris Loynes

University of Cumbria

Abstract

Outdoor educators are adapting practices to respond to the priorities of education for sustainability. New practices are emerging or adopted from elsewhere. In Europe, the American recreational movement of Leave No Trace (LNT) has influenced environmental education programs. LNT has been criticised for encouraging a reduction in environmental impact in wilderness areas whilst ignoring the more significant impacts of equipment purchase, travel and modern lifestyles. This paper extends the critiques of LNT suggesting that it encourages attitudes of a separation from nature. It is suggested that the LNT concept is unrealistic and unhelpful in Europe where most landscapes have experienced the impact of humans for millennia. The author suggests that, inspired by European approaches of human nature relations and at a time of need for significant environmental changes, educational programs seeking to connect people with nature could encourage people to 'leave more trace' or, perhaps, to 'consider their trace' instead.

Keywords

environmental education; education for sustainability; environmental citizenship

Introduction

As the complex inter-relationships between culture and nature are better understood so are the harmful consequences of some human activities on the natural world. Many organisations, projects and programs have arisen to mitigate this harm or restore the damage done. One such program is the 'Leave No Trace' program that began in the USA with the intention of reducing the impact of recreational visitors to wild landscapes. The long running program has attracted attention worldwide. In North America and Europe, a number of environmental education programs have adopted the approach. This paper reflects on the efficacy of this cultural adoption in a European landscape and considers whether leaving no trace is the appropriate approach for educational organisations to take when seeking to engage their students with environmental concerns.

Many commentators discuss the consequences of the age of modernity and its focus on improving the human condition by raising standards of living. Whilst prosperity has clearly delivered an enhanced life style for more and more people globally, the environment has been treated as a set of unlimited resources (Jackson, 2017). It is increasingly clear that a society based on continued growth on a finite planet will reach limits to that growth. According to Steffen et al (2015), those limits have already been surpassed in a number of crucial areas and society is perilously close to others.

The limits to growth, first recognised in what became known as the Bruntland report, (World Commission on Environment and Development; 1987), has led to campaigns for a more sustainable society living within its means which reached its global political peak with the 1992 Rio Declaration on Environment and Development (United Nations, 1992). To achieve a

sustainable future Jackson (2017) argues for a new definition of prosperity and Clayton et al (2017) for a new relationship with nature.

Beery (2014) argues that LNT strengthens the modern view of humans as separate from nature as it is necessarily predicated on the idea that humans are apart from nature and not a part of nature. Rawles (2010) argues that the concept of separation, a consequence of the on-going enlightenment project supported in practice by industrialisation and urbanisation, is an important part of the environmental problem. She suggests that when humans are perceived as apart from nature, nature 'matters' less, people care less, and we trash it more.

Discussions worldwide in the field of the outdoors, both recreation and education, are exploring the contribution that can be made to encouraging sustainable human nature relations (Orr, 1992; Higgins, 1996; Cooper, 1998; Bonnett, 2004; Martin, 2004; Wattchow & Brown, 2011; Henderson & Vikander, 2012; Ross et al, 2014). As these authors argue, this shift is congruent with the environmental needs of an urbanised, industrialised consumer society that is rapidly globalising (Alagona & Simon, 2012). Modern life distances the majority of people from experiences in nature. In the rush to protect what is left of nature Bonnett (2004) argues that humans have set it aside behind boundaries and, in some cases, barriers conceptually excluding us from it and it from us. Minimising human impact on these protected areas has become the dominant form of action of those concerned about the health of nature. I suggest that, even in attempting to care for nature, nature is therefore treated as something other than human and that humans consider their impact on it only when they are present in it, that is in the special places humans have designated as 'natural'. The authors above all argue that separation works against pedagogies of sustainability. The evidence for a different approach, widely termed 'connection with nature', has become well enough established to move from Louv's (2009) call to arms to one that influences

government policies [for a UK example see Lovell's evidence review (2016)]. The concern for a lack of connection with nature, especially amongst young people, is gaining traction rising up both the educational and the political agenda. Many pedagogic approaches have emerged that seek to restore the connection (Orr, 1994; Cooper, 1998; Bonnett, 2004; Waite et al, 2016). Their arguments are various. They include the suggestion that humans evolved in nature and so need to be in it in order to flourish (Richardson et al, 2016), biophilia as Wilson (1990) called it; that people learn better in nature; that natural or wild play promotes healthy personal and social development and mental health; active time in the outdoors promotes physical health; and that embodied, felt and cognitive experiential knowledge of nature is essential to compliment abstract knowledge of the environment in order to develop caring attitudes and behaviours (Lovell, 2016).

'Leave No Trace' seeks to minimise impact and, I have argued, can be understood as distancing people from rather than connecting people with nature. As a thought piece, I propose the approaches of 'leave more trace' or, perhaps, 'consider your trace' as alternatives. The intention is to examine the efficacy of 'Leave No Trace' in North America and in Europe as an approach to environmental education and education for sustainability.

The 'traces' left by LNT in the USA

At face value the LNT ambition seems unquestionably a good thing. However, it is argued that, in many cases it is either turning a blind eye to the more significant human impacts on nature of visiting a wilderness area or introduces an ethic that could be counter to sustaining rich natural/cultural landscapes.

In the USA, the LNT organisation sets out to promote the ethic that will minimise human impact on public lands (https://lnt.org). The seven principles of the organisation focus on human behaviour during a visit to public land. They are 'plan ahead and prepare'; 'travel and camp on

durable surfaces'; 'dispose of waste properly'; 'leave what you find'; 'minimize campfire impacts'; 'respect wildlife'; and 'be considerate of other visitors'. It has a big presence on Twitter, Facebook and You Tube, provides trainer training and offers various forms of public engagement for those accessing US public lands for recreation. The movement claims to have reached millions of recreational land users. Research suggests that the messages do make a difference to the knowledge and behaviour of users. However, there is less evidence for any impact on the quality of the visitor experience or on the land resource itself (Vagias, 2009).

Chambers et al (2000) argue that the intention of LNT, whilst well meaning, ignores the many impacts that are the result of human behaviour when not visiting public lands, the ecological and, especially, the carbon footprint of everyday life. More directly, they claim LNT ignores the impact of the travel involved to visit public land and the consumption and use of specialist equipment on the trip (see, for example, Orr, 2004 for an environmental education perspective). Arguably, these impacts are far more significant on the health of the ecosystems of public lands and elsewhere. This opens the LNT concept to criticism. Alagona and Simon (2012) point out that the reduced impacts claimed by the program are minimal in the context of the wider human footprint on the place visited and the planet as a whole. This would challenge the value of LNT as a means of education for sustainability. For example, packing out rubbish from an area, whilst laudable, is a small contribution when the carbon footprint of your travel to visit the area is ramping up climate change that is a significantly larger threat to the land by several orders of magnitude (Alagona and Simon, 2012; Rawles, 2013). It is similar to the story told by Berners-Lee (2010) of the person discussing with a friend the relative merits of hand towels or electric hand driers and their respective carbon footprints whilst in the bathroom at the airport and about to catch a plane.

To address this issue Alagona and Simon (2012) argue for an extension of the LNT approach beyond public land and wilderness areas to all landscapes and as a political as well as practical action. Whilst this paper has no argument with Alagona and Simon's call for human society to reduce some of it's 'trace' or impact on the planet I suggest that LNT is inappropriate and maybe counterproductive as an environmental education message. Indeed, I will argue for a 'hands on' rather than a 'hands off' approach.

Human 'traces' in the European landscape

Of course, it can be argued that the LNT approach has value in fragile 'wilderness' settings. However, in Europe the areas that can truly be called wild land are few and far between (Agnoletti, 2006). Human relationships with nature in Europe have historically evolved differently to those in the USA. Even the uplands and the Arctic tundra have been grazed extensively leading to a current and sometimes fragile balance between people and other species. European national parks are cultural as well as natural places. Humans have left a big footprint over thousands of years as Phillips (2015) discusses in his comparison of the American wilderness concept with the cultural landscape of the Alps. This contrast might inform a different land ethic to that of LNT, one that could be considered for its contribution to recreational land use and environmental education.

Most of our ecosystems have co-evolved with humans as one of, and often the most influential species (Crane, 2016). This has led to centuries of co-existence sometimes with significant positive impacts on biodiversity. For example, coppiced woodlands (Rackham, 2015) and flower rich meadows (Peterken, 2013) are some of the most bio-diverse habitats in the temperate zone developed in relation to human management over centuries of practice. They support species adapted and specific to them as habitats. These are now considered threatened as

old farming and woodland management practices decline. Therefore, these and other similar habitats have become the subject of conservation strategies even though the habitats are, or were, intensively managed by humans. Restoring these old practices has become essential for the health of these rich ecosystems.

In other cases, land management has led to substantial challenges to biodiversity. The uplands of the UK, for example, are claimed by some to be overgrazed by intensive sheep farming leading to species poor habitats compared with the mixed and more bio-diverse habitats that would emerge under different management plans (Mansfield, 2018).

In both situations humans are the keystone species. Like the Yellowstone wolves who, upon their reintroduction, restored some of the balance to the ecosystems of that park (Ripple and Beschta, 2003), humans in Europe can be key positive influencers on the quality of ecosystems and biodiversity – or not as the case may be. It is contextual as, unlike the wolves, humans are capable of developing different ways of living not all of which are sustainable. It is human nature, and I use the word nature here intentionally, to knowingly construct cultures. If, at this time, people need to transform those cultures into sustainable ones, my question is will this be best served by encouraging a 'hands off' or a 'hands on' approach?

Both these situations of so called rich and poor habitats are the result of human management strategies and both will require significant human intervention to sustain or transform them. In these cases, in order to protect and sustain the habitats and the wildlife people have come to value as part of our culture, perhaps the response is better described as 'leave more trace'. This argument has also been made by Turner (2002) who argues for an approach that engages recreational users in the sustainable use of the natural resources of wild places and, in so doing, can also minimise the material consumption of equipment that is a significant part of the

outsourced environmental footprint of a wilderness backpacker carrying tent, stove and dehydrated meals. Fenton (2016) argues that bushcraft, an educational approach to nature that engages people through the craft of living on the land, both minimises impacts and develops a sustainable land ethic.

The 'traces' of environmental education

The North American approach of 'Leave No Trace' (LNT), an approach that seeks to encourage care for nature amongst outdoor recreators, has been adopted by some North American environmental education programs. The National Outdoor Leadership School (no date) 'apply Leave No Trace principles to camping and travel'. LNT has also crossed the Atlantic to Europe. LNT training programs are offered by recreational organisations in Ireland, Scotland and England. They have also been adopted as principles of practice by a number of environmental education organisations including national educational programs and European wider outdoor education providers. The term LNT is also widely used to describe a principle of practice amongst professional environmental and outdoor educators. However, different principles, resonant with the different history of humans in the European landscape discussed above, are also evident.

The following case study highlights the differences. The UK wide environmental education charity explicitly uses LNT as a way to articulate its approach to education. However, as a program committed to education for sustainability, its actual practice, conducted in urban green spaces and rural neighbourhoods as much as in the wilder landscapes of Britain, indicates that the organisation practices a different approach to the traces they believe they make.

The John Muir Award: a case study of more or less 'trace'

The John Muir Award (JMA) is the educational arm of the John Muir Trust, a wilderness charity that promotes and defends the interests of 'wild' land primarily in Scotland. Despite its

adoption of the LNT approach, the JMA leaves a considerable trace both in wild places and in nature more widely through its award scheme. The award scheme encourages groups of people to find, learn about and do something for a place and then tell others about the place and the work. In a recent study (JMA, 2016) the JMA claimed (based on a survey of 81% of participants) to have, in one year achieved:

- 63,103 metres of footpaths maintained and created.
- 29,939 square metres cleared of invasive species.
- 8,442 bin bags of litter cleared – more than the capacity of the Olympic Stadium.
- 1,382 metres of hedgerows created.
- 12,553 trees planted.
- 4,692 square metres of ponds restored or created.
- 4,160 metres of fences built or maintained.
- 18,000 square metres of meadow created.

This is hardly 'no trace' and is indeed considerably more trace than a group passing through on a hike might have caused. Indeed, the report claims that, using Heritage Lottery Fund (a national lottery and JMA funder) figures, the work done was worth £1.3 million. The difference is, of course, that the trace has been considered by the group, and in some cases by the organisation their work supports and has been considered as the right trace to leave enhancing biodiversity and the opportunities for people to encounter flourishing habitats.

Of course, the LNT approach is a helpful way to put across the idea that humans should and can minimise their harmful impacts in areas of high natural value. Perhaps one of its strengths is that the scheme makes no judgement about whether that highly valued place is just down the

road in a wild patch surrounded by urban landscapes or a continent away in a place with little human settlement.

From this perspective the JMA, despite adopting LNT, is a good candidate for 'leave more trace'. The same report would seem to endorse this view (JMA, 2016) with a quote from John Muir:

"It is not enough for people to be in sympathy with the plight of the natural world, but that they must become 'active conservationists', as campaigners, as practical project workers, as scientists, as artists, as writers." (p.1).

The evidence suggests that the JMA, practices an approach better described as leave more trace in order to connect people with nature. Other research by Hayward (2012) suggests that the nature of approaches such as the JMA program do more than connect people with nature. It suggests that levels of engagement such as this lead to pro-environmental attitudes and pro-active behaviours leaving 'traces' that, for the participants, reach beyond the direct interventions encouraged by the program into other initiatives and everyday life.

Leave more trace' may therefore be a better description of practice and a better guiding ethic for environmental education. However, it also matters what this trace is, 'consider your trace'. It is more about leaving the right trace than none at all. Humans are a keystone species, that is a species that, through its behaviours, has an impact on the entire ecosystem it inhabits. Leaving only footprints and taking only photographs will not make places 'better' and leaving most places as they are is not an option for any keystone species. Whilst it can be argued that leaving substantially less traces in many aspects of our modern life style is a good, even a necessary action to take, it can also be argued that there are many things that need doing which require us to 'leave more trace'. These actions have the added benefit of engaging people with nature in ways that

research indicates enhance their environmental values and change behaviours (Hayward, 2012). Such an approach acknowledges that traces are inevitable and encourages debate about what traces are reasonable, proportional and ethical; and what are not. Perhaps what humans should be seeking is the restorative approach of living landscapes (Steiner, 2008) in which people intervene in order to promote the flourishing of humans and other than humans alike. This has implications for resident, recreational and educational communities in a landscape. As Alagona and Simon (2012) hope, this means leaving more trace will inevitably become political and reach far beyond the arena of protected areas as humans debate what needs and wants should be prioritised in each place and assess the impacts of these choices on the other inhabitants and the ecosystems that sustain both them and us.

Conclusions

LNT has value in that it alerts recreational users to the need to tread lightly in fragile landscapes and that this approach does impact on of the behaviours recreational users of such places. However, it does not pay any attention to the wider impacts of human behaviour in travelling to wild lands or in everyday life which, in their turn, have a far more significant impact on the fragile wild lands and nature everywhere. It has limited value as an ethic for everyday life. This would suggest that LNT may not be the best ethic to adopt in environmental education programs, especially those concerned with sustainability or practicing in the significantly less wild landscapes of Europe and much of the rest of North America. Inspired by a different history of human nature relations in Europe, I argue for an ethic of ‘leave more trace’ on the basis that this has the potential to connect people and nature in ways that encourage them to ‘consider their trace’. A case study illustrates how one environmental education program, despite using the LNT rhetoric, is effective in leaving significant traces that are considered beneficial to people and

nature. Further tentative research findings indicate that programs such as this have the potential to promote pro-active, pro-environmental behaviours in everyday life beyond the program. This suggests that an ethic of 'consider your trace' is a more effective guide to and description of effective environmental education in European landscapes and for programs concerned with education for sustainability. This terminology may also be worth consideration for some North American environmental programs.

Acknowledgements

I wish to thank Richard Ensoll who proposed the concept of 'consider your trace' during a seminar critiquing an early draft of this paper.

References

Agnoletti, M. (ed) (2006). *The Conservation of Cultural Landscapes.* Wallingford, UK; CAB International.

Alagona P. & Simon G. (2012). Leave No Trace Starts at Home: A Response to Critics and Vision for the Future. Ethics. *Policy & Environment, 15*(1), 119-124. DOI: 10.1080/21550085.2012.672695

Beery, T. (2014). People in Nature: relational discourse for outdoor educators. *Research in Outdoor Education, 12*, 1-14. DOI: 10.1353/roe.2014.0001

Berners-Lee, M. (2010). *How Bad Are Bananas?* Profile Books.

Chambers, N; Simmons, C. and Wackernagel, M. (2000). *Sharing Nature's Interest, ecological footprints as an indicator of sustainability.* New York, NY; Earthscan.

Clayton, S., Colléony, A., Conversy, P., Maclouf, E., Martin, L., Torres, A.-C., Truong, M.-X. and Prévot, A.-C. (2017). Transformation of Experience: Toward a New Relationship with Nature. *Conservation Letters*, *10*(5), 645–651. DOI: 10.1111/conl.12337

Cooper, G. (1998). *Outdoors with Young People: A Leader's Guide to Outdoor Activities, the Environment and Sustainability*. Lyme Regis, UK: Russell House.

Crane, N. (2016). *The Making of the British Landscape: from the ice age to the present*. London, UK : Weidenfeld & Nicolson.

Fenton, L. (2016). *'Bushcraft' and 'Indigenous Knowledge': transformations of a concept in the modern world.* (PhD), University of Kent.

Hayward, B. (2012). *Children, Citizenship and Environment*. London, UK: Routledge.

Henderson, B., & Vikander, N. (Eds.). (2007). *Nature First: outdoor life the Friluftsliv way*. Toronto, Canada: Natural Heritage Books.

Higgins, P. (1996). Connection and Consequence in Outdoor Education. *Journal of Adventure Education and Outdoor Leadership, 13*(2), 34-39.

Hinds, J., & Sparks, P. (2008). Engaging with the natural environment: the roll of affective connection and identity. *Journal of Environmental Psychology, 28*, 109-120. DOI: 10.1016/j.jenvp.2007.11.001

John Muir Trust (2016). *Audit highlights £1.3 million of activity through the John Muir Award*. Downloaded from https://www.johnmuirtrust.org/latest/news/836-audit-highlights-13-million-of-activity-through-the-john-muir-award

Leave No Trace. *About Us.* Downloaded from https://lnt.org/about

Linney, G. (2014). *Journeys into Relation.* Council of Outdoor Educators of Ontario. Downloaded from http://www.coeo.org/integrated-programs.html

Louv, R. (2009). *Last Child in the Woods: Saving Our Children from Nature-deficit Disorder*: London, UK: Atlantic Books.

Lovell, R. (2016). *Connection to Nature: evidence briefing.* Natural England Access to Evidence Information Note EIN015.

Mansfield, L. (2018). *Managing Upland Resources*. Dunbeath, UK: Whittles Publishing.

Martin, P. (2004). Outdoor adventure in promoting relationships with nature. *Australian Journal of Outdoor Education, 8*(1), 20-28.

National Outdoor Leadership School (no date). *Curriculum*. Downloaded from https://www.nols.edu/en/resources/curriculum/

Orr, D. (1991). *Ecological Literacy: Education and the Transition to a Postmodern World*: New York, NY: State University of New York Press.

Orr, D. (2004). *Earth in Mind.* Washington DC: First Island Press.

Peterken, G. (2013). *Meadows*. Totnes, UK: British Wildlife Publishing.

Phillips, A. (2015). *The Alps versus the Wilderness* https://www.linkedin.com/pulse/alps-vs-american-wilderness-alex-l-phillips?loadAction=comment&midToken=AQGSputpv1Bg2w&trk=eml-mention-reply-mp-cmt&fromEmail=fromEmail&ut=2Xb8Qtq2fvx701

Rackham, O. (2015). *Woodlands*. London, UK: William Collins.

Rawles, K. (2010). A Copernican Revolution in Ethics. In Moore, K. D. and Nelson, M. P. (eds). *Moral Ground: ethical action for a planet in peril.* San Antonio, Texas: Trinity University Press.

Rawles, K. (2013). Outdoor Adventure in a Carbon Light Era. In Pike, E.C. J. and Beames, S. (2013). *Outdoor Adventure and Social Theory.* New York, NY: Routledge.

Richardson, M., McEwan, K., Maratos, F., & Sheffield, D. (2016). Joy and Calm: how an evolutionary functional model of affect regulation informs positive emotions in nature. *Evolutionary Psychological Science, 2*, 308-320. DOI: 10.1007/s40806-016-0065-5

Ripple, W. J., & Beschta, R. L. (2003). Wolf Reintroduction, predation risk, and cottonwood recovery in Yellowstone National Park. *Forest Ecology and Management, 184*(1-3), 299-313. DOI: 10.1016/S0378-1127(03)00154-3

Ross, H., Christie, B., Nicol, R., & Higgins, P. (2014). Space, place and sustainability and the role of outdoor education. *Journal of Adventure Education & Outdoor Learning, 14*(3), 191 -197. DOI: 10.1080/14729679.2014.960684

Steiner, F. (2008). *Living Landscapes: an ecological approach to landscape planning.* Washington DC; Island Press.

Steffen, W., Richardson, K., Rockstrom, J., Cornell, S.E., Fetzer, I., Bennett, E.M., Biggs, R., Carpenter, S.R., de Vries, W., de Wit, C.A., Folke, C., Gerten, D., Heinke, J., Mace, G.M., Persson, L.M., Ramanathan, V., Reyers, B. & Sorlin, S. (2015). Planetary Boundaries: Guiding human development on a changing planet. *Science 347* (6223). DOI: 10.1126/science.1259855

Turner, J. M. (2002). From woodcraft to 'leave no trace': Wilderness, consumerism, and environmentalism. *Twentieth Century America, Environmental History*, *7*(3), pp. 462–484. DOI: 10.2307/3985918

United Nations (1992). *Rio Declaration on Environment and Development 1992*. Downloaded from http://www.jus.uio.no/lm/environmental.development.rio.declaration.1992/portrait.a4.pdf

Vagias, W. (2009). An Examination of the Leave No Trace Visitor Education Program in Two US National Park Service Units. *All Dissertations.* Paper 393.

Waite, S., Passy, R., Gilchrist, M., Hunt, A., & Blackwell, I. (2016). *Natural Connections Demonstration Project, 2012-1016: Final Report* (215). Downloaded from www.gov.uk/government/organisations/natural-england

Wattchow, B., & Brown, M. (2011). *A Pedagogy of Place: outdoor education for a changing world*. Monash, Australia: Monash University.

Wilson, E. O. (1990). *Biophilia*: Cambridge, MA; Harvard University Press.

World Commission on Environment and Development (1987). *Our Common Future*. Oxford, UK: Oxford University Press.