

## THESIS SYNOPSIS

# The Nature of Imagination in Education for Sustainability

**Dr Sally Jensen**

*Deakin University*

**Supervisors**

Associate Professor Mary Dixon and Dr Lou Preston

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### Thesis Abstract

The importance of imagination in education has a significant history (Egan, 1986, 2001; Eisner, 1976; Greene, 1988; Steiner, 1954; Warnock, 1976); however, scholarship is often theoretical, and the involvement of imagination in understanding sustainability is often overlooked (Jones, 1995; Judson, 2010; Stewart, 2009). Imagination has rarely been the subject of Environmental Education (EE) and research. Its nature is contested, and its workings can be concealed by formal notions of knowing and learning. Contemporary environmental philosophies argue that education can often contradict its aims through limited understandings of environment and knowledge (Orr, 1991, 1992; Weir, 2008; Whitehouse, 2011). This thesis reconceptualises imagination as a way of knowing and learning in environmental terms. The study investigates the role of imagination in Education for Sustainability (EfS) contexts and critically analyses how imagination is involved in understanding sustainability for teachers and learners. The possibility of imagination *as* environmental knowledge, and as essential to resolving environmental problems, is applied in this research.

The guiding theoretical framework draws largely upon Australian environmental philosophies (Gough, 1999; Matthews, 1991; Plumwood, 1993, 1999; Rose, 1996), and qualitative and arts-based educational research (Barone & Eisner, 2012; Jones, 2013; MacLure, 2013), as well as contemporary writings of material eco-criticism (Oppermann, 2013) and the New Materialisms (Barad, 2001, 2003, 2007; St Pierre, 2013). A New Materialist epistemological position considers all matter to have agency in knowledge making, so that knowledge is not confined to the human brain but embedded and discursive as all matter and the earth. In this thesis, EfS is framed by this New Materialist perspective.

The research design involves a combination of interviews and participant observation in a range of EfS settings across Victoria, Australia. To identify and understand imagination in these environmental education contexts, a coordinated palette of interdisciplinary perspectives and interpretations of imagination were brought together, such as the work of educational scholars Egan (2001), Dewey (1902), and Vygotsky (1932/1987), as well as creative writers' views, such as Malouf (1998) and Rowling (2008), and contemporary research (Macknight, 2009; Stewart, 2009).

Seven interviews with self-identified EfS educators from a range of primary, secondary, and tertiary settings were conducted at their workplaces. The interviews discussed the educators' pedagogical approaches to teaching and learning sustainability concepts. During the interviews, imagination was not referred to directly until the last open-ended question. Additionally, 14 weeks' participant-observation research at a 5-Star Sustainable primary school examined how imagination occurs in a sustainability education program for students and teachers. Visual, audio and written data, interviews with educators and students, reflective notes, and a range of visual material were gathered.

A diffractive, narrative discourse analysis views the data as learning stories, and examines how imagination arises in EfS, how imagination is understood in teaching and learning, and the extent to which imagination works to construct and expand ways of seeing the world for students and teachers.

Findings indicate that primary, secondary and tertiary educators work creatively to facilitate understanding the environmental realities that constitute matter, resources, and systems. The analysis narrates how educators use images, stories and metaphorical thinking to facilitate students' ability to imagine other perspectives, or concealed realities that are not immediately tangible or apparent. Findings highlight the ways in which children are encouraged to imagine their way into the lives of non-human entities, think backwards and forwards in time, and imagine bigger picture perspectives involved in migration and global systems, as well as smaller worlds at the level of nutrition, energy or biodegradability. Teaching and learning often involves metaphors and comparisons in order to communicate and build conceptual understandings. The use of photographs and other images evoked narrative responses and discussions; for example, educators and students constructed meaning through positioning matter as a storyteller with a life and a narrative. Imaginary perspectives were encouraged, such as asking questions about the feelings and perspectives of animals, resources, and objects themselves. As the analysis discusses the ways in which imagination contributes to students' and teachers' experiences and understandings in EfS, it recognises the complex, conceptual work of understanding the many dimensions of sustainability.

The thesis advances new understandings of imagination in EfS and provides a unique view of contemporary EfS practices. The imagination is reconceptualised as a way of knowing, learning, and understanding environmental knowledge, particularly in Australia. It argues that imaginative ways of knowing bring into being a concealed level of existence and relationships that are essential to understanding sustainability. This has important implications for the future of EfS and EE. Further advocacy and research is needed that considers imagination as a part of environmental knowledge to make educating students' environmental imaginations a central consideration of EE theory, research and practice.

## References

- Barad, K. (2001). Re(con)figuring space, time, and matter. In M. DeKoven (Ed.), *Feminist locations: Global and local, theory and practice* (pp. 75–109). New Brunswick, NJ: Rutgers University Press.
- Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of Women in Culture and Society*, 28, 801–831.
- Barad, K. (2007). *Meeting the universe halfway: quantum physics and the entanglement of matter and meaning*. Durham, NC: Duke University Press.
- Barone, T., & Eisner, E. (2012). *Arts Based Research*. New York: Sage.
- Dewey, J. (1902, January 15). Imagination. *White and Blue*, 5, 11–16.

- Egan, K. (1986). *Teaching as storytelling*. Chicago, IL: University of Chicago Press.
- Egan, K. (2001, August–September). *The cognitive tools of children's imagination*. Paper presented at the Annual European Conference on Quality in Early Childhood Education, Netherlands. Retrieved from <http://files.eric.ed.gov/fulltext/ED469669.pdf>
- Eisner, E. (1976). Educational connoisseurship and criticism: Their form and functions in educational evaluation. *Journal of Aesthetic Education*, 10, 135–150.
- Gough, N. (1999). Rethinking the subject: (De)constructing human agency in environmental education research. *Environmental Education Research*, 5, 35–48.
- Greene, M. (1988). What happened to imagination? In K. Egan & D. Nader (Eds.), *Imagination and Education* (pp. 45–55). New York: Teachers College Press.
- Jones, L. (2013). Children's encounters with things: schooling the body. *Qualitative Inquiry*, 19, 604–610. Retrieved from <http://qix.sagepub.com/content/19/8/604>
- Jones, M.W. (1995). Inadequacies in current theories of imagination. *Southern Journal of Philosophy*, 33, 313–333.
- Judson, G. (2010). *A new approach to ecological education: Engaging student's imaginations in their world*. Peter Lang, New York.
- Macknight, V.S. (2009). *Teaching imagination*. Melbourne, Australia: School of Philosophy, Anthropology and Social Inquiry, The University of Melbourne.
- MacLure, M. (2013). Researching without representation? Language and materiality in post-qualitative methodology. *International Journal of Qualitative Studies in Education*, 26, 658–667.
- Malouf, D. (1998). *A spirit of play; The making of Australian consciousness, Boyer Lectures 1998*. Melbourne, Australia: Australian Broadcasting Corporation.
- Mathews, F. (1991). *The ecological self*. New York: Barnes and Noble.
- Oppermann, S. (2013). Material ecocriticism and the creativity of storied matter. *Frame*, 26, 55–69.
- Orr, D. (1991). What is education for? Six myths about the foundations of modern education, and six new principles to replace them. *Context: A Quarterly of Human Sustainable Culture*. Retrieved from <http://www.context.org/iclib/ic27/orr/>
- Orr, D. (1992). *Ecological Literacy: Education and the transition to a postmodern world*. Albany, NY: State University of New York.
- Plumwood, V. (1993). *Feminism and the mastery of nature*. London: Routledge.
- Plumwood, V. (1999). The struggle for environmental philosophy in Australia. *Worldviews: Environment Culture Religion*, 3, 157–178.
- Rose, D.B. (1996). *Nourishing terrains: Australian Aboriginal views on landscape and wilderness*. Canberra, Australia: Australian Heritage Commission.
- Rowling, J.K. (2008). *The fringe benefits of failure and the importance of imagination*. Harvard address: Annual Meeting of the Harvard Alumni Association. Harvard University. Reprinted in *The Harvard Magazine*, June, 5, 2008. Retrieved from <http://harvardmagazine.com/2008/06/the-fringe-benefits-failure-the-importance-imagination>
- Steiner, R. (1954). *A modern art of education. Stenographic transcripts of lectures, 5th–17th August, 1923*. London: Rudolf Steiner Press.
- Stewart, A. (2009, April). *Windows onto other worlds: The role of imagination in outdoor education*. Paper presented at the Fourth International Outdoor Education Research Conference, La Trobe University, Beechworth, Victoria, Australia. Retrieved from <http://www.latrobe.edu.au/education/downloads/Stewart.pdf>
- St. Pierre, E.A. (2013). The posts continue: Becoming. *International Journal of Qualitative Studies in Education*, 26, 646–657.
- Warnock, M. (1976). *Imagination*. London: Faber & Faber.
- Weir, J. (2008). Connectivity. *Australian Humanities Review*, 45, 153–164.

Whitehouse, H. (2011). Talking up country; Language, natureculture and intercultural in Australian environmental education research. *Australian Journal of Environmental Education*, 27, 295–302.

Vygotsky, L.S. (1932/1987). Imagination and its development in childhood. In R.W. Rieber & A.S. Carton (Eds.), *The collected works of L.S. Vygotsky* (vol. 1, pp. 339–350). New York: Plenum Press.

### **Publications**

Jensen, S. (2013). Imagination and environmentalities: Ways of seeing in Australian environmental education. In C. Newmann, Y. Nussaume, & B. Pedroli (Eds.), *Landscape and imagination: Towards a new baseline for education in a changing world* (pp. 275–281). Florence: Bandecchi & Vivaldi.

Jensen, S. (2012). Going Deeply in Education for Sustainability. In *EINGANA Journal of the Victorian Association for Environmental Education*, 35, 27–29.

### **Access**

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### **Author Biographie**

Sally Jensen is a sustainability educator and environmental education researcher. She worked for 6 years in the education team at CERES Environment Park in Melbourne and facilitated the Australian Sustainable Schools Initiative to over 22 schools across Victoria. She worked at the Green School in Bali, Indonesia and completed her PhD in 2014.