Aesthoecology and Its Implications for Art and Design Education: Examining the Foundations

Emese Hall & Christopher Turner

Abstract

Aesthoecology (Turner 2019) can be described as an 'onto-epistemology' which fuses a theory of being with a theory of knowledge and deals with the affective, connected, and temporal aspects of education. Where the aesthetic aspect of aesthoecology - appearance and feelings/ sensation - concerns the affective domain, the ecological aspect - spaces, places, and relationships - concerns connectedness. In our title, 'foundations' refers both to the foundations of aesthoecology and the foundations of art and design education. We highlight the implications of aesthoecology for the art and design education of young children, as elsewhere we consider its implications for higher education (Turner & Hall 2021). Below, we explain aesthoecology in detail; identify some of aesthoecology's implications for art and design education; and apply these to an examination of current English early years education policy (DfE 2017, 2020, 2021). There is much room for improvement here, thus, in the spirit of Rancière (2004), we invite aesthoecologically-informed dissensus.

Keywords: Aesthoecology; onto-epistemology; affectivity; connectivity; liminality; foundations

Introduction

In this paper we introduce the theory of aesthoecology (Turner, C. 2019) and indicate some its implication for art and design education, with a focus on early years education in England. We feel confident that many readers will notice how aesthoecology resonates with their existing beliefs – beliefs not only about education but about life itself. In brief, aesthoecology is an onto-epistemological theory – it fuses a theory of being with a theory of knowledge. We present aesthoecology as a meaningful way of expressing the inherent educational relationship between aesthetics and ecology (Turner, C. 2019).

Aesthoecology offers a new lens and language with which to reflect upon art and design education. As professionals, we should seek to continually learn. According to Moate et al. (2019, 167): 'Effective professional learning involves the fusion of theory and practice…the careful negotiation of abstracted theorisations of education and the lived experiences of educators and educatees'. Our intention is to translate the abstract concept of aesthoecology and demonstrate its practical relevance to art and design education.

The original definition of aesthoecology was that it represents:

> the symbiotic and dynamic relationship between aesthetics and ecology, in which aesthetics represents the deep and often unconscious sensory awareness of being in the environment (our being in our environment), and the associated ecology, which represents a worldview as well as an intimate, unfolding and emergent understanding of the complexity, and immediacy, of our surroundings, which form our temporal landscape. Inherent in this, is the effect and affect that are predominant in the interaction between the two and the ways, often subtle, in which behaviours – actions, reactions – and consequences are elicited by the detection and

> emergence of individual and collective environmental changes. (Turner, C. 2019, 11)

This definition will soon be expanded upon - for now, here is an analogy. Aesthoecology has three essential components: aesthetics, ecology, and rhythmicity, and between these is a symbiotic relationship which forms, transforms and changes our perceptions and understanding over time (Turner, C. 2019). We can usefully compare aesthetics, ecology, and rhythmicity to the primary colours: red, yellow, and blue. Awareness of the three components of aesthoecology and their interconnectivities is as essential as familiarity with the three primary colours and the possibilities presented by their combinations.

In our title, 'foundations' refers both to the foundations of aesthoecology and the foundations of art and design education. We highlight the implications of aesthoecology for the art and design education of very young children, as elsewhere we consider its implications for higher education (Turner, C. & Hall 2021). Below, we explain aesthoecology in detail; identify some of aesthoecology's implications for art and design education; and apply these to an examination of current English early years education policy (DfE 2017, 2020, 2021).

Aesthoecology explained…

Introduction to aesthoecology

The theory of aesthoecology captures the profound inter-relationship between specific aspects of aesthetics and ecology and the significance that this relationship brings to bear on the education imperative (Turner, C. 2019). We contend that this aesthoecological relationship represents a symbiotic partnership, an entanglement (e.g., see Deleuze & Guattari 2013), within which the elements of both aesthetics and ecology coalesce in such an organic way

that new characteristics spontaneously emerge from the relationship (e.g., see Osberg 2008; Osberg & Biesta 2008). This coalescence possesses a rhythmic or temporal dimension thereby implicitly recognizing the dynamic and anticipatory nature of aesthoecology.

Aesthoecology represents a distinctly new ontology, founded on principles of posthumanism (e.g., see Braidotti 2013, 2019; Taylor & Hughes 2016) and new materialism (Barrett & Bolt 2013; Bennett,2010; Coole & Frost 2010; Harman 2018), which provides insight for the unique exploration of our personal world and the recognition of the interconnectivity that exists therein. This epistemological dimension is what makes aesthoecology so important in education and, as an onto-epistemology, links what it is 'to be' with what it is 'to know'. We also invest aesthoecology with an ethical dimension thereby relating it to Barad's (2007) concept of an *ethico*-onto-epistemology. There are many definitions of both aesthetics and ecology and so it is important that we clearly explain the context within which we use them.

The significance of aesthetics as affectivity

Aesthetics, broadly speaking, relates to the conceptual and theoretical inquiry of both sensual experiences and of the arts (Ranciere 2013; Scruton 1974). Kant, in his *Critique of Judgement* (2007/1790), attempts to integrate what he considers as the three central elements of aesthetics - the true, the good and the beautiful - which might legitimately and contemporaneously be interpreted as ethics, politics, and creativity. This is very similar to Maslow's (1993) concept of being values, which include justice, truth, and beauty; he considers that the self-actualised person is a seeker of these values.

Rancière (2004) refers to aesthetics as a way of identifying thinking about the arts - the aesthetic regime of the arts – which forms a balance between forms of action, production, perception and thought. He considers that the close relationship between politics and art lies in the ideas of dissensus – a common concern in challenging the status quo and creating space

for the new to emerge. This is an affective process full of personal meaning and a willingness to open up to the new. Building on this notion of the aesthetic as an affective dimension Shapiro (2008, 8) suggests that it is not a matter of 'what something is, but how it is – or, more precisely, how it affects, and how it is affected, by other things.' This sensitivity to feeling, our intimate relationship to space and place and the perspective of experience (Tuan, 1977) resonates with the idea of self-cultivation in the same way that Biesta (2006) links philosophy to education by referring to the German tradition of 'bildung'. He suggests that 'bildung' has 'always expressed an interest in the humanity of the human being and thus stands for a way of educational thinking and doing that is significantly different from the near hegemonic educational discourse today.' (Biesta 2006, 99). This complex and affective concept of 'bildung', that Taylor (2017, 3) refers to as a process of 'developing, shaping, self-formation and inner cultivation' reflects the nature of aesthoecology as a form of holistic personal transformation that reorientates education from the 'acquisition of skills, the linear transmission of knowledge and the measurement of learning' to 'a notion of education centred on being and becoming' (Taylor 2017, 3).

We take the view that sensory perception and the values associated with experience are a principal motivation in learning (e.g., see Dewey 2005/1934; Berleant 2010). The original concept of aesthetics, aisthesis (see Rancière 2013), is based upon sense perception and the associated connections which are experienced from the objects (animate and non-animate) that represent our immediate environmental conditions. The affectivity represents feelings, emotions and a continuous empathy and connection with our ecology. Sensing, experiencing, and forming connections become the basis for affective change.

Sense perception is distinct from mere sensation – it is, as Berleant (2010, 36) states, 'sensation mediated, quantified, apprehended, and shaped by psychological and cultural characteristics and patterns of apprehension, and by the multitude of forces that are part of

everyone's world'. It is, therefore, important to recognise the compatibility between our affective state - our aesthetic - and those multitude of forces and connections which are brought to bear upon it – our ecology – and to understand the fundamental and autopoietic connection between them when they con-join and con-fuse as an aesthoecological entity.

The significance of ecology as connectivity

In an analysis of aesthoecology the term ecology represents the connectivity that spontaneously emerges from new experiences and playfulness with the objects and forces that surround us and impinge upon us. The aesthetic, or the affective in an educational context, is reliant upon notions of inter- and intra-connectivity and the importance and identification of space and time.

Turner, C. (2019) identifies an ecological hierarchy relating to space, place and time within which aesthetics and ecology operate at different levels, intensities and significance depending upon the state of the individual in the present. Broadly speaking these equate to a meta-state, a meso-state and a micro-state. The meta-state represents an understanding of our global situation and issues facing the planet as a whole. Concepts of hyperobjects (see Morton, 2013) and Gaia (Lovelock, 1979) are examples of the meta-state – all-encompassing phenomena which connect us to something far greater and yet which impinge upon us as humans in every way, much of the time not consciously realised. The middle layer, the meso-state, is particularly significant in educational contexts as it represents all those spaces, places and contexts in which education is enacted. It connects the outside with the inside, the planet with the individual, and it represents the boundaries between spaces. It is an essential part of the education-ecology mesh, and it provides the stimulus with which, and within which, to interact with the materiality of learning. The meso-state is inherently multi-disciplinary and experiential and connects self with community. It transcends barriers and is

sensitive to the connectivity between spaces and places thereby offering ‘opportunities for new understandings of creativity which acknowledges spaces, environments and objects as contributors to the creative process, rather than simply seeing them as context’ (Chappell, 2018, 10). The lowest level, the micro-state, is related to the individual. It is the point at which personal learning becomes education through the emergence and construction of an educational landscape that operates through the meso-region, out to the meta-regions, and back.

Consequently, aesthoecology recognises that the individual within complex systems can never be seen to be an object at the centre but is implicit in a shared orientation within and towards the possibility of emergence. Individuals are enmeshed within units of complexity, social collectives, from which educational interpretation and meaning emerge (Osberg, 2008).

The significance of rhythmicity as temporality

There is rhythmicity or temporality implicit in the relationship between aesthetics and ecology. This rhythmicity is bound into the dynamic forces which are required to produce change. Learning can never be in a state of stasis. Rhythm might, therefore, be seen as ‘a central feature that not only links artforms, and consequently has a distinctly aesthetic nature, but inherently links aesthetics to our environment.’ (Turner, C. 2019, 135). According to Jirousek (1995), somewhat speculatively, rhythms in sound and music are very similar to rhythmicity in visual composition except that the timed beat is sensed by the eyes rather than the ears. Therefore, it could be argued that a condition of artistic form is a rhythmicity that is deeply rooted in being alive and, as Dewey notes, ‘The first characteristic of the environing world that makes possible the existence of artistic form is rhythm’ (Dewey 2005/1934, 153).

Liminality, anticipation and transformation

Aesthoecology forms, transforms and changes our perceptions and understandings over time and is, therefore, implicit in complex and dynamic change. Liminality relates to in-between spaces determined as being both 'a point in time and state of being' (Barradell & Kennedy-Jones 2015, 541 – 542). In geo-biology it is considered as an ecotone:

> a boundary state or estuary between two conditions such as river/sea or woodland/river in which temporal dynamics are put up for grabs and new possibilities are able to emerge, a space where teloi themselves become objects of play (Amsler & Facer 2017, 9).

Liminality, therefore, entails being on the edge of awareness and in sensitive anticipation of the next event. This represents a dynamic state that maintains the body in a condition of affective anticipation and positioning which, according to Gregg and Seigworth (2010, 4), would 'feel a great deal less like a free fall if our most familiar modes of inquiry had begun with movement rather than stasis, with process always underway than position taken.'

Liminality represents spaces or contact zones, in which there is a meeting of ideas, cultures and thoughts, which provide entry and exit points between zones of experience or understanding (e.g., see Conroy 2004; Turner, V. 1969). The exit points may be considered as thresholds from which the new emerges – transformation points which are irreversible once crossed. It is a point of realisation that distinguishes the liminal condition, betwixt and between (Conroy 2004), from the radically new. This state of emergence can only be perceived when it comes into being and is enacted such that 'anticipation disappears the moment uncertainty is overcome' (Osberg 2018, 15). This moment of transition is reliant on an affective way of being – a liminal state of openness and receptivity to change. (Turner, C. 2019) or, as MacCormack and Gardner (2018, 11) suggest 'affects are not concrete entities

but rather self-constituting interfaces that generate both interiority and exteriority through affective encounters.'

Consequently, the temporal dimension of aesthoecology constitutes recurring series of threshold moments in which, at any one point in time, cognitive positioning is in flux. This state of liminality represents possibilities and opportunities for transition from one state of understanding to another. We argue that this change state is not predictable or teleological but emerges from the experiences and playfulness of the moment.

The liminal zone: (emergent) implications of aesthoecology for art and design education

In considering the implications of aesthoecology for art and design education, we identify three emergent principles:

- Connecting the physical and intellectual: doing and thinking, affectiveness and effectiveness
- Understanding (artistic) perception and awareness of material qualities
- Slowing down and true mindfulness through making and making meaning

Similar to the three components of aesthoecology, each principle has interconnectivities. Below, in examining art and design in English early years education policy (DfE 2017, 2020, 2021), we draw closely on these principles.

An aesthoecological perspective on art and design in the early years foundation stage

Signs of promise…

In England, the Early Years Foundation Stage [EYFS] refer to the education of children aged from birth to age five. The EYFS spans nursery/pre-school education (ages birth to four) and the first year of the primary school known as 'reception' (ages four to five). The Department

for Education's policies for the EYFS consist of a statutory framework (DfE 2017, 2021) and non-statutory curriculum guidance (DfE 2020). Within EYFS policy, art and design appears as part of the 'expressive arts and design' learning area:

> Expressive arts and design involves enabling children to explore and play with a wide range of media and materials, as well as providing opportunities and encouragement for sharing their thoughts, ideas and feelings through a variety of activities in art, music, movement, dance, role-play, and design and technology (DfE 2017, 8/9)

The above description recognises the transdisciplinarity of young children's learning (Edwards *et al.* 1998), whilst also resonating with the aesthoecological principle of *understanding (artistic) perception and awareness of material qualities.* Via the encouragement of artistic exploration and expression – affective experience and the sharing of this, we see the potential for 'the arousal of the curious and the awakening of the imagination' (Turner, C. 2019, 103). This is evidence of *connecting the physical and intellectual: doing and thinking, affectiveness, and effectiveness*. As Eisner (2002) informs us, the arts offer experience for learning through discovery in imaginative, complex, and critical ways. Indeed, aesthetic perception is key to the critical aspect of learning in art and design (Eisner 1972). Further, it is 'curious questions' that feed transdisciplinary learning (Chappell et al. 2019, 6), where subject boundaries are dissolved (e.g., see Klein, 2015). Within this EYFS policy there is as much emphasis on learning *through* and *with* the discipline of art and design as much as *in* and *about* it (Lindström 2012). This observation reflects the rhythmicity of learning from an aesthoecological standpoint – which is, notably, in a constant state of flux (Turner, C. 2019).

The following is the description of expressive arts and design given in both the non-statutory 'development matters' guidance for the EYFS (DfE 2020, 69) and the 2021 statutory framework (DfE 2021, 10):

> The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

In common with the quotation given earlier (DfE 2017, 8/9), this statement is positive in terms of the value placed on young children's artistic communication and expression. Again, we see evidence of our aesthoecological principle of *understanding (artistic) perception and awareness of material qualities.* Young children's understanding of art worlds/ communities (Hetland et al. 2017) is also promoted, extending the ecologies of young children's learning beyond the micro-level (individual) to the meso-level (society). Terms such as 'quality', 'variety' and 'depth' (DfE 2020, 69) encourage a rich curriculum offer where one would hope there is adequate scope for the other two aesthoecological principles: *connecting the physical and intellectual: doing and thinking, affectiveness, and effectiveness*; and *slowing down and true mindfulness through making and making meaning.*

Areas of concern…

Towards the end of the reception year, when most children are five, teachers complete a 'profile' of individual attainment against 17 early learning goals [ELGs], informed by the

statutory guidance. This profile is an important summative judgement of children's knowledge, skills and understanding at the end of the EYFS. Two of the ELGs concern expressive arts and design. At the time of writing, these ELGs exist in two versions – one applicable for profiles completed in summer 2021, with the exception of 'early adopter' settings (DfE 2017) and one that will be universally applicable from September 2021 (DfE 2021) - Table 1 provides a side-by-side comparison of these.

ELGs (DfE, 2017)	**ELGs (DfE 2021)**
Exploring and using media and materials: children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	*Creating with materials:* • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; • Share their creations, explaining the process they have used; • Make use of props and materials when role playing characters in narratives and stories.
Being imaginative: children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories.	*Being imaginative and expressive:* Invent, adapt and recount narratives and stories with peers and their teacher; Sing a range of well-known nursery rhymes and songs; Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music.

Table 1: Early Learning Goals for 'expressive arts and design'

On first inspection, there does not appear to be great difference between the 2017 and 2021 ELGs. However, closer examination reveals expectations that clash with aesthoecological beliefs. For example, the new ELG for 'creating with materials' emphasises the ability to explain artistic *process* – it fails to mention the child's capacity to verbalise (or otherwise communicate) the affective significance of processes or outcomes. Although the physical and intellectual are connected, *effectiveness* is prioritised over affectiveness. This is a technical and limited view of learning. Addison (2011, 375) argues:

> Despite the privileging of cognitive development in education, humans are evidently not merely cognitive beings. Rather we are embodied creatures, beings who feel, think and act through the body on other bodies and are in turn affected.

Clearly, the embodied view of learning described by Addison and supported by aesthoecology is not held by the DfE policy makers who authored this new ELG. Sensitivity to feeling is lacking. (It is notable that the both the 2017 and 2021 ELGs for 'personal, social and emotional development' likewise emphasise superficial practical considerations over deeper affective awareness.) Moreover, we see no acknowledgement that 'Meaning-making, ergo learning, in art and design can defy spoken and written language extending into a (sometimes ineffable) visual language' (Payne & Hall 2018, 172). This point is especially significant within the early years, when children communicate in multimodal ways using '100 languages' (Edwards *et al.* 1998).

In contrast, the DfE's 2017 ELG for 'being imaginative' refers to representing 'ideas, thoughts and feelings' seemingly supports children's affective awareness. Further, creativity is promoted in the mentioning of originality and purpose (NACCCE 1999). However, the 2021 ELG titled 'being imaginative and expressive' is supremely misleading. Rather than an expanded expectation with further recognition of the role and value of art and design it is the exact opposite: there is zero mention of art. The failure to mention artistic activity in connection to young children's imagination and expression raises profound questions.

We argue that the signs of promise regarding art and design in the EYFS are undermined by the issues highlighted in the ELGs for expressive arts and design – and other areas, besides personal, social and emotional development. This mixed messaging in early years educational policy has been critiqued previously (e.g., see Hall 2009). Curriculum content and pedagogy within individual settings might well be excellent, but the national assessment

expectations for children's artistic learning does not recognise the 'quality', 'variety' or 'depth' mentioned in the EYFS guidance (DfE 2020, 201). Crucially, we must remember that 'Why and how we assess our pupils has an enormous impact on their educational experience and consequently on how and what they learn' (Harlen 2014, 1).

This brief examination of EYFS policy serves to illustrate that 'art and design, as a subject, is undervalued because it is fundamentally misunderstood' (Payne & Hall 2018). For example, our principle of *slowing down and true mindfulness through making and making meaning* is the antithesis of time-filling commercially produced worksheets. Educators in tune with aesthoecology know that 'Imagination involves the head, the hands, and the heart; it is transdisciplinary, open-ended and requires time, space, and resources' (Hall et al. 2021, 23). The principles of aesthoecology support a holistic and anticipatory approach:

> It is more than bodies of knowledge or existing pedagogical practice; it is a recognition of that which might be and the spaces which might be created for that to come alive. The aesthetic represents the aliveness to the new and the ecology the spaces within which the new might appear (Turner 2019, 98).

Returning to Barad's (2007) concept of an ethico-onto-epistemology, we also highlight that the DfE's 2021 ELGs in particular demonstrate a lack of ethical consideration for young children's artistic and affective capabilities and interests. Instead, we must strive to recognise their rich funds of knowledge (Moll *et al.* 1992) via their ecological enmeshment.

Conclusion

We have argued that aesthoecology, as an onto-epistemology, provides a new lens and language with which to reflect upon art and design education. There is naturally an aspiration that this proposal prompts a positive reaction. Moreover, 'When reaction

becomes action is when the greatest creativity emerges' (Turner 2019, 95). We suggest that this action should be driven by question posing - and this is what art and design educators do: problematize (Baldacchino 2019). However, the right kind of questions need to be asked.

> We would argue that education's current dis(re)pair has been brought about by the wrong kind of attention: attention focused on what education should do (its instrumental purpose) without regard for what education, itself, actually is (as a kind of entity or being in its own right). (Osberg & Biesta 2020: 2).

Defining education as 'the process of bringing learning into consciousness' (Turner, C. 2019, 75) provides scope for debate. Further, we call for a focus on being. For us, education is as much about being as it is about knowing. An aesthoecological approach supports 'the development of a 'whole person' living in relationship with others' (Chappell et al 2016, 255). Ecologies connect us all. Crucially, if a society cannot get things right from the foundations – that is, from when the very youngest children start on their formal educational journeys, then we are setting ourselves, and them, up for future problems. The failings of current EYFS policy, especially the DfE's 2021 ELGS, to fully understand and value art and design education demonstrates that radical change is required.

> '…curricula that are inspired by entangling the conventional strands of learning, a pedagogy that recognises the complexity of knowledge formation, a philosophy that understands the implications of an unknown and risky future and a care that fosters the enchantment and fragility of the world and all within it. Aesthoecology supports these dimensions of dynamic change' (Turner, C. 2019, 167).

In the spirit of Rancière (2004), we invite your aesthoecologically-informed dissensus.

References

Addison, N. (2011) Moments of intensity: affect and the making and teaching of art, *International Journal of Art and Design Education,* Vol. 30, No. 3, pp. 363–378.

Amsler, S. & Facer, K. (2017) Contesting anticipatory regimes in education: exploring alternative educational orientations to the future, *Futures: The Journal of Policy, Planning and Future Studies*, Vol. 94, November 2017, pp. 6-14.

Baldacchino, J. (2019) Introduction, in J. Baldacchino [Ed] *Histories and philosophies, Vol. I, The International Encyclopedia of Art and Design Education.* London: John Wiley and Sons, pp. 1-13.

Barad, K. (2007) *Meeting the universe halfway*. London: Duke University Press.

Barradell, S., & Kennedy-Jones, M. (2015) Threshold concepts, student learning and curriculum: making connections between theory and practice, *Innovations in Education and Teaching International*, Vol. 52, No. 5, pp. 536–545.

Barrett, E. & Bolt, B. [Eds] (2013) *Carnal knowledge: towards a new materialism through the arts.* London: I. B. Taurus.

Bennett, J. (2010) *Vibrant matter: a political ecology of things*. London: Duke University Press.

Berleant, A. (2010) *Sensibility and sense: the aesthetic transformation of the human world*. Exeter: Imprint Academic.

Biesta, G. J. J. (2006) *Beyond learning.* Boulder, Colorado: Paradigm.

Braidotti, R. (2013) *The posthuman*. Cambridge, England: Reality Press.

Braidotti, R. (2019) *Posthuman knowledge*. Cambridge, England: Polity.

Chappell, K. (2018) From wise humanising creativity to (post humanising) creativity, in A. Harris, P. Thompson, & K. Snepvangers [Eds] *Creativity, policy, partnership and practice in education*. London: Palgrave Macmillan, pp. 279-306.

Chappell, K.A., Pender, T., Swinford, E. & Ford, K. (2016) Making and being made: wise humanising creativity in interdisciplinary early years arts education, *International Journal of Early Years Education*, Vol. 24, No. 3, pp. 254-278.

Coole, D., & Frost, S. (2010) *New materialisms: ontology, agency and politics*. Durham, NC: Duke University Press.

Deleuze, G. & Guattari, F. (2013) *A thousand plateaus*. London: Bloomsbury Academic.

Department for Education (2017) *Statutory framework for the early years foundation stage. Setting the standards for learning, development and care for children from birth to five* (online). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/596629/EYFS_STATUTORY_FRAMEWORK_2017.pdf (accessed 03 May 2019)

Department for Education (2020) *Development matters. Non-statutory curriculum guidance for the early years foundation stage* (online). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/988004/Development_Matters.pdf (accessed 11 January 2021)

Department for Education (2021) *Statutory framework for the early years foundation stage. Setting the standards for learning, development and care for children from birth to five* (online). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974907/EYFS_framework_-_March_2021.pdf (accessed 11 January 2021)

Dewey, J. (2005/1934) *Art as experience*. New York: Berkeley Publishing Group.

Edwards, C., Gandini, L., & Forman, G. [Eds] (1998) *The hundred languages of children. The Reggio Emilia approach: advanced reflections*. Westport, CT: Ablex.

Eisner, E. W. (2002) *Arts and the creation of mind.* New Haven, CT and London: Yale University Press.

Gregg, M., & Seigworth, G. J. [Eds] (2010) *The affect theory reader*. Durham, NC: Duke University Press.

Hall, E. (2009) Mixed messages: the role and value of drawing in early education, *International Journal of Early Years Education*, Vol. 17, No. 3, pp. 179-190.

Hall, E., Wood, A., Ruck Keene, H. & White, H. (2021) The arts and education for sustainable development, in S. Ogier & S. Tutchell [Eds] *Teaching the arts in the primary curriculum*. Exeter: Learning Matters, pp.21-30.

Harlen, W. (2014) *Assessment, Standards and Quality of Learning in Primary Education.* York: Cambridge Primary Review Trust.

Harman, G. (2018) *Object-oriented ontology: a new theory of everything*. London: Pelican Books.

Hetland, L., Winner, E., Veenemer, S. & Sheridan, K.M. (2013) *Studio thinking 2: the real benefits of visual arts education.* New York: Teachers College Press.

Jirousek, C. (1995) Art, design and visual thinking (online). Available at: http://char.txa.cornell.edu/language/principl/rhythm/rhythm.htm (accessed 19 March 2018).

Kant, I. (2007/1790) *Critique of judgement*. Oxford, England: Oxford University Press.

Kinsella, V. (2018) The use of activity theory as a methodology for developing creativity within the art and design classroom, *International Journal of Art and Design Education*, Vol. 37, No. 3, pp. 493-505.

Lindström, L. (2012) Aesthetic learning about, in, with and through the arts: a curriculum study, *International Journal of Art and Design Education*, Vol. 31, No.2, pp.166-179.

MacCormack, P. & Gardner, C. [Eds] (2018) *Ecosophical aesthetics: arts, ethics and ecology with Guattari*. London: Bloomsbury Academic.

Moate, J., Hukse, B., Jahnke, H. & Owens, A. (2019) Exploring the material mediation of dialogic space—A qualitative analysis of professional learning in initial teacher education based on reflective sketchbooks, *Thinking Skills and Creativity*, Vol. 31 (2019), pp. 167-178.

Moll, L.C., Amanti, C., Neff, D. & Gonzalez, N. (1992) Funds of knowledge: using a qualitative approach to connect homes and classrooms, *Theory into Practice,* Vo. 31, No. 2, pp. 132-141.

Lovelock, J. (2000) *Gaia: a new look at life on earth*. Oxford, England: Oxford University Press.

Maslow, A. (1993) *The farther reaches of human nature*. London: Arkana.

Morton, T. (2013) *Hyperobjects*. Minneapolis, MN: University of Minnesota Press.

National Advisory Committee on Creative and Cultural Education. (1999) *All our futures: creativity, culture and education.* London: DFEE

Osberg, D. (2008) The logic of emergence: an alternative conceptual space for theorising critical education, *Journal of the Canadian Association for Curriculum Studies*, Vol. 6, No. 1, pp. 133–161.

Osberg, D. & Biesta, G. (2008) The emergent curriculum: navigating a complex course between unguided learning and planned enculturation, *Journal of Curriculum Studies*, Vol. 40, No. 3, pp. 313–328.

Rancière, J. (2004) *The politics of aesthetics: the distribution of the sensible*. London, New York: Continuum.

Rancière, J. (2013) *Aisthesis: scenes from the aesthetic regime of art*. London, New York: Verso.

Scruton, R. (1974) *Art and imagination: A study in the philosophy of mind*. London: Methuen.

Shapiro, S. (2007) Pulses of emotion: Whitehead's critique of pure feeling. The Pinocchio Theory (online). Available at: http://www.shaviro.com/ (accessed 23 June 2018).

Taylor, C. A. (2017) Is a posthumanist bildung possible? Reclaiming the promise of bildung for contemporary higher education, *Higher Education*, Vol. 74, No. 3, pp. 419–435.

Taylor, C. A., & Hughes, C. [Eds] (2016) *Posthuman research practices in education.* Basingstoke, England: Palgrave Macmillan.

Tuan, Y.-F. (1977) *Space and place: the perspective of experience*. Minneapolis: University of Minnesota Press.

Turner, C. (2019) *Education as aesthoecology*. Doctoral thesis, University of Exeter.

Turner, C. & Hall, E. (2021) 'Transformation through aesthoecology: emergent events, affective anticipation and thresholds of transdisciplinarity', *23rd Annual GLAD conference*. Online, hosted by Nottingham Trent University, 23 April.