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Creative Ruptions for Emergent Educational Futures

Edited by
Kerry Chappell
Chris Turner
Heather Wren

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Both creativity and culture are areas that have experienced a rapid growth in interest in recent years. Moreover, there is a growing interest today in understanding creativity as a socio-cultural phenomenon and culture as a transformative, dynamic process. Creativity has traditionally been considered an exceptional quality that only a few people (truly) possess, a cognitive or personality trait 'residing' inside the mind of the creative individual. Conversely, culture has often been seen as 'outside' the person and described as a set of 'things' such as norms, beliefs, values, objects, and so on. The current literature shows a trend towards a different understanding, which recognises the psycho-socio-cultural nature of creative expression and the creative quality of appropriating and participating in culture. Our new, interdisciplinary series Palgrave Studies in Creativity and Culture intends to advance our knowledge of both creativity and cultural studies from the forefront of theory and research within the emerging cultural psychology of creativity, and the intersection between psychology, anthropology, sociology, education, business, and cultural studies. Palgrave Studies in Creativity and Culture is accepting proposals for monographs, Palgrave Pivots and edited collections that bring together creativity and culture. The series has a broader focus than simply the cultural approach to creativity, and is unified by a basic set of premises about creativity and cultural phenomena.

Kerry Chappell • Chris Turner
Heather Wren
Editors

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Editors

Kerry Chappell
School of Education
University of Exeter
Exeter, UK

Chris Turner
School of Education
University of Exeter
Exeter, UK

Heather Wren
School of Education
University of Exeter
Exeter, UK



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Notes on Contributors

Hamza Albakri is a theatre practitioner in Palestine and a PhD student in Palestine Studies at the Institute of Arab and Islamic Studies, University of Exeter. His work focuses on understanding the construction of Palestinian masculinities in the aftermath of the Oslo Accords.

Asha Ali is a PhD student at the Institute of Arabic and Islamic Studies, University of Exeter. Asha's research focuses on Black Muslim women in Britain.

Oded Ben-Horin is Head of Department of Arts Education at Western Norway University of Applied Sciences. He is the coordinator of the Global Science Opera initiative. He has led several European Commission projects, and lectured in the field of creative, inter-disciplinary education. Oded is a music educator, jazz vocalist, composer and lyricist.

Sarah Campbell is Associate Director for Arts and Culture, University of Exeter. She joined from the Victoria and Albert Museum, having worked extensively in museum and gallery education, developing public engagement programmes and projects for a broad range of audiences.

Kerry Chappell is Associate Professor at University of Exeter where she leads the Creativity and Emergent Educational futures Network (CEEN) and the MA Education Creative Arts Programme. She researches creativ-

ity in education in the arts, transdisciplinary settings, and futures. She is also Adjunct Associate Professor at Western Norway University of Applied Science. (Twitter: @KerryChappell1; Facebook: kerry.chappell.79)

Sarah Chave is a University of Exeter affiliate, who researches sustainability, decolonisation and the posthuman using creative methodologies. Her publications include *Sustainable and Democratic Education: Opening spaces for complexity, subjectivity and the future* (2020). Her current focus is learning from the wisdom of Hafren (River Severn).

Helen Clarke, Sharon Witt are independent scholars who have worked within Primary Schools and Initial Teacher Education. Their work engages with playful, experiential place-responsive learning. They are currently exploring innovative practices that consider the potential of a relational approach to natural encounters through signature ‘pedagogies of attention’ with more-than-human-worlds. Their research interests include geography, science, posthumanist, transdisciplinary and arts-based practices, curriculum making and teacher professional development. You can follow their work on X @Attention2place.

Ursula Crickmay has a background in developing creative community arts projects, and now works in higher education as a lecturer and researcher. She is currently completing a PhD exploring posthuman theory and creative music workshop practices.

Arthur Dart is a PhD candidate at the Institute of Arabic and Islamic Studies at the University of Exeter. His research focuses on the liberatory ethics of Sufism in West Africa.

Nancy Katingima Day is a PhD student at the University of Exeter questioning and exploring the theoretical underpinnings of the nature of music and music making in the Kenyan context by drawing from her experience as a music teacher, performer, conductor, director and composer.

Sarah Dyer is based in the Manchester Institute of Education, University of Manchester where she holds a Chair in Digital Education. She previously worked at the University of Exeter where she was the Inaugural Director of the Exeter Education Incubator.

Riadh Ghemmour holds a PhD in education from the University of Exeter. He is currently working as Programme Coordinator and Learning Development Academic at the Royal Central School of Speech and Drama, University of London.

River Jean Nash is a specialist artistic fabricator, joiner, carpenter, designer, artist and educator. Their practice spans print, drawing, artist film and sonic scapes. Thematically their work explores cognitive dissonance, prejudice and the parody of queer sexuality/the trans body. They utilise their body as a site of political discourse both artistically and in daily existence.

Katie Natanel is a Senior Lecturer in Gender Studies at the Institute of Arab and Islamic Studies, University of Exeter. She is the author of *Sustaining Conflict: Apathy and Domination in Israel-Palestine* and the Executive Editor for Middle East Research and Information Project.

Chris Turner is Honorary Lecturer at the University of Exeter and Associate Fellow at the Centre for Climate Change and Sustainability Education, UCL. His research and writing interests are in the theoretical and philosophical concepts of aesthoecology. He is a member of the Creativity and Emergent Educational Futures Network (CEEN) at the University of Exeter and has lectured widely on eco-philosophy, educational leadership and community education.

Caroline Welsh is a flautist and animateur, who creates and leads engagement projects with organisations including Wigmore Hall, Royal Academy of Music, London Symphony Orchestra and City of London Sinfonia. She is passionate about human connection and the process of reciprocal co-becoming that she explores through a reflective improvisatory practice developed alongside people living with dementia.

Heather Wren is a Post-Doctoral Researcher at the University of Exeter. She has worked on EU creativity research projects and their published outcomes. Her research explores the emergence of environmental empathy in education using new materialism. Heather is also a member of the Creativity and Emergent Educational Futures Network (CEEN) and leads the CEEN blog. (<https://blogs.exeter.ac.uk/ceen/>)

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1

Creating Spaces for Ruptions and Provocations

Kerry Chappell

with contributions by Chris Turner, and Heather Wren

Introduction

At the heart of this book is a desire to spotlight creative approaches within education which not only ethically facilitate generative practices, but which can be catalysed to instigate ruptions and change within educational systems. This chapter opens the door on this process by introducing the book as a thematically organised collection of direct educational responses to the daunting and unpredictable challenges that we all, human and other-than-human,¹ now face. Our intention in opening the book by detailing the challenges is not intended to weigh you down with the enormity and impossibility of it all, but rather the opposite—to acknowledge that if we look carefully and responsively, we can identify problems that have emerged in the early twenty-first century within

K. Chappell (✉)

School of Education, University of Exeter, Exeter, UK

e-mail: k.a.chappell@exeter.ac.uk

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which educational systems are contextualised, and to which we, as an authoring team, believe we should aim to respond as educators. By so doing our aim as editors is to set the scene for the journeys on which our different authors will take you, our readers/engagers, to respond to these problems.

As editors we are also clear that we want to offer direct educational responses. Much of the work in this book stems from complex philosophical thinking which can have a reputation for being disconnected from practice and not applicable in action. We aim to balance the richness of the philosophical heritage of our ideas with a translation of that thinking into practice-based action and provocations for change. This book follows in the footsteps of our team's previous writing partnerships (e.g. Chappell, Rolfe, et al., 2011), where the authors argued against the limited official future for education offered by neoliberal policymakers. Rather than curtail education to probable futures, similar to the status quo and which fail to deal with the challenges we are facing, this book is arguing for a diversity of radical alternatives, indeed in line with Fielding and Moss (2010), we propose an ethos of overthrowing the current dictatorship of no alternatives.

If the book is then aiming to share and articulate alternative, emergent new approaches to education, what are the challenges that these alternatives are working to address? Chappell (2021) has previously articulated anthropocentric issues as broadly as political violence (Khalili, 2013), democratic subversion (Piccone, 2018), the slouching beast of neoliberalism (Ball, 2016), the climate emergency (Leichenko & O'Brien, 2020) and global disease caused by overpopulation (Grange et al., 2021). This array of emergencies can be seen to sit within Lopez-Claros et al.'s (2020) detailing of twenty-first-century challenges including those derived within environmental, social, economic and security issues, which they argue are compounded by the inadequacy of the governance mechanisms that exist to deal with them. Segueing with this, the University of Lincoln's twenty-first Century Lab has identified ten grand challenges for this century: increasing inequality of wealth and income; migration and mobility; living in a global society; conflict and war; void of vision and foresight; identities and changing norms in society; mitigating environmental and ecological damage; changing economic powers; technological disruption

and civic disaffection. The Lincoln team's intent is to understand the new roles and relationships that higher education might need to enter into in this context. For our purposes in this book, challenge frameworks like this are helpful to provide context for our discussions. We are not, of course, suggesting that an early years classroom in Italy or a Kenyan secondary school or a US community arts education initiative can solve these challenges; our purpose here is to ask you to turn your educational efforts more firmly to face these identifiable challenges and to address your teaching, facilitating, curriculum and classroom design, policy influencing and studio research towards thinking and acting creatively, using the provocations in this book to generate more relevantly responsive emergent educational futures.

Our chapters arise from higher education to community education, in varied disciplines and transdisciplinary settings and with a range of participant ages. The common connector is that, through creative approaches, all chapters offer emergent alternatives to the Euro-Western traditional, linear, logic-based, verbally centric educational models, which have been exported internationally and are assumed to be universal. There is an intentionally diverse set of underpinnings which reflect a shared understanding that many worlds exist, that educational futures can emerge in many different ways, and that the authors share a desire to creatively counter injustice. And that this can happen through de-centring the human, and/or dominant manifestations of the human, to make better and more space for multiple ways of being and becoming in education. The chapters are organised around the core themes of *Creating spaces for ruptions*, *Dialoguing* and *Resistings*, which offer a means to journey through bigger picture narratives, into relationality and activism whilst honouring the diversity of authors' ideas.

We lay the ground in this chapter for authors to create meaningful and productive ruptions—disturbances or commotions—in practice and research thinking. We purposefully use the notion of ruptions rather than *disruptions*. The 1913 Webster's dictionary describes the term rruption as 'obsolete' but meaning 'a breaking or bursting open; breach; rupture'. This is not the same as the Oxford Dictionary's definition of *disruptions* which is 'disturbance or problems that interrupt an event, activity, or process'. We use the term ruptions because once a breaking or bursting

has occurred there is an implication that there is more change to follow, rather than disruptions' feeling of interruption and therefore halting of a process.

We are interested in exploring the fissures, cracks, wedges and lever-ages that lead to an inevitable flow of energy or activity which provoke change. We aim to share how we have experienced this to happen through the thinking and practices we describe, and how in turn we aim to provoke you to think and enact change in your own educational contexts. Again, this approach picks up on arguments in Chappell, Rolfe, et al. (2011) where the culminating treatise was for bottom up, cumulative, quiet revolutions. Whilst we are not averse to influencing policymakers, we are aware of the grip of right-wing agendas in many Western countries and beyond currently, which means that, at government levels, creativity and the notion of thinking carefully about research in education are marginalised. Whilst not halting in our efforts for top-down influence, this push for ruptions which can contribute to cumulative change from within, is perhaps more potent.

Ethical, Care-Ful Spaces for Educational Futures

In this opening chapter, we offer insight into how, broadly speaking, ethical, care-ful educational futures might responsively emerge through the generative potential of creativity and its associated ruptions. As a collective, our group has a heritage in the conceptual relationship between creativity and wisdom. This stretches back to the late Anna Craft's concern that creativity was being spot lit in education without reference to any values frameworks, and if one existed it was one of Western individualism and global capitalism (2006, 2015). In much of her writing between 2006 and 2014, she asked questions about how we might nurture creativity with wisdom and led on a seminal collection of writing by eminent thinkers which grappled with the interconnection between creativity, wisdom and trusteeship (Craft et al., 2008). Central to her intellectual investigations in this area were questions about empathy, pedagogic ethics and responsibility and she left an indication (2015) that a vital part of educational futures work would be "the recognition and exploration of

multiple approaches to wisdom itself” (Craft, 2015, p. 137). She began this work with Chappell in their co-developed concept of wise humanising creativity which took a humanist stance on how ethics and wisdom might be practised alongside creativity in education (Chappell, Craft, et al., 2011; Craft, 2013). It is from this grounding that our thinking has extended to engage with new theoretical ideas regarding ethics and creativity and to develop the fresh approaches to educational futures presented in this book.

Consequently, and recognising the continued need for wisdom in our thinking and practice around creativity and educational futures, the ethical dimension of this book is of the utmost importance as we align ourselves to the importance of emerging, care-ful and creative futures. We seek fundamental and creative changes to the ways in which we view the educational landscape. This is entangled with our growing ethical relationship with, and developing understanding of, posthumanism and new materialism. In relation to this, Mulcahy (2022, p. 1003) proposes that affirmative ethics presents ‘as an emergent property of relational assemblages’ of human and other-than-human elements that bring ethical subjectivity into effect. This effect that Mulcahy talks of is intimately connected with otherness, diversity and that which we are capable of becoming (Braidotti, 2019) through creating empowered relationships in which ‘the very essence of the self is contributed by others’ (Postma, 2016, p. 319 in Mulcahy, 2022)—others in this context being human, other-than-human and material.

We regard creative posthumanism as an ethical practice which recognises inclusive values—the dynamic interplay between individuation and integration. This argues for an ethics which is responsive to local communities and their more specific needs, history and practice. The dynamic potential of possible futures then has the space to emerge (the notion of liminality), not be colonised ‘by ideas from the present (Facer, 2016), but instead left radically open’ (Chave, 2021, p. 50). This is an endeavour in which ethics ‘is a practice of activist, adaptive and creative interaction which avoids claims to overarching moral structures’ (MacCormack, 2017, p. 1). It can be understood and practised through notions of pluriversality which seek to cultivate a practical ethics of co-existence and collaboration (Dunford, 2017; Hutchings, 2019). Hence when we think of

ethics of care we understand it as moving away from neoliberal attitudes which tend to concentrate on knowledge and expertise rather than morality (Gibbs & Coffey, 2004), into a space which is entangled with a myriad of relationalities between human/other-than-human within differing temporalities and spatialities (Haraway, 2015). Within this entangled space, ethics of care stimulate attentiveness, responsibility, competence, responsiveness and trust, forming a kinship between bodies, of which an understanding of difference lies at the heart. This kinship is supported through an obligation of care which cannot always be expressed through language because it is entangled with both human and other than human bodies.

To this end, obligations of care are understood as an embodied affective kind of empathy where humans and other-than-humans 'are intertwined through their ability to affect and be affected by circumstances, environments, and feelings' (Bennett, 2010, in Wilde & Evans, 2019). Consequently, when being care-ful we are opening a space in which curiosity leads to us seeking to affectively know more about each other emotionally, politically, culturally and socially which then leads to some kind of action (Haraway, 2008, p. 36). Herewith, we see a care-ful approach as a form of relational activism.

In the spirit of this kind of activism, across the book, authors consider the why and how of educational futures from varied perspectives, with clear support for Fielding and Moss' (2010) argument for alternative futures rather than remaining with the status quo as the only option. There is also shared resonance with Amsler and Facer's (2017) argument for the role of critical anticipation where they assume those working with educational futures engage in active and critical reflections with futures that are unknowable.

Going into greater detail on this point, we find collective grounding in Osberg's (2017) arguments against extrapolatory anticipation, that is the temptation to see education as a tool or instrument in perpetuating a particular kind of envisioned education considered as the 'best' for human flourishing. The problem Osberg points out is that first the judgement values of contemporary Western society have been used to shape these visions of education, without this being overtly acknowledged. And second, we have been persuaded that this version of education is

unavoidable and natural. Osberg suggests that instead we should step outside of this and think about educational futures through symbiotic anticipation. By this she means that we can enter into symbiotic relationships with others without knowing what is yet needed or indeed what is yet possible, and even what cannot yet be imagined. These experimental educational developments are certainly grounded in the pasts of those at play, but they do not aim to predict or extrapolate an educational future from these, but to be pro-actively open-ended and see what emerges. Osberg sees this mode of action as having the potential to experiment with all kinds of others in a posthuman or beyond the human sense and argues that we should respect symbiotic anticipation as a way of thinking about education which is radically different from current Western, neo-liberally driven definitions. Approaching educational futures in this emergent way is not always easy as the spaces created by those working to 'symbiotically anticipate' can be brutishly colonised by those seeking to maintain the status quo. Rather than seeing these spaces as 'empty', we see them as full of potential.

Exploring the potential that arises from symbiotic anticipation requires creativity, hence our use of the term 'creative' ruptions in our title. Whilst the ideas about creativity collected here draw inspiration from the works of Anna Craft, in particular her last published book *Creativity and Educational Futures* (Craft, 2011), as well as collaborative works such as *Close Encounters: Dance Partners for Creativity* (Chappell, Rolfe, et al., 2011), the ideas have now developed from these humanist, socio-constructivist groundings into new manifestations of thinking which draw us into encounters with powerfully change-provoking concepts such as posthumanism, embodied dialogue, decolonisation, materiality and anticipation. As we approach the end of the first quarter of the twenty-first century, we are surrounded by creative thinking/doing/theorising which has moved well beyond a humanly focused, individualised, psychologically measurable concept. The authors in this book are privileged to be able to draw on ideas which extend creative relationality into conversation with others of all kinds, and which acknowledge the challenges of the Anthropocene, as detailed above, which we are all now facing. We fundamentally understand creativity as an ethical process driven by dialogic relationships between others of all kinds which leads to

newness. For example, Harris and Holman Jones's (2022) manifesto for posthuman creativity studies offers propositions that problematise a humanly exceptional approach to the field; Chappell (2021) explores the affordances, challenges and imperfections of working with posthumanising creativity to expand pedagogical and methodological educational possibilities and disrupt thinking and practice; Burnard (2024, in production) articulates a posthuman theory of multiple creativities which opens spaces for future possibilities through its foundations in pluralism; and Henriksen et al. (2021) argue for the Indigenous foundations of posthumanism to be acknowledged implying a rethink of the politics of creativity.

Supported by these cutting-edge approaches to creativity, we are in agreement with Facer's (2019, p. 12) argument in which *surplus potential* represents emergent properties that were unexpected. It is the excess, or additional, which is produced over and above that which might be expected from the input:

it is possible to begin to create educational spaces in which the surplus potential of the past, present and future are visible, in which new ideas are generated, in which the experience of living in complex material and planetary systems that decentre the human can be acknowledged.

Historically, education has been dominated by the constraints of space, place and time arguably representing a position of power that controls, rather than liberates, the lived experiences of students (Lefebvre, 1991). What might become of educational thinking if it were to be freed from imposed constraints and viewed as engaging with space and time in a more dynamic, emergent and creative way?

For example, Chappell and Craft (2011), in their discussion of 'creative learning conversations', stress the importance of lived spaces which exude '... experiential complexity, fullness and perhaps unknowable mystery...' (p. 14). Tschumi's insightful critique of architectural space and use when he says: 'the inevitable disjunction of the two terms means that architecture is constantly unstable, constantly on the verge of change' (1996, p. 20) resonates well with the idea of a dynamic dialogic space 'locating not as a fixed or hierarchical space but as a space of

counter-possibilities, where conceptual, emotional/affective, identity and other exploration can occur' (Chappell & Craft, 2011, p. 15).

The way we think about space matters. It acts as a prism to our understandings of the world, our attitudes and our politics. It affects the way we understand globalisation and localisation. Consequently, an acute awareness of spatiality is central to debates on creativity and futures education. Space is not a neutral backdrop against which humans exist. It is a complex set of interactions which shape and determine how and what people become through seeing space as dynamic as well as a place of production (Massumi, 2011).

To experience an event in space and time is to experience the passing, the becoming and the processing of the *just-was* and the *is-about-to-be*. Spatiality works on a variety of levels from the personal to the global but what is apparent is that space is not something static and ethically neutral, a static entity, but is enmeshed with time and is continuously changing (Massey, 2005). It, therefore, has great possibilities and creative potential. Spatial sharing is dialogic and sets up opportunities for the new to arise unpredictably from what Ermine (2007, p. 1) would describe as 'ethical space'—a theoretical space which exists between 'thought worlds' and which respects pluriversality. This understanding of spatiality is highlighted and exemplified in many chapters of this book.

Ethics is also a dominant theme in the book and is understood as the capacity to be cognisant of what harms or enhances the well-being of sentient beings and the environments in which they exist. Within spatial co-existence there is the possibility of conflict, of tension and of the collision of ideas. This can be avoided through reduction of control or domination by either one party or the other but still this interconnected, political meshwork of multiple creativities provides a potential for rupture and reveals the ways in which actions and events can bring about emergence, that which arises spontaneously and unexpectedly—a *surplus potential*. This dynamic inter-relationality within the mesh is critical in creating ruptions.

An Array of Ruptive Approaches

These questions about how ethical, care-ful educational futures might responsively emerge through the generative potential of creativity and its associated ruptions are situated by the book's different authors in an array of dominantly posthuman, new materialist, decolonial and feminist approaches. Our authors raise connected but different questions about emergence and change, creating the kind of educational spaces that Facer (2019) encourages.

In order to understand how and why we have come together to co-author this book, and to collect and intensify our thinking using these wide-ranging approaches, it is perhaps worth being aware that all authors are in some way connected to the Creativity and Emergent Educational-futures Network (CEEN) within the School of Education at the University of Exeter. This network has a heritage in the CREATE educational research centre (2007–2014, established by Professor Anna Craft), which developed into the Centre for Creativity, Sustainability and Educational Futures (2014–2018, co-led by Dr. Kerry Chappell and Dr. Fran Martin); with CEEN established in 2018 and co-led by Kerry and Fran until the latter became fully retired in 2020, after which point it has been led by Dr. Chappell. The network's rationale is to seek to bring together individuals with overlapping and intersecting philosophical orientations, ideologies and values that challenge the status quo on education. Despite our diversity, we all do work that argues for the centrality of difference and emergence in our practices of thinking, being, doing and becoming; the necessity of researching education beyond boundaries and in the spaces between boundaries. From this rationale, and through regular seminars, debates and co-designed research projects, our collective research practice has developed into an entangled and potent set of arguments and examples of disruptive and provocative approaches to creating spaces for new educational futures.

In writing this book we have endeavoured to keep our diversity a vibrant part of the thinking we offer—as Mendible (2017) argues we are now in an age of 'posts' which is redefining the Humanities and Social Sciences, amongst other disciplines, through this kind of diversification.

As detailed in the opening of this chapter, we see advantages in forefronting complexity when grappling with the anthropocentric crises that we face. Amidst this complexity, though, are the key approaches of the post-human, new materialist, decolonial and feminist. Whilst not aiming to represent all authors' perspectives on these terms, and knowing that each will deal with them respectively in detail in their own chapters, we offer insight here into our editorial team's broad understandings of them.

Posthumanism in education entails the fundamental idea that humans, particularly those who have overtly dominated, should be de-centred as the main driver of the educational narrative and action (Chappell, 2018); as a way of thinking and doing, it challenges what we believe to be the false binary between the human and other-than-human and opens the possibility of differently entangled relationships with all others. Humans should not be seen as superior and controlling of other living beings, objects, materials and environments but should be understood as intrinsically enmeshed with them (Braidotti, 2013).

Our thinking resonates with Bozalek and Zembylas (2016) who see posthumanism as embracing a critical view of liberal humanism, which assumes that society consists of equally placed autonomous agents with rational scientific control over others. This critique has consequences for how we understand ethics; Braidotti (2013) argues that we should shift from trying to extend human rights to other-than-humans, to an "ethics of transformation" which encourages ethics to emerge from the enmeshing and interaction of human and other-than-human. In education, this process entails enacting power and relationships differently.

Many of the authors in this book also take advantage of ideas from new materialism, woven alongside posthuman understandings. Amidst a plethora of possible articulations of new materialism, Sencindiver (2019, para 1) helpfully delineates the main pivot of its thinking as:

the primacy of matter as an underexplored question, in which a renewed substantial engagement with the dynamics of materialization and its entangled entailment with discursive practices is pursued, whether these pertain to corporeal life or material phenomena, including inorganic objects, technologies, and nonhuman organisms and processes.

Where this comes to life for many of the authors in this book is in Barad's (2003) notion of 'intra-action'. They argue that matter of all kinds, that of human and other-than-human 'intra-act'. This means that educationally we need to more actively consider and respond to the intertwined agencies of all different kinds of bodies. For Barad, new phenomena are produced through agential intra-actions which change the entangled, intra-acting elements; they are co-constituted by the process. This different understanding of agency is one of the main drivers of this book which positions creative change as central to new emergent educational futures.

In using posthuman and new materialist approaches, authors in this territory also ground themselves in the practice of ethico-onto-epistemologies. This is the notion that as researchers we cannot separate ourselves from our research matter (Barad, 2007). So, our assumptions about the nature of reality and how we come to know that reality are inseparable; intra-actions between humans and humans, and humans and other-than-humans are grounded in kinship and create a mutual, ethical accountability which is inescapable.

Another way that authors frame the emergence of educational futures in the book is through decolonising theories and practices (e.g. Andreotti, 2011; Mignolo, 2007). As Pirbhai-Illich et al. (2022) carefully articulate, these approaches recognise colonialism (the ideology of superiority that fuelled the Western attempt to politically control other cultures and countries), colonisation (violent domination of the colonising nation which forces the erasure of the colonised country's cultural practices) and coloniality (the logic of Western imperialism underpinning modernity through superiority and separation, claiming to be overwhelmingly 'good' and perpetuated through institutional power structures).

These approaches then work with the processes of decolonising, which, broadly speaking, endeavour to move beyond surface-level shifts of national independence towards practices which work to decolonise minds and bodies away from colonial ways of being, doing, knowing and valuing. Authors in the book working in this area understand decolonising through their praxis, reimagining open, new educational futures which aim to counter injustice and marginalisation. Their work is also in parts shaped by decolonial feminist ideas and practices which recognise how colonialism, heteropatriarchy, capitalism and racism interlock to produce

and sustain violence and domination, and therefore refuse these structures and logics and commit to new futures (Lugones, 2010; Vergès, 2021[2019]).

The positioning of these approaches within one publication is not without its tensions. Our decolonising authors clearly resist Western hegemonic epistemic structures, which, for some, include posthuman approaches. Taylor (2020) describes how posthuman and new materialist practices have been criticised by Black, antiracist and Indigenous scholars for their perpetuation of the “‘White episteme’ and Eurocentric academic practices” (p. 26). Taylor’s advice is for White scholars to engage with the discomfort engendered through this stance and to act and think with humility in response. For our multiracial editorial team this includes listening to and honouring the Indigenous ideas which in places have pre-empted the turn towards materiality and de-centring of the human. As Taylor (2020) warns, we need to hear, learn from and act upon these criticisms if our efforts are not to be compromised.

Core Themes

There are three core themes in the book within which authors put to work different elements of the above-detailed framework to consider what it is to be creatively ruptive. They emphasise those elements which are particularly relevant to their arguments and practice, for example, ethics, spatiality, emergence, whilst balancing discussion between the book’s key drivers. The core themes and author contributions follow next.

Creating Spaces for Ruptions

These chapters all offer a breadth of approach to educational futures, considering how new ways of theorising can create spaces for ruptions and change across education.

In Chap. 2, Chappell asks us to consider embodiment and materiality as central to how we might create spaces for new educational possibilities. Via Barad (2007) and her own combined experiences as a movement/

dance practitioner and academic focused on dance and creativity in education research, she demonstrates how embodiment and materiality are entangled dialogically within the notion of posthumanising creativity. She argues that, with multiple others, we can create, think and do differently. She shows how this can manifest in embodied, materially driven pedagogy, to disrupt practice and research. Positioning the mind–body binary as a specifically Western problem, she takes an experiential journey through touch and time, offering you examples from different educational settings including the rupturing of disciplinary storylines, the role of multi-epistemic literacy, and the affordances of slowing and playing with time. She concludes by discussing the power of cumulative ruptures which have the potential to create spaces for educational approaches that can match and respond to the rapidly changing global challenges that we face.

Next, in Chap. 3, Turner shares his concept of aesthoecology, demonstrating its relevance at a time of significant change and challenge because it illustrates the importance of ethically creative education in dealing with random and unexpected events (Turner & Hall, 2021). This involves the exploration of notions such as liminality, emergence, and affective anticipation, all of which are features of dynamic systems. These elements of theory are discussed to support the concept of aesthoecology as a framework of ideas, and a creative vocabulary, which critically questions the established ways of being, doing and becoming in current educational practice. Theorising and philosophising on these ideas provide the freedom to think differently, the space to be creative and the courage to provoke radical thinking and action. The theory of aesthoecology is exemplified by reference to the development of an art gallery at a UK community college in which the new and unexpected was a significant element of the richness of provision. Turner works his theory and example to argue that education is enriched by inviting and embracing the unexpected and by exploring the ways in which the new arises spontaneously from our actions.

Sarah Chave provides the final chapter, Chap. 4, in this section, focused on *be-wilder-ment*. Chave posits that throughout education there needs to be space for *bewildering questions* when no-one yet knows the answer, a letting-go of certainty, an acceptance of ambiguity, and encouragement

of emergence. She argues that this is especially important in this era of climate and ecological emergency where the emergence of new ways of thinking and being are urgently needed, especially when Westernised pedagogy has an increasing desire to sanitise knowledge. This might then manifest in a *be-wilder-ing* of education processes towards more demanding, rebellious, disruptive educational futures. Following Suzawa (2013), Chave calls for a cognitive revolution towards dialogical reasoning and artistic practice which can open up holistic modes of thought, and examines how encouraging *aporia*—literally lacking a *poros*: a path, a passage—can contribute to opening up educational spaces where such creative, holistic thinking is possible: spaces which embrace *doubt* and see within it questions which can make new understanding possible' Burbules (1997). Chave argues that such education foregrounds encounters, creative entwinings and care-ful, attentive listening which can re-centre more-than-human voices and forge new relationships.

Dialoguing

These chapters enter into more detailed dialogue between humans and other than humans including the environment, materials and system structures to disrupt and to articulate the emergence of new educational futures through relationship and the creation of spatial events.

In Chap. 5, Wren addresses issues of climate change and the Anthropocene through 'affective embodied empathy'. Empathy is seen as important in assessing complex relationships from an ethically driven, more-than-human perspective and in moving away from environmental education as addressed only from an anthropocentric viewpoint. Empathy is understood as an emergent consequence of affective intra-actions between all relational elements of the environment. Research material is drawn primarily from a field trip to Norway and the reader is invited to share in these experiences. Wren invites engagement in the 'glow-moments' (MacLure, 2013) which emerge and encourages the reader to feel affective empathy alongside her. The glow moments are subjected to diffractive analysis which allows an understanding of those spaces of co-creation which disrupt normalised ways of perceiving the environment.

Next, Clarke and Witt, in Chap. 6, stress the importance of sympoiesis (Haraway, 2016) as a notion of thinking with and making-with. This chapter focuses on place-based learning engaging the reader with creative transdisciplinary worldings and the notion of sympoiesis as a collective, making with, transformational experience. This stresses the centrality of care-ful and creative practices which nurture kinship and intra-active relationships. The ideas of sympoiesis are grounded in practical, everyday and lifelong ways in which educators can nurture kinship and in so doing creativity becomes a powerful and provocative agent of change establishing inclusive, non-colonising pedagogies within spaces of posthumanist profusion.

Proposing alternative educational futures through ruptive and creative means is the theme of Chap. 7, by Crickmay and Welsh, in adopting emergent, care-ful, affective and intra-active approaches to music making. They describe improvisatory musical practice with a group of people with young-onset dementia. Three specific theoretical approaches are adopted to understand this practice: open ended and affective dimensions of sense; the notion of response-ability and the ethics of responsiveness; and the emergence of creative energy through transitional states of liminality. The creation of these ethical and care-ful spaces affectively interweave the human, the sonic and the material. Through these dialogic encounters, and with the benefit of theoretical underpinnings, the result is a creative tapestry of music, words and images which arises from the inter-twined agency of all participants.

This section concludes with Chap. 8 by Ben-Horin facing the issues of contemporary society through reference to a research and development case study which promotes the importance of ethical educational futures and the generative potential of creativity. This approach is set in contrast to the current political requirement in higher education which puts emphasis on quality standards and societal impact. Discussion centres on the management issues arising from this dilemma in relation to Science, Technology, Engineering, Arts and Maths (STEAM) education as a transdisciplinary and creative innovation. Grounded in the practical experience of leadership roles in higher education, the chapter explores the ethical tensions implicit in introducing futures thinking to engage with challenging and unpredictable global environments.

Resistings

These chapters offer active resistances to existing structures, thinkings and practices by challenging the status quo through combined theory–practice examples.

In Chap. 9, Nancy Katingima Day begins this section by drawing from a theoretical framework known as ‘Utu’ to explore how the ‘aesthetics of life’ of music and music making can deepen understanding and practice of music education and widen perspectives and approaches used in negotiating emergent futures for education, the arts and creativity in Africa and the rest of the world. Positioned as exploring decolonisation, Nancy resists Western hegemonic epistemic structures (including posthuman approaches) to argue for a more geopolitically and culturally positioned framework. Here, music and music making are considered as spaces of disruption, interrogation and negotiation, and as a resistance to the sole use of mechanistic or technical music making.

Next, in Chap. 10, Ghemmour seeks to critically discuss and unpack what decolonising the mind may mean to achieve authentic praxis and shape educational futures through the lens of reflexivity and positionality—in terms of [our racialised] identities, embodiment, and power and privilege. He uses a process of reflexivity, self-examination and positionality to resist normative ways of thinking and being to expand current decolonial thinking, efforts and praxis happening within UK higher education. Ghemmour’s decolonising approach endeavours to encourage (re)imagined ways to keep educational and decolonial futures open to possible, ethical, creative and inclusive praxis. The ultimate goal is to invite readers to (re)consider the link between decolonial praxis and reflexivity, and achieve authentic emancipatory education grounded in creativity, ontological plurality, action and critical consciousness.

In Chap. 11, Campbell, Dyer and Nash follow by exploring care as a radical act of resistance and consider how educators conceive of, receive, enact and embody the various forms of care (Tronto, 2005) required to fuel creativity, and what the interdependencies are, if any, between care and creativity in establishing new approaches to learning in higher education. Questions arise from the process of dialogue during a Creative

Fellowship workshop into what potential creative methodologies there are to explore when considering de-conditioning the workshop, moving away from a site of social and capital violence toward the re-generative. They also ask what wider social implications could come about from embedding radical cultures of ritual and care in the workshop setting. The learning gained from this could usefully support others who seek to centre care, resist from within, or develop care-ful, ethical educational futures.

Finally, in Chap. 12, Natanel closes this section by exploring how embodied ecological practices might stretch the space/time of teaching and learning in higher education, in ways that (re-)orient students and teachers towards justice and solidarity. Their journey begins with a walk designed to provide a break from the weight of study, however, unexpected ruptures open them up to new modes of teaching and learning, connecting to each other and the land, and working toward material and epistemic decolonisation. By moving together outside, they connect settler colonialism in Palestine/Israel with the (present-day) coloniality of Britain—in ways that insist on their accountability and action which grounds them in a broader ethic of care and sense of shared struggle. Natanel argues that the connections made along this journey become the roots of a decolonial feminist ecology.

In the final Chap. 13, as editors we revisit the claims made in this chapter around the emergence of ethical, care-ful educational futures, the educational responses we might provide; and different authors' approaches. We demonstrate how these elements have all been addressed by dealing with the bigger questions around how we handle creative ruptions and what they in themselves 'do' through the notion of accumulation thresholds. We go on to demonstrate how the creative ruptions in this book respond to various wicked problems, and then end by offering ways of thinking-being-doing to push matters forward. This includes considering how we can expand our emotional repertoires from anxiety to also include hope and courage, positioning the contribution of this book in relation with colleagues working in decolonisation and possibilities studies.

Conclusion

We conclude this chapter simply by turning you towards the ruptions that the three sections make. We ask you to read on and engage with the writing, films, images, audios and other provocative media that the authors use, whilst remaining alert to our shared emphasis on a care-ful, ethical approach to making space for emergent educational futures. We ask you to remember the influence of others of all kinds amidst the diversity of what the different chapters offer, and, if this idea is familiar to you, to work with the chapters as an assemblage of thoughts and suggestions which provide varied ways in for intra-acting.

As we pointed out at the start of this chapter, the challenges that we currently face can be overwhelming and when combined with futures-anxiety can leave us feeling hopeless. In coming together under the umbrella of CEEN, we have recognised how the camaraderie of the network helps us to push back against this lack of hope, and access the power of accumulating, bottom-up change which we are sharing with you here.

Our book continues the work begun by thinkers like Anna Craft, providing us with fertile ground in the inter-twining of creativity, educational futures and wisdom. Together these bring with them an activist mindset for cumulative and at times radical change. We are all passionate that there is an urgent need for this sort of thinking, action and change in education. So, we ask you to find ways to take the authors' ideas into your own practices and research wherever possible, and, where you can, to bring your students into these processes. We offer the chapters as a praxis toolkit for everyone in education, not just the lecturers and teachers, as ultimately it is our students, participants and learners who need to be equipped to develop education to reset the course of a post-Anthropocentric future.

Note

1. Please note you will find a range of terms including other-than-human, more-than-human and non-human across the book and use is dependent on author preference.

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Part I

Creating Spaces for Ruptions



2

Flowing with Embodiment and Materiality: Touch and Time for New Educational Futures

Kerry Chappell

Introduction

Embodiment has increasingly become a lively and vital current in my pedagogy, research and writing around posthumanising creativity. As I will explain in the early parts of this chapter, I have overtly entangled embodiment, enmeshed with materiality (Barad, 2007) into the notion of dialogue to emphasise that, with multiple others, we create, think and do in many ways that are as influential as words within education (Chappell, 2018, 2021). Flowing through my writing, I have argued that a better understanding and practice of embodiment and materiality could be key to aiding our efforts to creatively respond to the rapid and unpredictable twenty-first century challenges that we are all facing. This is because embodiment and materiality inherently bring with them attention to ethics and care through their proximal focus on bodies and

K. Chappell (✉)

School of Education, University of Exeter, Exeter, UK

e-mail: k.a.chappell@exeter.ac.uk

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matter. Enmeshed together embodiment and materiality also complement each other in their propensity for ‘bottom-up’ or emergent being, knowing and becoming. In this chapter, couched in the wider drivers of the *Creative Ruptions* book, I aim to pick up on this flow of arguments from previous research and explore them here together, to more fully articulate my ideas and to draw the reader into ruptive and provocative approaches and activities which create spaces for new emergent educational futures.

Embodiment has been a focus of Western academic study for decades. Hoppner (2018) helpfully delineates work in socio-constructivism which considers embodiment through sociological approaches to the body in relation to social stereotypes and hierarchies. She also discusses phenomenological approaches which focus on mind and body through the study of space, time and lived experience, where rationality is not valued over emotions and affect. Hoppner also explains the emergence of postphenomenological embodiment which challenges the binary between human and other-than-human materiality, and employs Barad’s agential realism to interrogate the material entanglements, not only between mind and body, person and society, but also between humans and other-than-humans. My own work has journeyed through varied approaches to embodiment to seek understanding (e.g. Chappell, 2007, 2021) and has most recently taken a posthuman turn (to be explained below) which also incorporates Barad’s agential realism (Chappell, 2018).

However, many Western researchers working in these fields experience how the theorising and practice of embodiment and materiality are still often denied space and influence within education (Fullagar & Zhao, 2021). Peters (2004) argued that the distinction of soul and mind from the body is rooted as far back as Platonic philosophy’s elevation of the mind over the body, and traces it through Descartes’ divorcing of pure reason and the body into the classic Cartesian mindbody dualism. In 2004, he described it as ‘one of the most trenchant and resistant problems of education in postmodernity’ (p. 14). I would go so far as to say that although, since Peter’s chapter, those of us working in this arena have a stronger heritage, that I agree with his statement even now; we still struggle to gain purchase and application for these ideas within our education systems and curricula. In this chapter, I am therefore aiming to

contribute to the efforts of embodiment scholars and practitioners to spotlight the potential impact of these ideas, and to show how as part of practice and research around posthumanising creativity, they can make spaces for the emergence of new educational approaches which are fit to respond to the challenges of the Anthropocene.

Posthumanising Creativity for Disrupting and Creating Spaces

Before taking you, the reader, through a brief introduction to my past forays with embodiment and materiality and stepping into the flow to put these into conversation with educational futures, I would like to give you an insight into the wider context of my research into posthumanising creativity. For some time, I have argued that posthumanising creativity is a fruitful means by which creativity can be conceptualised within education, as well as being the vehicle through which to generate new emergent educational futures rather than falling back on visioning futures (Amsler & Facer, 2017).

Posthumanising creativity positions embodied material dialogues as the driver of the creative process (Chappell, 2018). My understanding of these dialogues is influenced by Bakhtin (1981), with dialogic relationships established as generative of new ways of knowing, being and becoming between all kinds of others. I also find useful Wegerif's (2010) extension of this thinking. He articulates the importance of dialogic space to conceptualise shared, relational spaces that emerge in dialogues: spaces where people are able to switch perspectives and co-construct each other (Wegerif, 2010), whilst viewing the world from a different perspective (Chappell et al., 2019). Chappell et al. (2012) describe this as the shared process of becoming which is interconnected with the generation of novel outcomes that are in some way valuable to those involved and those around them. In Chappell et al. (2019) we also argued that it is vital to take seriously Bakhtin's point that dialogue happens between humans and 'others', and that we must therefore attend to the participation of other-than-human 'voices' in dialogue. We, therefore, go on to

couple this with Barad's (2007) understanding of agency which is not conceived as a human capacity to act. Instead, it is conceived of as a 'relational performance enacted intra-actively within an entangled assemblage of material and embodied humans and other-than-humans' where ideas and phenomenon emerge through the intra-action. Here it is important to understand that matter and materiality are not seen as inert objects but as dynamic phenomena. Wegerif et al. (2017, p. 2) argue that 'dialogism assumes that identities are formed out of and within relationships, not the other way around'. This resonates with Barad's articulation of intra-action generating new subjectivities and phenomena rather than these pre-existing the intra-action. This all reinforces Braidotti's (2013) argument that we need to de-centre humans in our endeavours to generate new approaches to existence, resulting in a view of creativity as dispersed amongst humans and other-than-humans with dialogue at the heart of creating new ideas and becomings. When using the term 'we' in these discussions, I mean those of us in the West who have been overtly influenced by human rationality; I do not include the many indigenous scholars who have perhaps more wisely developed human-environment-other relationships and, as I discuss later, who I think we should look to more to understand how to rebalance human influence.

Thus conceived, posthumanising creativity can provide a way of defining creativity in education but it can also offer spaces in which to generate new emergent educational futures. Barad (2007) encourages us not to see space as a neutral, objective backdrop against which events happen and reminds us of Lefebvre's (1991) insistence that space and society are co-constituted. If we see posthumanising creativity, generated by humans and other than humans, as creating living dialogic spaces (Chappell & Craft, 2011) in which we can co-constitute activities, phenomena and ideas, we can follow Barad's notion that not only space, but time and bodies materialise through intra-action. None of these notions are containers, or linear, or bounded; they are fluidly entangled and ripe with emergent possibilities. Here the notion of emergence is used to indicate that we do not aim to extrapolate or predict what futures might be, rather to let futures emerge through and from intra-actions as pro-actively open-ended (Boden et al., 2021). This may not always fit with a current policymaker and practitioner approach that dictates fixity and certainty, but

my explorations convince me that this is the best way to be responsive to the challenges we face.

It is my hope that, in line with the creative ruptions driver for this book, and as argued as necessary in Chap. 1, what emerges will ultimately burst open the old containers of educational systems, break the lines, go beyond existing boundaries of educational research and practice. This is likely to happen cumulatively as embodied and material endeavours disturb the status quo. These small ruptures can ultimately be accumulated, together with the ruptures from other authors in this book and like-minded colleagues to generate cracks in systems and make change happen.

The Flow of Embodiment and Materiality

Working with the above ideas since 2018, I have found both Braidotti (2013, 2018) and Barad (2007) helpful in exploring embodiment and materiality. Braidotti (2018) articulates embodiment as the mindbody continuum: ‘the embrainment of the body and embodiment of the mind’ (p. 1); the manifestation of each through the other. Connected to this is Barad’s (2007) fundamental argument that material and discourse co-constitute each other. As I describe above, entities are not bounded and separated. Through their very materiality they are entangled with each other as they intra-act, constantly making emerging subjectivities and phenomena which are shaped by the form, time and space relationships around and within them. Taken together these ideas intriguingly centre the notion of materiality, whilst de-centring the human’s dominant embodiment.

Applying this to empirical research with colleagues has led to various developments. In Chappell et al. (2019), we were able to flow into making a strong connection between matter and meaning within our exploration of science|arts relational processes within school-based pedagogy. We came to understand how to work with assemblages of students-teachers-objects-ideas mindbodies rather than just minds. We were also able to acknowledge the role of emotions, feelings, touch and expression as undertones of interdisciplinary experiences.

Moving into Chappell et al. (2021), we felt more confident to overtly offer a departure point of ‘moving beyond the word’ in Higher Education (HE) curriculum design and pedagogy. We did this to recognise ‘the messy contingency of lived experience, intra-action with and accountability to the other-than-human, and the significance of affect/materiality in both our data and our pedagogical process’ (p. 18). We also earmarked the use of film as a future means to make visible, audible and tangible the inseparability of being from knowing, grounded in embodiment and materiality, and previously underscored by indigenous scholars (e.g. Todd, 2016; Vergès, 2019).

In Chappell et al. (2021), I was able to bring together my thinking on methodological flows to focus on how embodiment and materiality have disrupted pedagogies within HE transdisciplinary intensive courses, growing into a living understanding of Manning’s (2012) bodyworlding in action. I again highlight the possibilities of film as a publishing format that might scale-ably take the reader-engager into new diffractions¹ of ideas that are not reliant on words. In Chappell et al. (2023), we were able to bring this mooted new flow to fruition, working with a professional film artist to “forefront moving human bodies, materialities and spatialities edited, cut together and captured in intra-action with those of other-than-humans” and as Fullagar (2021) argues, create possibilities for knowing otherwise. Currently, in Chappell and Hetherington (2023), we have moved into exploring how irresistible young children find natural, material artefacts, and that through their embodied experiences in relationship with these, we might understand children as already-able (Haynes, 2021) and recognise better than adults, the connections, or kinships with things and their mutually affecting relationships (Bennett, 2010).

These are the moving off points for this chapter; stepping into the flow of these ideas to deepen understandings and to see what comes next.

Stepping into the Flow

From here, this chapter steps into the flow of this current to extend thinking and practice around embodiment and materiality within a posthumanising creativity frame, and to consider their significance for emergent educational futures. While my intention here is to spotlight the potential of embodiment and materiality, I ask you to appreciate them as thoroughly entangled with the processes of dialogue, becoming and human decentring that make up the posthumanising creative processes.

I also want to set this in the context of an enlightening realisation that I was helped into by Fullagar and Zhao (2021). They remind us that Indigenous scholars are very clear ‘that the mindbody binary is a Western problem’ (p. 12). How right they are. In the past when disseminating in Western journals, I have often struggled and felt guilty for attempting to include my embodied and material expertise. Although, this has always been somewhat easier when researching dance education because of its inherent forefronting of embodiment and practice. I realise that taking the posthuman turn around 2018 gave me permission to more fully engage with this part of my expertise in scholarly endeavours, for example leading to the inclusion of the movement film in Chappell et al. (2023).

Fullagar and Zhao (2021), alongside influential Indigenous scholars such as Ritenbury et al. (2014), also opened the door for me to confidently consider and give consequence to the heritage of my embodied expertise in ki-awareness from the martial art of Aikido. I practised this martial art intensively between 2001 and 2008 and became ni-dan (second-level blackbelt). Despite discontinuing intensive study when I became pregnant in 2008, the embodiment of ki within, through and in relationship with others continues as part of my ongoing becoming; although tellingly less so within my academic writing. Ohnishi and Ohnishi (2008, p. 175) discuss how ‘when an Eastern philosopher defines Ki, it is a function of life, which permeates through the life of an individual and the life of the universe’. My Aikido ki-awareness emphasised working with this life energy and I have realised that there are enormous parallels between Ki understood in this way and the calls to take the post-human and new materialist turn. Fullagar and Zhao (2021) also point

out that the Chinese notion of *body* refers not to the physical bodily entity but to a wholistic mind-body-heart; and alerts us to the fact that the Chinese term for body—shenti—身体—traditionally means body thinks-experiences. The call to de-centre humans and to attend to embodied and material intra-actions with other-than-humans is a different means to get to the same place, to protect and where possible enhance the life of the universe through Eastern philosophy, and to do this via understanding the body-mind-experience as inseparable.

For me, in combination, these approaches offer a powerful means to more strongly value embodiment and materiality and to encourage others to do the same, ultimately to cumulatively rupture Western systems of rationality and manifest alternatives. As a precursor to reading the next parts of this chapter I would ask you, what are your embodied and material life practices that you have been unable to find a place for in Western pedagogy and research? These might be practices rooted in your own Indigenous heritage, or those from other cultures with which you find allyship or kinship. How might what you know through them enliven your work with embodiment and materiality? How can you accumulate this with others doing the same?

Holding these questions in mindbody, we now step into the flow around Touch.

Touch

Barad (2012, p. 206), a quantum physicist, begins their interrogations of touch by referring to the ‘sensuality of the flesh, an exchange of warmth, a feeling of pressure, of presence, a proximity of otherness that brings the other nearly as close as oneself’. Perhaps surprisingly, they go on to explain that touch is the primary concern of physicists:

How do particles sense one another? Through direct contact, an ether, action-at-a-distance forces, fields, the exchange of virtual particles? What does the exchange of energy entail? How is a change in motion effected? What is pressure? What is temperature? How does the eye see? How do lenses work?

And they describe this approach as a perturbation of the usual storyline. They continue by asking quantum questions at the level of minutiae. For example, ‘whom and what do we touch when we touch electrons?’ (ibid) and ‘When electrons meet each other halfway when they intra-act with one another, when they touch one another, whom or what do they touch?’ (ibid). I am not a quantum physicist and cannot begin to answer these questions but here I see a colleague from a different discipline asking questions from different angles, at different levels and scales about touch, similar to the notions that I am interested in exploring in education. Focusing on touch from the fleshy sensuous pressures of hands touching to the minutiae of electrons intra-acting, Barad is creating ruptures in physics, asking their peers to consider that touching and sensing is what matter does, indeed what matter is. They do this by arguing that materiality is always already touching and being touched by multiple others, which constitutes us all as mutually dependent.

If we look at how this kind of thinking has been applied to education, we see constant reminders not to see touch humanistically with the human as sense maker of the touching. Sundberg (2013) reinforces this point when she addresses the challenge of accounting for other-than-humans as actors when dealing with anthropocentric environmental issues. However, Sundberg (2013) calls out a reliance purely on posthuman thinking. She demonstrates how in her own work as a citizen and resident of white supremacist settler societies (Canada and the United States), she has not given enough credit to other epistemic knowledge systems. She shows how she is now aiming for what Sami scholar Kuokkanen (2007) calls multi-epistemic literacy, that is, aiming for dialogues between a diversity of epistemic perspectives to enact a pluriversal understanding of the world. I find this encouraging; it offers a precedent to bring my experience and understanding of *ki* into my academic work and to seek out and learn from indigenous knowledge systems which posthuman and new materialist practices can complement.

As a means to further explore touch in all its various forms, walking in, with and through are fruitful starting points. Sundberg (2013) talks powerfully about what she has learned of walking and walking with, through the Zapitista’s knowledge systems which allow us to ‘make our world in the process of moving through and knowing it’ (Turnbull, 2007, p. 142).

She describes the Zapatistas as putting forward an influential body of knowledge grounded in Chiapas ontologies and experiences in Mexican Mayan communities, rooted in the idea that:

Walking...is embodied in the principle of 'preguntando caminamos' or 'asking we walk,' which suggests that the movement is enacted through a dialogic politics of walking and talking, doing and reflecting. In other words, the path to social change must be walked and talked.

This Zapatista way of becoming then offers a connection-making process with others, both human and other-than-human which is literally grounded and potentially powerful. Where might this take us if we complement it with the understanding of touch that Barad offers on the micro-level of intra-active questions between electrons? Where might we walk and move to if we continue to try to be multi-epistemically literate? We might also explore practices such as Myers' (2016) experiments with walking and photography to investigate thinking-with plant sentience in Toronto's High Park. Springgay and Truman (2017) highlight in all of these practices the importance of attending differently. To try to tune into the land, the flora and fauna is not the same as documenting it. This is perhaps similar to the Zapatista's notion of walking with, learning to respect the multiplicity of life worlds (Sundberg, 2013).

In my Aikido practice, I spent hours simply breathing, experiencing ki through my *tanden* (perhaps more familiar to some movement practitioners as their 'centre'), to find a centredness in myself but also with the wider world. For example, with my senseis Paul Smith (Tetsushinkan Dojo, London) and Minoru Inaba from our home dojo (Shiseikan Dojo, Japan) we spent time walking outside in the Welsh hills, engaging through our centres, breathing into the flow of ki between and amongst us. Still now, I return to this breath work, this *tanden* awareness at times when I need to focus, to connect and clarify, sometimes in a yoga class, when rehearsing in the dance studio, when engaged in challenging debates with colleagues, when walking in the wind and rain on Dartmoor where I live. I have found myself using breathing, walking and touching exercises not only in my arts teaching where they reside anyway, but also increasingly in traditional Western knowledge delivery-based lecture theatre teaching.

I hope that in these encounters, the eighty plus students that I am requested to engage simultaneously, and who are expecting a seated delivery-based lecture, are challenged to understand that we can experience knowledge differently. I ask them to breathe together, to touch palms with the person next to them and with the materials of the room to create a human-lecture theatre relational entity and ask them how this helps them to understand relationality. I ask them to explore Springay and Truman's Walking Lab (2018) approaches. For example, they offer a walking practice called 'Walk: touch' which begins with the instructions (p. 138):

Go on a walk. Feel your feet on the earth. Touch the breeze. Attend to impressions. Caress the thoughts that weigh on you as you amble. Feel the haptic; the corpo-real. Walk in a graveyard if you can find one.

So, my regular teaching now involves experimental combinations of Barad's work, Aikido ki and walking practices; working towards my students and me becoming more multi-epistemically literate.

This is but the tip of the iceberg in terms of what is possible if we engage touch as a means to bring alive embodiment and materiality as approaches to engage beyond the human and generate emergent educational futures. Clearly if accumulated together, touch practices in education can contribute to developing new approaches to challenges such as climate change and social justice. My much-valued colleague Katie Natanel writes beautifully in this book (Chap. 12 with Hamza Albakri, Asha Ali and Arthur Dart) about how embodied ecological practices might stretch the space/time of teaching and learning in Higher Education, working for accountability and action through a decolonial feminist ecology. Combining forces together we can rupture the usual story lines, developing multi-epistemic literacy, attuning researchers and students differently to ways of knowing and becoming, and triggering new practices in those who are open to reading and engaging with chapters like ours.

Time

Time is the next turn in the flow that is worthy of consideration to better understand embodiment and materiality. Katie Natanel, Heather Wren and I (Chappell, et al., 2021) previously worked with the notion of slowing down to pay attention to care in HE. There the Anthropocentric challenge on which we were focused was political and gender-based violence. It became apparent that a thoroughly embodied and material engagement was required of us when interacting with student works as varied as grotesque sculptures, stories of Palestinian villages which had been flattened and buried, deaths and abuses portrayed within visual art works, and sexual abuse evoked in a student's pole dance performance. These were not the kinds of assignments that could be speed read and a neoliberally driven marking grid filled in. Engagement here needed to be slow, and care-ful to ally ourselves with the painful causes within the assignments. Indeed, they stay with us and continue to affect us now.

Since then, I have worked to stay slow where possible in the fast-paced academic world in which we function, trying to allow different ways of doing education to emerge. Morse (2021) points us towards Stengers (2005) arguments for slow science, which push back against a neoliberal knowledge economy within which there is no time for hesitation. Stengers suggests that a slow scientist might find time to consider other knowledge systems such as Gaia and work with these to civilise modern science practices, and in so doing let go of the idea of human dominance. In line with this I would argue for a slowing down of education per se, and a reiteration of Sundberg's (2013) argument for multi-epistemic literacy to explore how we can better play with time and do education differently. As Facer (2023) argues we need to cultivate our temporal imaginations, in order to foreground their interpersonal, empathetic and critical functions, and to attune ourselves to the myriad timescapes present in any situation.

I have been able to achieve this to some extent in three areas of my practice recently. Two opportunities arose during my University of Exeter study leave where I was released from teaching for six months to focus on research. I was able to spend time on an extended writing project with my

colleague Lindsay Hetherington (Chappell & Hetherington, 2023), focused on research into the creative pedagogies which support cutting-edge digital STEAM practice in school education for Oceans Literacy. We experienced what felt like the luxury of working in education research in a way that honoured Barad's idea of spacetime mattering. This meant that we did not, and could not, proceed in a linear march from start to finish in our thinking or writing. Instead, Lindsay especially explores time as a crucial dimension of the 'messy mixture': the natural, cultural, technological assemblage with/in which school pupils are learning in a non-linear spatio-temporal space. Whilst I cannot offer full details here, I point you towards our explorations of how time connects to living dialogic space in this context including understanding of how varied experiences of time within augmented and virtual reality create a balance between transience and stability in learning. This resonates with Hackett and Somerville's (2017) arguments that schooling should not be a linear sequence. It should be positively disrupted and childhood learning enhanced through creative practices that play with time, in a way that children are likely to recognise from their everyday lives.

Second, during my study leave, I was able to work with a film artist, Leonie Hampton, to integrate a professional movement-based film into a peer-reviewed academic article (Chappell et al., 2023). The article focuses on explorations of creativity, transdisciplinarity, materiality and spatiality in HE pedagogy, particularly SciCulture intensive courses. We introduced the Kinasphere film (QR Code 1), which you can watch here <https://vimeo.com/788222550> or scan QR code:



QR Code 1 Kinasphere film QR code



Fig. 2.1 Still from *Kinasphere*

to forefront moving human bodies and materialities and to take the opportunity to play with time in provocations that go beyond words (Fig. 2.1).

Christiansen (2019) analyses the modulation of temporal experience in film and how films can make posthuman arguments about how human beings experience time. This can occur through how audio-visual relationships materialise, in our case sound is juxtaposed against visuals to jar the viewer/engager's understanding of time. We also experimented with changing the other-than-human site specifically to take us back and forth in time and to leave trails of expectation as to what might have continued to happen in the times and places we leave behind. Overall, the aim in the film is that time is experienced slowly at first and with increasing speed towards the middle, ending with a sense of journeying time. In recognition that this is a new learning area for many of us, we offer those who read/engage with the article a series of provocations to help to access

the filmic dimensions that we are playing with (Chappell et al., 2023). You may want to explore these yourselves.

The third opportunity has arisen during my teaching at the Danish National School of Performing Arts in Copenhagen where I have been able to share these ideas in a slower two-year full-time, small cohort MFA in Dance and Participation programme. For 12 years, I have taught the students twice in their programme cycle and have been seeding ideas about slower, postqualitative approaches into their practice and research since around 2018. These students are usually mid-career dance artists with a plethora of embodied experience, which makes for very fertile ground to the extent that they have also shown me how to slow down and understand how to ‘play’ with time. This is beautifully exemplified in the work of Sonia Ntova, a 2020 graduating student. Sonia focused on the intersections between unconventional choreographic tools and pedagogy with the aim of shifting learning from mind to body-centred. She achieved this through exploring the multiplicity of the relational body within the learning process in different environments. Influenced by a range of feminist, and posthuman ideas, Sonia produced *The Book of the Nomadic School of Moving Thought* as an activator (Ntova, 2020: <https://blogs.exeter.ac.uk/ceen/> or scan QR code) (QR Code 2).



QR Code 2 Ntova ceen blog

Within this Sonia considers time in many ways—below is an example exercise from the book (Fig. 2.2):

I would thoroughly recommend trying out Sonia’s ideas to begin or to extend your own playing with time. Sonia’s experiments and the other

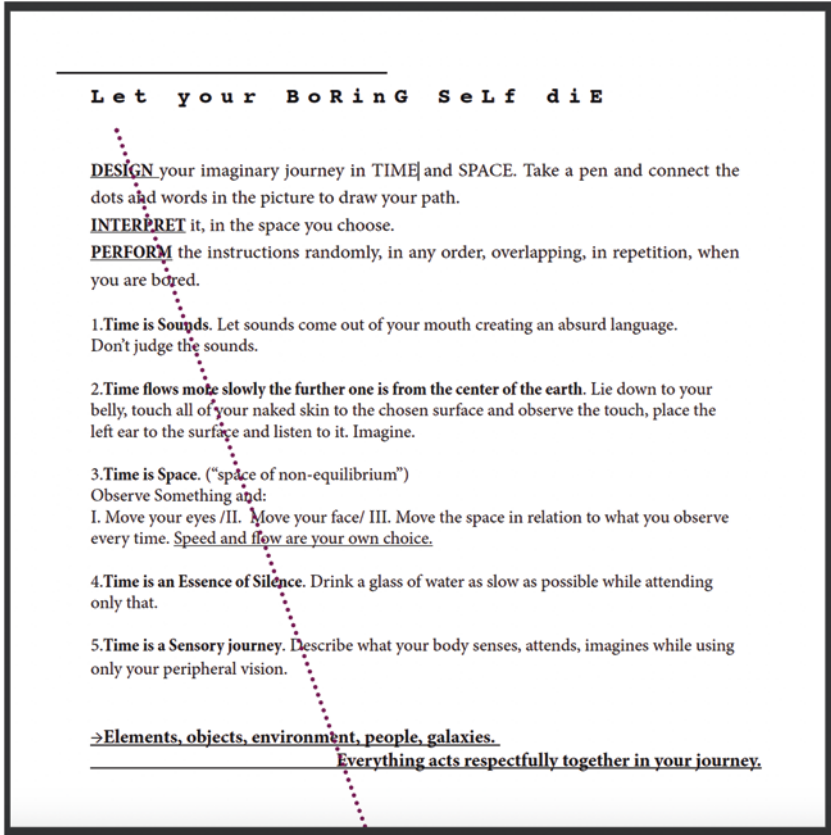


Fig. 2.2 Let your boring self die from the Nomadic School of Moving Thought

examples above resonate with Braidotti's (2019) claims for the potential of creative imagination within posthuman work to engage with continuous, flowing, and multidirectional non-linear time. As Morse (2021) picks up, the importance of a temporal flow is that the embodied, embedded and situated present is always in motion. There are benefits from understanding and practising this as we look for different educational futures to emerge as we respond to anthropocentric challenges, such as the intensification of fast academia fueled by the neoliberal marketisation of education.

Moving on

This chapter has stepped into the flow of my experience of embodiment and materiality and teased out their significance through discussions around touch and time. This has all been offered within an understanding of creativity as posthumanising and as driven by embodied dialogue—as a process that is capable of both spurring on teaching and learning to develop new ways of educating. As I said in the introduction, Barad (2007) encourages us not to see space as a neutral backdrop and calls upon Lefebvre's insistence that space and society are co-constituted. I hope I have shared here how embodiment and materiality, through a focus on touch and time, are also co-constituted through their entangled intra-actions. Space, time and touch are not bounded or constituted through binaries. In this last section of the chapter, I want to draw out how we can now position this in relation to creating ruptions and spaces for new educational futures.

I am pulling together the practice-based examples of my own smaller ruptions and offering them to you as flowing provocations from this chapter. I have argued alongside other posthuman and Indigenous scholars that the mindbody split is a Western problem that we in the West need to overcome. This realisation has provided a precedent to combine my posthuman philosophising with prior knowledge of embodiment and materiality through *ki* awareness. How can you overcome this problem? How can you find small ways to bring your embodied and material life practices, that have previously been denied access, into your pedagogy and research? My response to these questions has led me to consider how attention to touch can perturb the usual story line of disciplines including education. And I argue that if we can understand touch through multi-epistemic literacy, honouring Indigenous and arts-based epistemologies alongside postqualitative and posthuman Western ideas, we can trigger new practices which de-centre humans and start to develop a human/other-than-humanly entangled response to the twenty-first-century challenges we face. Where is touch in your teaching and research? How might attention to it extend your professional, not just personal,

becomings in multi-epistemic ways (through walking practices, embodied learning dialogues with other-than-humans)?

My work to overcome the problem has also led me to consider the affordances of understanding time as non-linear, and slower so that as educators we can fully engage with the affective elements of teaching and learning around potent topics such as political violence; and so that we can fully engage with the potentials of AR and VR technologies in formal schooling and the deepened focus and time that that takes; how we can use arts media such as film and dance/movement practices to play with time in education. Which Anthropocentric problems are most urgent for you? How can you positively engage with technologies as other-than-human allies to play with time and generate new perspectives in relation to these? Where are visual, movement and film-based endeavours in your practices, and how could they be more influential to change-driven learning and researching? In my experience, responding to these kinds of questions requires a constant alertness to what has gone before; whilst attending and attuning to multiple ways of being and becoming. The global challenges that we keep responsively turning towards in education are fast changing. I hope what I offer here provides some means to match their ability to morph and intensify, with intra-active approaches to education that make responsive use of all our combined energies.

As Boden et al. (2021) state in their exploration of posthuman change, and as resonates with our citation of Facer (2019) in this book's introduction, posthumanising creative change is not about futures to be envisioned in a linear progression but is about emergent phenomena that unfold through their exploration. In relation to creating ruptions, my aim is that by offering my examples here regarding touch and time, that they are not only picked up and experimented with by you, the reader/engager, but that we can also connect our endeavours together to create emergent change. The fissures and cracks from my posthuman practices will accumulate with those from other chapters in this book working from feminist, decolonising, Indigenous and new materialistic perspectives to name a few, and with colleagues in the wider field to co-rupture and start to breach the system. Engaging in posthuman practices can feel isolating against the power of the neoliberal HE machine, and yet I take strength from Fullagar and Zhao's (2021) statement that the mindbody

binary is a specifically Western problem; there are cultures and paradigms that we are often already part of, that are not weighed with this issue. In interrogating embodiment and materiality in this chapter, where previously I could only see my influence as a small, isolated disturbance within a sea of rationality, I can now see much greater potential in accumulating smaller ruptures into bigger breaches. Perhaps this is because we—humans and other-than-humans—are all materially co-constituted and, in that lies our power for change.

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Note

1. Diffraction is an element of postqualitative methodology which is performative and uses different ‘cuts’ to interrupt and diverge the object of study in co-productive ways creating the object/s, data and methods together. It is based in the articulation of diffraction in physics as the spreading out of waves as they pass through an aperture.

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3

Exploring Aesthoecology: Affective Anticipation, Liminality and Emergence as Features of Alternative Educational Futures

Chris Turner

Introduction and Background

I write this chapter at a time of considerable turmoil in the political, social and economic landscape, certainly in the United Kingdom (UK) but arguably across continents more generally (Monbiot, 2023). There is a strong argument, which I shall weave through this chapter, that education has a significant role to play in not only engaging young people in determining their own future but also the future of the planet itself. I argue that it is only by taking this broader, radical and more futures-oriented view that education might simultaneously steer and respond to the *wicked problems* that humanity currently faces. Wicked problems are those that are difficult to define and inherently challenging in finding any universally acceptable solutions (Rittel & Webber, 1973). Generally, they are symptoms or results of multiple, contingent and conflicting issues

C. Turner (✉)

School of Education, University of Exeter, Exeter, UK

e-mail: c.turner5@exeter.ac.uk

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that can be used to emphasise the limitations of reductionist approaches in addressing complex social and ecological problems (Lönngren & van Poeck, 2021). Typical examples addressed in academic literature include poverty, urban renewal, equality, migration, climate change and environmental resource planning (Weber & Khademian, 2008). Writers such as Patricia MacCormack (2016) discuss how posthuman ethics creates 'new, imaginative ways of understanding relations between lives' and how these new relations 'offer liberty and a contemplation of the practices of power' (MacCormack, 2016, p. 1).

Our current education system relies upon a backward facing curriculum and pedagogy that is largely designed to cope with a linear history (Kallick & Zmuda, 2017; Osberg, 2018)—that is, if the past is understood then there might be a good chance that future predictions will follow. Predictions and predictability have in the past at best been constructed to help invent a better future, or at least to try and avoid what is seen as an undesirable one but at worst, and all too frequently, it colonises 'the future from the perspective of someone's normative vision of a good future' (Osberg, 2018, p. 18) in an undemocratic way through imposition. There is an increasing recognition that certainty about the future is difficult to ascertain (Facer, 2011), to say the least, and as Batty (2020, p. 739), an architect and town planner, says, 'the future is an unknown book, and this suggests that there is no such thing as an accurate prediction, anywhere, at any time'. In addition, Batty (p. 740) quotes Margaret Attwood (2020) as saying, 'We live in such unpredictable times that you'd have to be an idiot to try to predict definitively the outcomes of some of the chaos and strangeness that we see developing around us.' Facer (2011, p. 5) contends that 'it is less to do with divining the future' and more to do with 'making visible the materials—ideas, aspirations, emerging developments and historical conditions—from which better futures might be built'.

In a world that is changing rapidly, and which is progressively more difficult to predict accurately, our reliance on an education which just hands over knowledge from teacher to student in an uncritical and unquestioning way becomes less valid and increasingly unhelpful (Collet-Sabé & Ball, 2022). We base our major world systems, such as education, health and economics on the hope that these catastrophic events are

infrequent and yet the evidence suggests that not only will they become ubiquitous but also much more unpredictable (Whiting, 2020). Our education systems rely upon, and assume, stability as opposed to potential flux and turbulence. McKinsey and Co., an international firm of management consultants, advise that the world is undergoing increasingly rapid and unprecedented change. Consequently, catastrophic events will become more frequent and unpredictable and climate change and geopolitical uncertainty will all play major roles (Nauck et al., 2021). Attempts at control will always be disrupted and yet it is, ironically, those ‘ruptions’, as we choose to call them in this book, which provide the potential spaces and impetus for creativity (Chappell et al., 2024).

The recent COVID-19 pandemic, for example, caused disruption on a global scale at every level. Supposing, therefore, the impact of COVID-19 was interpreted as ruptive rather than disruptive—as not just an interruption or disturbance to the normal way of doing things but as creative ruption—a breach or rupture—that acts as a dynamic catalyst of change. My argument is that unexpected and emergent opportunities for innovation, such as happened during COVID-19, should be researched, and tested further and the best should be built upon, not discarded. Instead of life going back to an assumed normal (whatever that may mean) COVID-19 might have been seen as a call to make radical and lasting changes. Periods of radical change could be seen as an emergent and creative opportunity (Chappell, 2018) to accept a different educational and global future, a tipping point (Lenton et al., 2008), and perhaps even more importantly as a radically changed attitude and approach to the Earth crisis.

If education is accepted as a means of preparing for the future and providing the skills, attitudes and confidence in young people which will best equip them to face it (Claxton, 2010), it is vital to adopt a creative, futures thinking mentality to provide the optimal ethical educational environments which will allow young people to survive, or better still flourish, mentally, physically and economically (Facer, 2011). It might be argued that our current educational system is ill-equipped to do so (Fielding & Moss, 2011) and insufficiently fleet of foot to adapt and change to growing uncertainty. It is this very uncertainty that provokes anxiety in young people, currently eco-anxiety (Brophy et al., 2022), but

potentially it may become a more generalised futures-anxiety as life feels much more turbulent and unsettled. It is, therefore, important to examine the fundamentals of education—initially philosophically and, building on this, by different ways of seeing and being through a radically changed pedagogy (Osberg & Biesta, 2021). It is important to steer from futures-anxiety to futures-positivity by working with young people to provide different alternatives for building empowerment: democratic, ethical, personal, creative, philosophical and political.

I argue that strategies for creative ruptions are at the heart of this transformation. In these periods of turmoil and uncertainty these strategic moments sometimes reveal intense creativity (Chappell, 2018) and intensely novel and unique responses to new situations. Creativity is one of the ways in which to engage with the possible—‘experiencing what is present (the here and now) through the lenses of what is absent (the not-yet-here)’ (Glaveanu, 2017, p. 171). Emerging into this rich seam of creativity is a focus on process philosophy within which:

speculative concepts can twine with ecological theorizations of creativity with research creation, posthuman and more-than-human ethical commitments, and calls for an anti-capitalist politics of rethinking creativity for the planet rather than profit. (Harris & Roussel, 2022, p. 427)

Radically creative thinking and action are contentious propositions in a schooling system which has determinedly defended linear notions of learning, pre-determined outcome measures and has favoured compliance over challenge. In my experience, mathematics, English and science, important as they undoubtedly are, have been afforded greater prestige than the arts (BBC, 2015); the centring of the so-called academic subjects has been favoured over the practical and experiential; the actions of the mind have had undue attention as opposed to the sensory experiences of the whole body; and the centring of the human over and above the importance of the other-than-human and material aspects of our environments (Bennett, 2010; Braidotti, 2013) has been a dominant feature of an education system which is failing to rise to the challenge of a complex and increasingly unknown future. In contrast, for example, Todd et al. (2021) highlight the sensory dimensions of human experience and

the ways in which the body and the senses should be deeply involved in pedagogy; Halverson and Sawyer (2022) provoke conversations about arts in education counting for more than just add-ons to make science, technology, engineering and maths (STEM) learning more appealing to students; Stewart et al. (2019) claim that the arts can transform STEM teaching and learning by highlighting creativity, innovation and problem solving as core practices (Chappell et al., 2019).

Therefore, this is a vital window of opportunity to rethink our understandings of epistemology such that we move away from an instrumental and linear approach to one which accepts complexity and uncertainty. This supports the idea of alternative educational futures which contest that 'schools remain organised around a conception of time privileging predictability and stability, assuming that it can be controlled and managed' and adopt the idea that 'educational temporalities should rather be conceived through order and disorder' (Alhadeff-Jones, 2018, p. 27).

Aesthetics and Ecology in Action

The importance of aesthetics and ecology as building blocks of educational experience, and subsequently the concept of aesthoecology, arose from my experiences of many years in educational environments as a teacher and in school and college leadership roles, including principalship. On moving into higher education and research I took the opportunity to analyse what it was that was pre-eminent in creating schools that worked for all (Turner, 2019).

Inherent in my suggestion that aesthetics and ecology are vital components in promoting educational richness was that these ingredients actively elicit the *emergence* of meaning rather than just being concerned with the *transfer* of meaning from teacher to student. Fundamentally, and I pursue this in greater detail later in the chapter, I interpret aesthetics as perception and how the world is viewed, our sensorium, on many different levels, in space and in time. The sensorium might be defined as 'the total character of the sensory environment which together includes sensation, perception, and the interaction of information about the world

around us' (Duncum, 2012, p.183). However, it seems apparent that our own individual perception makes little sense unless it is intimately connected to the material and animate entities of the world beyond our own body (Berleant, 2010; Ingold, 2022), and to be in dialogue with the world. This may be other people, other organisms and/or, for example, the architecture (natural or otherwise) of our immediate environment—the places and spaces of temporal existence. This I interpret as our ecology. Consequently, I relate the sensory and affective dimension, the aesthetic, with the environmental dimension, the ecological (Turner and Hall, 2024). I contend these work in a symbiotic relationship thus forming the aesthoecological dimension of our being.

To illustrate this, I draw upon my experience, for example, of the development of an art gallery at the heart of an expanding community college¹ within which I was the principal. Staff from the arts faculty requested that money for building projects be put aside to develop a gallery rather than other types of arts facility. Instead of just seeking better facilities for their timetabled teaching, they wanted to experiment. They felt that a gallery used by all would lead to various interesting developments, but they did not have specific outcomes in mind. This presented as an opportunity to exploit the new—to create spaces in which the new could arise spontaneously, and outcomes, rather than being predetermined and measurable, remained open-ended, speculative and exploratory. This represents the notion of emergence (Osberg et al., 2008) which became a central feature when I was considering the importance of both the aesthetic and ecological foundations of education.

The understanding and adoption of emergence as central to learning requires a different mind-set and range of skills from the teacher and from schools, and a high degree of empathy with students and the spaces and materials with which they work. This is not an exclusive strategy but might be considered as complementary to other pedagogical approaches. The idea of creating a gallery was contentious because there was also a view that money could have been spent in more conventional ways to produce more standardised teaching spaces. However, conventional ways of being rarely produce creative change and so there are times when it is appropriate, albeit risky, to do things differently.

The *raison d'être* of a gallery is to give the arts a high profile but it has the potential to do much more than that. Potentially, it becomes a space for transdisciplinarity to flourish, creating spaces for the harmonious integration of different disciplines (Nicolescu, 2010). The arts would be valuable to all other faculty areas, not an isolated subject (Hall & Turner, 2021). It might engender a culture in which the arts became an intrinsic part of what were seen as the academic subject areas. It would contribute to greater morale amongst students who would have their work displayed, it would encourage greater use of graphics, pictures and drawing to convey information in non-written ways, it would value cross-discipline discourse, dialogue and debate and it would enhance community involvement (Cultural Learning Alliance, 2023). No-one knew exactly how this would unfold but above all it was exciting, creative and new. It was not about attainment targets decided on beforehand, it was about values and affectivity—an immersive aesthetic experience within a creative, ecological space of what-might-be.

It was within these sorts of educational experiments that lay the potential and importance of various combinations and associations between aesthetics and ecology. The associations became so strong and intimate that the symbiotic relationship suggested an amalgam between them—an aesthoecology. Apart from the more holistic philosophy and practice of aesthetics and ecology combining concepts of affective anticipation, liminality and emergence became intrinsically and extrinsically apparent. I examine each of these characteristics in relation to the art gallery in detail.

Affective Anticipation, Liminality and Emergence

On entering most formal spaces in educational contexts there is an expectation of how to be in those surroundings, a presumed understanding of what is to happen and a normative pattern of events. It has become assumed that good practice is for certain models of behaviour to be followed—an understanding of the plan, and a set of aims and objectives from both student and teacher alike. If you go into a lecture theatre or

classroom you are expected to be relatively quiet, find a seat, prepare yourself for what is to come and be attentive. All perfectly fine for certain types of events but often the unexpected, the unanticipated and the novel are powerful learning triggers. Rather than being disruptive, which can be seen as negative and unhelpful, they might instead be interpreted as ruptive events—a change and a cleaving from the norm which produces a creative and aesthoecological opportunity.

Entering any space for the first time creates an overall feeling of heightened anticipation. The senses are on alert as a new territory is encountered made up from other people, the material surroundings, new shapes, sounds, smells and things to touch. Understanding the differences there are in the way people perceive and relate to the complexity of the environment is important in understanding the potential of assemblages (DeLanda, 2016) in effecting and affecting their behavioural ecology. The term assemblage is a philosophical approach which frames social complexity through fluidity and connectivity. It proposes that people do not act exclusively by themselves, but instead human action requires complex social and material interaction. Each of the elements contributing to this ecology are referred to by Bennett (2010) as actants, and she speculates on the question of their role in political activity.

The emotions and general sensitivity produce a state of *affective anticipation* (Osberg, 2018; Turner, 2019). On entering the gallery, the hope was that the eye would be drawn to the exhibits. What was the theme and what were the questions the artefacts asked of the observer? Did they tell a particular story, if so, who's story? Did the artefact produce an emotional response? Were they of people, places, events, catastrophes, wildlife? Feelings, emotions and general affective state induced by the room, the exhibition and the people, are important factors in how feelings are oriented and the ways in which interaction takes place.

For example, in its extreme form one becomes aware of affective anticipation in working with children with autism who often have very heightened sensitivities. The following description of intense sensory immersion exemplifies the affectivity and connectivity of people, spaces and things. While it is possible to empathise with those who experience the extremes of sensitivity it is not possible to be that person, but an ethical space can be shared (Ermine, 2007)—that which respects individuation and

diversity, sentience and materiality alike. A mother of two children with autism describes in the book, *George and Sam*, their first day at school and their sensitivity to the school environment:

[S]trip lights flicker, radiators hum, the chatter of other children is bewildering and incomprehensible. The walls are covered in a confusing jumble of colour and sparkle. Classrooms are rearranged – you’ve just got used to one layout when you have to start all over again. Smells of cooking or cleaning fluid, or even the teacher’s perfume, are overpowering. You can’t take in the teacher’s instructions – she talks too fast, and her earrings jangle. (Moore, 2004, p. 177 from Turner, 2019 p. 60)

Students and staff, on entering the college gallery for the first time, reported that the newness of the surroundings, the plethora of emotions and feelings it might elicit, and its success came from the idea that it was a shared space in which there was no right or wrong way to be. Paramount was respect for other people’s space so that everyone could experience it in their own way and in so doing appreciate individuality. The notion of aesthoecology is exemplified through deeply recognising the affective nature of the experience; by acknowledging the importance and influence of the surroundings, both animate and inanimate; and, how to relate ethically to that space. By ethically, I mean respecting the space, being aware of one’s place in it and the rights of others who are also there, have been there or will be there (Bozalek et al., 2022). To have your own centrality displaced is an ethical and empathetic positioning.

Therefore, the significance of affective anticipation is that it prepares us for a perception of the world as continually unfolding, and as a persistent positioning of the *not-yet* thus leaving space for the indeterminate and for creative ruction. Osberg (2018, p. 14) refers to this as a space of the ‘not-yet-possible, one which cannot yet be imagined’. Affective education is used as a term to describe significant dimensions of the educational process concerned with the feelings, beliefs, attitudes, and emotions of individuals within their inter- and intra-personal relationships. An inter-relationship, the ecological position, is that which connects to the environmental situation, awareness of the world around and the development of empathy (Matravers, 2017) towards each other and to the planet

in its entirety. My definition of an intra-relationship, in this context, is an awareness of one's own feelings, emotions and sensitivities. Awareness is a key element of affectivity and represents the aesthetic position.

The time leading up to the development of the gallery was a prime example of a period of affective anticipation. A period of intense creativity and envisioning, of curiosity and critical awareness of what this development might yield and excitement (tinged by trepidation) for the future. It held the possibility of change which went much more widely than the gallery itself influencing perceptions of what might-be, nothing definitive but calling to future possibilities.

If it is accepted that this space, in this case the gallery, is full of possibility the reality of which is tentatively or eagerly anticipated, there is an awareness of a space where change might happen, but that change is importantly unpredictable. It depends on many factors. Liminal zones (Barradell & Kennedy-Jones, 2015; Conroy, 2004), as these types of spaces might be considered to be, are those within which the new can arise spontaneously—they are entered through and across boundaries, and they keep the future open. In the case of the gallery, in retrospect, the idea was to produce what I now philosophically recognise as a liminal space—open-ended voids of opportunity where outcomes were not predictable. This relies on a spontaneity of action in which students and staff interact with each other and with the material contents of the space—an aesthoecological relationship. Liminality represents the importance of transition from one state to another and the idea of spaces of appearance (Chave, 2021).

These spaces might be considered as a—'a point in time and state of being' (Barradell & Kennedy-Jones, 2015, p. 541–542). 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 (Conroy, 2004; Turner, 1969). This theorises the gallery space very well. The space is entered with anticipation, there is no particular expectation, and there is an opportunity for new experiences through interaction. The nature of a community college is that it would often have members of the public in the gallery alongside children, young people and teachers from other schools. Parents and governors were regular visitors. This interaction could be very rich and

varied—no-one knowing quite what to expect in terms of their learning experience. Generally, the atmosphere would be informal, but it also gave opportunity for more formal situations arising from the exhibits—discussion, drawing, role play, dance or music. It was always interesting to learn about personal experience of the moment, transition points from one state of understanding to another.

This transition is reliant on an affective way of being—a liminal state of openness and receptivity to change or, as MacCormack and Gardner (2018, p. 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, understanding is in flux. I argue that this change state is not predictable or teleological but emerges from the experiences and playfulness of the moment and entails being on the edge of awareness and in sensitive anticipation of the next event. These important transitional moments move change on to a different ontological level and are largely transformational, irreversible moments which could be interpreted as a series of ruptive events.

Emergence arises from the irreversible crossing of the threshold representing the exit points from the liminal zone—points in which the new arises spontaneously. This suggests an epistemology in which ‘knowledge does not bring us closer to what is already present but, rather, moves us into a new reality which is incalculable from what came before’ (Osberg & Biesta, 2007, p. 46).

The Concept of Aesthoecology

Creatively conceived innovations such as these encouraged me to engage with concepts of aesthetics and ecology as important dimensions for influencing futures thinking in education. They became handles with which I could grasp the immense complexity of any given moment and conceptualise the myriad interactions that are at work in educational environments. Aesthetics was the medium through which body, mind

and space became symbiotically alive through the senses—the affective and relative dimension of being, one with another.

In the context of the gallery, the aesthetic experience comes from the interaction with spaces, objects, people, architecture, light, dark and colour. It was important that the space offered a range of sensory stimuli at different times of the day to maximise interaction and to raise curiosity. This might, of course, be said of any space within an educational setting but when there is the intent to provide a space designed to maximise these qualities the opportunities for experimentation become far greater and can be changed on a regular basis. In fact, that is one of the stimulating features of galleries—to be a provocation of the senses.

Aesthetics can be broadly divided into three philosophical areas all of which conceptually and intimately overlap (Levinson, 2005). The first, and perhaps the most generally understood as aesthetics, is the practice of the arts and the process and production of an artistic object. The gallery was clearly able to contribute to this aspect of aesthetics. By curating different exhibitions, by highlighting different aspects of the work of a range of curriculum areas and by introducing students and others to a range of visual stimuli there was an opportunity to hone the critical senses and stimulate contemplative wonder.

The latter is interestingly explored through the recent book *Wonder and Education* in which it is proposed that wonder is ‘object centered’; it ‘entails an epistemic element in the form of surprise, puzzlement, perplexity or yet another form’; it ‘entails an intensification of the present’; and ‘it contains the suggestion or promise of a new, deeper or more comprehensive meaning.’ (Schinkel, 2022, p. 49). Wonder has a futures orientation—anticipation of what might emerge. All of these qualities are so central to education and yet can get very lost in many pedagogical approaches. The gallery was not only able to contribute to these practices but to spread awareness of these values and practices within and across the curriculum. It was important that the gallery was seen to belong to everyone and to be used as a resource to influence major pedagogical change.

The second characteristic of aesthetics is in the appreciation of the property or feature of things, such as an artefact or landscape, a stone, a person or an idea. This might, in the broadest sense, be defined as the

beauty of something. This, too, is incorporated above. The third is an *affective way* of being, drawing on a sensitivity derived from our sensorium in order to create a personal understanding of the world—to understand it as it is experienced—and to value that personal positioning.

All three of these dimensions of aesthetics—the artistic, the beautiful and the sensitive—I see as being intimately entangled with the concept of affective education. It encapsulates the ethical, the care-ful, the creative and the wise inherent in the affective consciousness of being a person. Affectivity asks questions of our adaptability, our reactivity, our risk taking and our relationships (Abram, 2017; Gregg & Seigworth, 2010), each of which is essential to consider in creatively ruptive contexts—those situations, as in the gallery, in which the new and unexpected is to be welcomed and honed into epistemological opportunities.

These contexts are spaces which might best be described as the ecological situation—the temporal, the spatial and the entangled—‘an infinitely complex, woven fabric that connects all things in its intricate weave’ (Lent, 2022, p. 116). This interplay represents a continuous, conscious and dynamic process—perceiving and connecting—aesthetics and ecology—making sense of things as an ethical and intimate relationship involving humans, other than humans and the material surroundings. Morton (2012) refers to this as an entanglement—an ethical attitude that constitutes ‘coexistentialism’ (p. 47).

With aesthetics very often, as described above, the focus is arrested by an individual object or artefact. Our educational ecology, however, is how these personal experiences are connected to that of others (human and other-than-human), to our material world, to our cultural heritage and more broadly to our past and our anticipated future. Being in the gallery provides opportunities for personal contemplation as well as for communicating with others through dialogue. This captures the importance of inter- and intra-connectivity between the animate and non-animate elements of the world and the transience of individuality which acts as a precursor to important questions about the centrality of *Homo sapiens* and the distorted anthropocentric positioning of our culture. It is this ‘habitual inattentiveness that is complicit in our colonial appropriation of the more-than-human-world’ (Booth, 2021, p. 221) which has led us to the major global predicaments that our society now faces. This must

now raise serious questions about the suitability of our current educational systems to confront these challenges and to prepare young people for the future they are facing. These experiences are opportunities for the emergent and ruptive to occur.

Assuming that is the case I develop the idea, following my arguments of mutuality, that aesthetics and ecology play a vital part together rather than apart. If they are acting as a symbiotic relationship, for example, I propose that this has substantial relevance to education and futures thinking. It creates a conceptual framework, or more fluidly a mesh or web, which captures much of what might be expected as education's purpose in a futures context. The importance of symbiosis has been recognised in contemporary biology, for example, in replacing the previously established position of individuality (Margulis, 1981). A symbiotic relationship is not just a combining of the characteristics of two entities; rather, in their combination, something new and unique emerges. Hence, the concept of aesthoecology came into being to provide a more appropriate language, an aesthoecological literacy, within which ideas and perceptions of creative and ruptive education could be discussed and enacted. I propose that it is a highly relevant and helpful concept which contributes to the language of creative and ethical educational futures.

Conclusion

Aesthoecology is an onto-epistemology that gives us a new and dynamic insight into being and knowing. The theory of aesthoecology has 'interesting and important implications for the ways in which educators, researchers and societies perceive education' (Hall & Turner, 2024) and, consequently, it 'adds value to an understanding of our global scale of existence and the impact, individually and collectively, we have on the future' (Turner, 2019, p. 163).

I think it is very important, even essential, that as educationalists we can move from the conceptual (ideation) to the concrete (realisation) and back again, allowing each to infuse the other with the richness of practice. Only then can these ways of being enter the consciousness of practitioners. I use the example of the development of an art gallery in a

community college but there are other examples which I could have used in which the focus was also on creative ruption of the status quo—to enable students and others to see things differently—and to provide opportunities for futures thinking. The philosophy of aesthoecology is applicable to all contexts of educational futures.

I refer to aesthoecology not as a discipline or as a history but as a specific way of identifying thinking about education: a pivotal (political) balance between forms of perception, thought, production and action. By political I mean that this sequence might be considered a dissensus (Ranciere, 2010), or a conflict, because collectively there is an opportunity to disrupt the status quo and to creatively re-order power relationships in the same way that ruption is a dissensus. Politics has an inherently aesthoecological dimension and aesthoecology an inherently political one.

Consequently, aesthoecology represents an affective sensitivity within a dynamic inter- and intra- set of relationships; the opening of spaces within which connections can occur and productive action can emerge. This is aesthoecology at work, the melding of our sensitivity and awareness (the aesthetic of education) with our immediate and distant surroundings (the ecology of education) resulting very often in outcomes which are unpredictable but rich in their potential. In onto-epistemological terms, an ecological practice of engagement is part of the aesthetic of enhancing by questioning norms, finding new perspectives and challenging us to act, to embrace change and, wherever possible to seek the cracks, fissures and spaces through which creative ructions may occur.

Note

1. Community colleges in the UK developed in the 1960's and 1970's alongside comprehensive schools to offer community education, normally youth work and adult education, alongside and often integrated with the normal life of a school. Buildings very often would be opened through the day, evening and holiday periods for educational and leisure purposes. Early and radical examples were Stantonbury Campus in Milton Keynes and the community colleges of Leicestershire and Cambridgeshire.

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4

On Bewilderment, Education and Opening Spaces for Creativity and Emergent Educational Futures

Sarah Chave



Fig. 4.1 Artwork by Tijana Velikinac for Edulab, Institute for Philosophy and Social Policy, University of Belgrade's (2022) Third International Conference: Why still education?

S. Chave (✉)

School of Education, University of Exeter, Exeter, UK

e-mail: k.a.chappell@exeter.ac.uk

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Introduction

I was once firmly told in a college administration department: ‘Just tell those trainee-teachers to stop asking questions and teach.’ I was somewhat taken aback by this comment but it also got me thinking. What is teaching if it is not about asking questions? (Fig. 4.1) Moreover, what kind of questions are teachers asking? If they already know the answer is this really questioning? There are situations where transmission of existing knowledge is vital—ranging from learning to read to how to fly a plane. In these instances, asking questions when the teacher knows the answer—often called Socratic questioning—is valuable. However, is this *all* education *can* or *should* be, especially in this era of climate and ecological emergency where the emergence of new ways of thinking and being are urgently needed? There needs to be space for *bewildering questions* where no-one yet knows the answer; space where letting go of certainty and acceptance of ambiguity is possible; space which encourages creativity and new ways of knowing and being in the world together. In addition, there needs to be space for positive conceptions of ‘the wild’ and a *be-wilder-ing*¹ of education processes themselves towards more demanding, rebellious, ruptive educational futures which can burst through framings of the world dominant in current Westernised education. This is a challenging move for such Westernised education, dominated as it is by anthropocentric, androcentric and Eurocentric conceptions of ‘man’ (see discussion in Braidotti, 2013) and an increasing desire to ‘sanitise’ knowledge (Suzawa, 2013). Moreover, such Westernised pedagogy is not geographically limited. Instead, as Braidotti (2013, p. 2) highlights, ‘it is a structural element of our cultural practices, which is also embedded in both theory and institutional and pedagogical practices’ which have spread around the world, driven by colonialism and its continuing effects.

In this chapter, I explore how a shift towards bewildering/be-wilder-ing education can be nurtured. I examine how encouraging *aporia*—literally lacking a *poros*, a path, a passage—can contribute to opening up educational spaces where creative, holistic thinking and new ways of

being in the world can burst through: ruptural spaces which embrace *doubt* and see within such doubt ‘the questions that make a new understanding possible’ (Burbules, 1997, p. 40). I find it hard to pin down in words what such ruptural spaces are but suggest that they are combinations of physical spaces and the physical actions and mental responses arising in these physical spaces. For me, Lefebvre’s (1991) conception of ‘lived spaces’ is helpful here. Lefebvre posits that space is not a neutral, empty entity. Instead, it is constituted from ‘perceived space’, ‘conceived space’ and ‘lived space’. Perceived space is what (Westernised) humans experience with their senses as they move through the world. Conceived space is how the original designers and political powers conceptualised and planned a particular space. Then there is ‘lived space’ which, as Zhang (2006) highlights, can be harder to understand. To help here he turns to Elden (2004, pp. 186–188 cited in Zhang, 2006) and his discussion of Lefebvre’s early work in which Lefebvre critiques the seventeenth-century Western philosopher Descartes’ binary—*res cogitans* (the realm of the mind) and *res extensa* (the physical realm of matter). Elden argues that Lefebvre may have first formulated his conception of conceived space as a response to *res cogitans*, with Lefebvre denoting such abstract knowledge with the French word *savoir*. Perceived space, on the other hand, corresponds to *res extensa*. Pursuing this line of thinking Elden suggests that in his later work, Lefebvre introduced his conception of lived space to form his triad as a way to reconcile his own thinking and Descartes’ binary. Lived space combines (Westernised) human external experience of the space and the power relations within it with (Westernised) human inner mental life as one responds to these perceptions and conceptions of inhabited space around one. Lefebvre denotes knowledge in these lived spaces with the French word *connaître*—the things a person is acquainted with and knows locally. These three spheres—perceived, conceived and lived—are not separate ‘slices of a pie’. Rather they act, shift, flow together, forming experiences of space in everyday life.

In this chapter, I argue that ruptural ‘lived spaces’ have potential to emerge when students can play with bewildering ideas and questions without expectations of reaching pre-set outcomes or solutions and

when there is openness and attentiveness to others, both human and more-than-human, within the space. I also like the word ‘wallow’ here: space and time to wallow, to deep-dive into ideas and feelings, luxuriate in them as well as time to share these ideas with others in an unhurried atmosphere. There is a sense of indulgence. Wallowing is something which humans, especially those in fast-paced Westernised societies might even have been bidden *not* to do. Playful, attentive actions as well as wallowing with ideas can occur in activities often called ‘creative’ such as art, craft, music, dance and creative writing but also stretch beyond and are *not* limited to these. As Ken Robinson (Mindshift, 2015) highlights, ‘creativity is in everything... in science, the arts, mathematics, technology, cuisine, teaching, politics, business, you name it’. It involves ‘putting your imagination to work’ and is something which can be cultivated and honed, including, crucially, in educational settings. Cremin and Chappell (2021) identify that key characteristics of creative pedagogies include opportunities for student playfulness, independent thinking, problem-solving, risk-taking (learning by ‘mistakes’) and co-construction and collaboration as well as teachers demonstrating their own interest in creative processes. I argue in this chapter that exploring bewildering questions has an important role to play in creativity understood in this broad sense. Such creative approaches have potential to combine and ‘open a window’, as a friend of mine put it: a window through which novel ideas and ways of being can break free and contribute to living in the new ways so needed in this era of biodiversity loss and climate emergency.

Embracing Bewilderment and *Aporia*

According to the Merriam-Webster (n.d), ‘bewilderment is the quality or state of being lost, perplexed or confused’. Such confusion has long been accepted as a starting point for education with the aim to then lead students to places of certainty. Adopting the approach Socrates used in Plato’s *Meno* (circa 385 BCE/1961), bewilderment can also be a

mid-point of the educational process. A student is nudged by a teacher along a pathway aimed to undo their previous certainties. This leads the student to a place of puzzlement, a place of embodied discomfort as well as mental uncertainty—an *aporia*—where they do not have a path or passage forward. The teacher can then show the student a path out of this place of confusion towards an accepted answer. What happens, however, when there isn't a solution or where it is hard even to form a question as language and existing dominant conceptions are insufficient to allow its articulation? Can teachers and the curricula and policies which frame their practice tolerate such ambiguity where there is no 'answer', where students' bewilderment, confusion, puzzlement cannot be addressed and solved by the teacher?

Suzawa (2013, p. 234) argues for the value of *embracing* ambiguity and bewilderment, rather than merely tolerating or actively avoiding it. He stresses the importance of 'being open to alternative ideas, never being very narrow in our thinking as we practice the art of teaching'. Reading this reminded me of an experience from my own teaching practice which has spanned over 30 years in vocational, adult and university sectors, teaching languages, economics, business studies and teacher education. In an observation I undertook in my role as a teacher-educator of a plumbing lesson in an inner-city vocational college the students were revising for a multiple-choice exam. One question, on energy generation, asked which option was carbon neutral. The answer required was 'wind turbines'. A student challenged this, saying that due to the transport of turbines as well as the materials needed for their construction and maintenance it is disputed whether they are carbon neutral. I sat forward, interested to see how the trainee-teacher would handle this dilemma. He paused for a moment then responded 'Well, in your exam please select "wind turbines" but I take your point, these things are complex and there isn't a simple answer. You could, however, research this for the presentation you are doing for your communication module'. The teacher could so easily have closed this student down but instead embraced this opportunity to encourage students to grapple with bewildering issues and sought ways that this could be done within the constraints of his tightly

packed, highly regulated curriculum. His *attitude of mind* kept a space open for exploring bewildering concepts such as carbon neutrality, reconciling the restrictive modes of thinking and classification imposed by multiple-choice assessment with opportunities within the communication module for more 'holistic modes of thought opened by dialogical reasoning and artistic practices' (Suzawa, 2013, p. 232).

Burbules (1997) highlights how artistic creative practices can open spaces to explore bewildering questions. He considers how dance has potential to open an embodied 'gestural space' for exploring bewildering issues as an alternative to deductive cognitive thinking with its tendency to classify and move from A to B in a straight line. Other creative choices such as musical composition/performance, art/craft, poetry and creative writing also have potential for embodied holistic exploration of *aporia* and topics across subject boundaries. As a teacher-educator I was privileged to observe such a creative activity which was part of a vocational music qualification. Students aged 16 to 18 had been tasked with creating a song and music video as well as reflecting on the experience. One group of teenage students had produced a song called *Shadows*, which explored thoughts and feelings around love and relationships. I found their song, video and reflection very moving. These activities highlighted their creative, musical and technical skills but in their reflection they also drew in another, unexpected aspect. They explained that whilst filming they became very aware of the movement of the sun and the physical shadows it created in their video. They had to re-record certain scenes as the shadows cast by the sun did not match up with the words in particular verses. They realised that they were approaching 'shadows' as metaphor but the *physical* act of recording opened up their awareness of existing in a physical world. This allowed them to explore what this meant for their relationship with and responses to physical phenomena. They also became more aware of the transient nature of long shadows and what this could mean for coping with the often-bewildering relationship challenges, explored in the song, which they faced as they entered adulthood. The creative processes of music and film-making enabled the students to explore these challenges which are hard to articulate in existing language and where there are no clear solutions.

I am not suggesting that *all* teaching needs to engage with bewilderment. This could be overwhelming for students as well as neglectful of certain existing useful skills and knowledge. However, exploratory spaces are important if, as the thinker Hannah Arendt (1961a/2006a, p. 193) argues, education is where:

we decide whether we love our children [*and young people*—my addition] enough not to expel them from our world and leave them to their own devices, nor to strike from their hands their chances of undertaking something new, something unforeseen by us.

Arendt and the Potential for Opening Spaces of Appearance Through Intersubjective First-Hand Encounters

Drawing on Arendt introduces another dimension to exploring bewildering questions. For Arendt, rather than being pre-formed ‘selves’, *who* one is emerges intersubjectively (between subjects) in first-hand encounters when one speaks and acts with others under what Arendt terms ‘conditions of plurality’. Such conditions can potentially occur in encounters when others are receptive to one’s speech and actions and one is receptive to theirs. This opens potential for ‘spaces of appearance’ through which *who* one is as a *unique* being emerges, bringing possibilities for new ways to be, know and act in the world (for further discussion see Chave, 2020). Creative activities exploring bewildering questions provide time and space for such intersubjective encounters, for sharing one’s positioning and for openness to the speech and action of others: encounters through which *who* one is can begin to emerge anew.

I experienced such an encounter at a craft workshop I had co-organised as part of an arts-based project in higher education. Adults were making notebooks from recycled paper using the Japanese craft of momigami. The slow creative, embodied repetitive action of crumpling and

smoothing paper central to momigami opened a lived space and time for sharing different ideas and perspectives. A wide range of bewildering issues connected to climate change was discussed. As the session progressed, a respectful atmosphere, a more secure space opened up. One issue which arose was more sustainable farming methods: a complex bewildering issue with many different opinions and possibilities for change. As the activity progressed, a participant from a farming family spoke up to explain how her brother was committed, for various practical and emotional reasons, to a single breed of cattle he had kept on his farm for 40 years. Moving to a different breed would be a huge challenge, and understanding such starting points needs to be taken on board in any change processes. This perspective inserted a new way of thinking about change. It caught my attention and stayed with me, humbled me, encouraged me to find out more, challenged and changed me and took my thinking and actions in relation to nature-friendly farming in new directions. Creative activities had opened a space for speaking and being open to others and a window in my existing framings through which new ideas and ways of being could bubble.

Arendt focuses her thinking on encounters within the human realm. However, it is important to remember that she died in 1975 and it would be unfair to judge her for not engaging with recent posthuman ideas. Arendt emphasises the importance of engaging with thinking of the past, learning from these ‘threads’ without letting them become ‘chains which fetter us’ (1961/2006b, p. 94). I would like to believe she would be interested in extending her theorising in response to recent posthuman developments and the possibility of intersubjective encounters with(in) the wider natural world. This possibility is complex, bewildering for several reasons. In Western Modernist thinking only humans possess subjectivity—which it defines narrowly as having a sense of self, of who one is, and capacity to reflect and have higher-order (abstract) thoughts and feelings (see discussion in Braidotti, 2013). However, Lyvers (1999, p. 5) makes what is for me a key point, when he comments that to acknowledge subjectivity beyond the human does not demand that it is ‘similar in all respects to one’s own’. This poses a

challenge for many of how to approach the more-than-human without categorising them or fitting them into Western understandings of the world. Buber provides a helpful insight here (1958/1923) with his idea of *I-it and I-Thou relationships*. In *I-it* relationships the other is an object—an ‘it’. In contrast, in *I-Thou* reciprocal relations ‘I’ recognises the other as a subject with whom one engages in their entirety rather than as a sum of their qualities. He highlights how:

The primary word *I-Thou* can be spoken only with the whole being. Concentration and fusion into the whole being can never take place through my agency, nor can it ever take place without me. I become through my relation to the *Thou*; and as I become *I*, I say *Thou*.

All real living is meeting (encounter). (24–25)

Buber does not limit *I-Thou* relations to the human realm, giving the example of contemplating a tree: He recognises how in Western thinking there are several different ways to understand a tree—as an object to be used/consumed, as an object for contemplation or as an example of a particular species category but to address the question of whether a tree has subjectivity Buber comments:

I have no experience of that. But thinking that you have brought this off in your own case, must you again divide the indivisible? What I encounter is neither the soul of a tree nor a dryad, but the tree itself. (59)

Reflecting on Buber’s ideas, Walsh et al. (1994, p. 151) argue that ‘now the [Western] worldview that presupposed an objectified nature has run its disastrous course... we are open to a different way of relating, a different way of life, beyond the subject/object dualism, beyond the *I-it* relationship’. All, both human and more-than-human in this our shared planet can strive towards what Buber (1958/1923, p. 79) called “tenderness” and an acceptance of the ethical responsibility this then places on each of us.

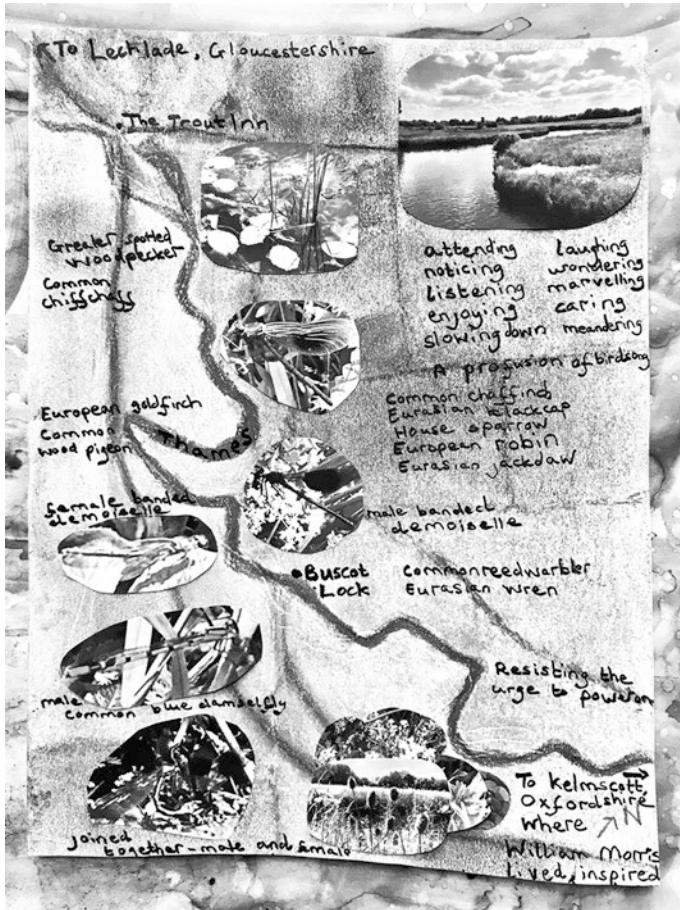


Fig. 4.2 C/artography: Meandering, encountering, attending with Thames (2023)

It was with these ideas on intersubjective encounters in mind that I set out to walk beside meandering River Thames² between Lechlade and Buscot in Oxfordshire, UK, recording the experiences in a c/artography (Fig. 4.2) and reflection. These cannot fully capture encounters which happen between ‘I and Thou’—but are an attempt. It might seem strange to explore bewilderment and *aporia* (the lack of a path or passage way) by following a river. However, rivers are vital forces, life-givers, they meander, flood, change: new routes, and habitations emerge.

Meandering, Encountering, Attending with Thames

Stepping down onto the riverside path my husband, Peter, and I are enveloped by the tall grasses and reeds that flourish near the bridge which stands beside the Trout Inn near Lechlade. The hubbub of people quickly fades and, on this sun-filled day, we enter a world of insect buzz and bird call—surprised to hear immediately the distinctive sound of a woodpecker. Eager to see if this is still a place where damselflies thrive, we make our way to where a wooden bridge crosses a lily pond. We stop, filled with joy and wonder to see the iridescent deep blue of the male banded demoiselles with distinctive dark spots on their wings and the smaller, lighter common blues darting above the lily pads and settling on the reeds. As we look closer, we begin to see more—the well-camouflaged green females as well as entwined mating pairs. We feel the ‘tenderness’ that Buber (1958/1923, p. 59) describes. We are drawn into attentive caring relation with these damselflies who cease to be ‘its’ – mere examples. Instead, it is with these damselflies ‘on this occasion that I engage into a relation and this fills my world’ (59). We follow Thames as he meanders across the flat plain, forced to slow down and take a circuitous route, laughing at the short distance we would have covered by travelling in a straight line. Along the way we enjoy birdsong—the repetitive calls of jackdaws and chiffchaffs and melodious blackbirds, goldfinches, wrens and reed warblers. We pause to appreciate the alders and willows leaning outwards from the bank, the waving teasel heads, the yellow wild brassicas, tiny pink geraniums and vivid blue alkanets. Damselflies and butterflies flit across the path. Reaching Buscot Lock we resist the urge to power on to Kelmscott where William Morris once lived, pausing instead beside Thames to enjoy the sunshine and the moorhens swimming between the reeds. We retrace our steps, hot and tired now but still open to this special place and the calls of the more-than-human all around us. We stop once more at the lily pond, sad to leave the damselflies as they dart, settle, entwine, but heartened that this place still exists for them and aware of the importance of protecting it and other places like it.

Such embodied encounters open something beyond articulation. Spending time with these damselflies on this occasion opened a new way for me to be in the world. Returning home, I learnt more about them from the *British Dragonfly Society* website. I became more aware of damselflies and many different coloured bees, butterflies, moths, greenfly and ants in my little garden. I am now less afraid of these creatures, more absorbed in their never-ending dance. I tend flowers which support them and which the insects in turn support through pollination, an ecosystem in which humans are both entangled and dependent. I have learnt the shocking statistic that flying insects have declined by almost 60% in the UK over the last 20 years (Ball et al., 2021). I have investigated actions to reverse this trend and support their lives such as nature-friendly and regenerative farming. On sun-filled days, damselflies sometimes enter my home through the open kitchen door then become trapped against the windows. On one such day, I stand on tiptoes and reach across the worktop, all the time aware of the frantic damselfly beating his delicate wings against the glass. I manage to push open the stiff window and joyfully watch as the damselfly flies free: an embodied happening for us both and a reminder too of other lived spaces where caring inter-actions can open a window through which new ideas can take flight.

A Pedagogy of Be-Wilderment

Intersubjective encounters and the ethical responsibilities these raise, for example with Thames and with all that live within and beside his water, open space to explore what Snaza (2013, 2020) calls a ‘pedagogy of be-wilderment’: an approach which aims to rupture existing educational framings and open possibilities of new educational futures. Snaza highlights how Westernised education is a humanising project. In this framing, children are not fully human and education is a way of bringing them to a fully human state. Snaza outlines how this conception is seen in educational writing dating back to Plato’s *Republic* (1961) first published in the fourth century BCE. In this work by Plato, Socrates refers to the ‘uneducated’ as an ‘unintelligent philistine’ who has ‘no use for reasoned discussion and [has] an animal addiction to settle everything by

brute force' (177). The 'philistine' needs to be brought out of this state through educational processes. Almost 2000 years later, although at first sight more sympathetic to the wildness of Emile, Rousseau (1972) argues for the necessity of forming 'man' through education and emphasises the importance of doing this according to *human* nature rather than social institutions. For Kant (1960, 3), man needs to be 'turned aside from his animal impulses' and through education be led towards 'humanity, his appointed end'.

Snaza (2013, 2020) challenges this conception of education where the *telos*—endpoint—is to learn to be fully 'human', particularly where what it is to be human is based on Western conceptions of 'Man'—white, European, male, heterosexual and able-bodied. Such centring of Western Man has been performed for so long in education it has become normalised, disappearing from view. Snaza calls instead for education in which the concept of Western man is taken as a *starting point* for enquiry, for exploring what it would mean to let go of being human as separate from and superior to all that is more-than-human and what it would mean to accept, reconnect and value the part of ourselves which is animal. This be-wildering is itself a bewildering process—a letting go of a clear path towards Westernised conceptions of becoming 'fully human'. Yet, it is this unsettling and the doubts this engenders that open up 'the possibility of love beyond the human'.

As an academic I feel that perhaps I should reach here for some learned texts such as hooks' (2000) reflection on love, compassion and healing; Freire (2000) on love as a commitment to others; Donna Haraway (2007) on our entanglement with the more-than-human and Snaza's recommendation of *Education out of bounds* (Lewis & Kahn, 2010). I do encourage you to explore these texts and I will examine hooks' ideas later in this chapter. However, it is the film *Paddington* (King, 2014), particularly its ending, which comes strongly to my mind at this moment. In the film, the taxidermist Millicent Clyde wants to kidnap Paddington from the Brown family who have taken him into their home, then kill him, stuff him and place him in a museum. Judy, the Brown's daughter, defends Paddington passionately, declaring that even though Paddington is from a different species he is still a member of their family. The film is problematic in many ways, for example it does anthropomorphise bears and

use species classification. However, it also allows for possibilities of humans encountering bears, learning from bears, resisting killing bears and other animals for human glorification and advancement. It challenges limiting notions of kinship. These are all issues which can be discussed with students as *starting points* for exploring the possibilities of love as forging a ‘new kinship bestiary that is strange, and in that strangeness opens itself up to new forms of learning out of bounds’ (Lewis & Kahn, 2010, p. 147).

Be-Wilder-Ment and ‘Wild Pedagogies’

The Crex Collective (2018, p. 6), who include The Hebrides as a co-author, provide another interesting way to consider bewilderment/ bewilderment, exploring opportunities for what they call ‘wild pedagogies’. They argue that:

If we take seriously the notion that the natural world is not made up of inert entities; but rather, it is filled with active, self-directing, and vibrant participants, then our attention towards the affordances of place-based education changes. In seeking to teach with nature, educators become open and available to the range of facts, knowings, and understandings that places have to offer.

They highlight how ‘Such attention involves carefully listening to available voices and building partnerships ... and it will, at times, involve actively de-centring the taken-for-granted human voice and re-centring more-than-human voices’ (6). A starting point for such listening can be as simple as encountering, attending to a plant breaking through the tarmac in a school playground. Opportunities to be found further afield could include at an urban or rural farm, a river meander, a local or national park, a forest, a seashore. The Crex Collective provide what they call six touchstones, or jumping off points, for wild pedagogies. These are nature as co-teacher; engaging with complexity, the unknown and spontaneity; relocating the wild (which can be found everywhere); the need for time and practice; socio-cultural change (and the recognition of

education as a method of political activism) and the need to build alliances within the human community and beyond. They emphasise that these are starting points rather than a prescriptive list. They include questions to encourage teachers to reflect on their existing practices in relation to these touchstones. Wild pedagogies foreground a role for intersubjective first-hand encounters, for care-ful and attentive entanglements with the more-than-human, for embracing the wildness within each of us and the bewilderment and doubts this can engender. This is not an easy move, or one that is guaranteed. However, with encouragement, fleeting moments can emerge, moments to treasure rather than shut down, moments which open possibilities of rupturing existing Westernised educational framings and supporting the bursting through of new ways of knowing, being and acting in the world.

Returning to the River

I place my feet in the cooling water of Thames. I see the flowing water glittering in the sunshine, the spikey reeds, the mossy stones and thick trailing weed. I am lulled by birdsong, the buzz of insects and the occasional distant sound of a car. Reflecting on The Crex Collective's touchstones my mind turns to the poem *At the River Clarion* (2009) by Mary Oliver. In this, Oliver emphasises the importance of giving time and patience to listening to the voices of the more-than-human, highlighting how one does not hear them in a mere hour or day. As she comments, it is as though 'selfhood has stuffed your ears'. Whilst visiting the countryside I have seen primary-aged (four to eleven) and secondary-aged (11 to 18) students on field-trips, busy, busy, busy in the landscape, measuring, weighing, making notes, urged on by their teachers. But even amongst this busyness, moments of encountering, entangling and care-ful listening emerge when a student is caught up in the intricate pattern in a stone, the smoothness of a rock shaped thus by a river, the swaying movement of grasses rustled by the wind. As teachers we can encourage such moments and support students to find ways to respond holistically, tenderly, creatively to these in ways which, to use Suzawa's (2013) phrase, exceed narrow cognitive processes. As I continue to listen, I feel the love,

stretching back through deep time, that this life-giving river gifts. I reflect on Arendt's (2006a) words, introduced earlier in the chapter, that education is a place where, as teachers, we decide whether we love our children enough neither to abandon them to their own devices nor 'to strike from their hands something new, something unforeseen by us'. Introducing love into education runs a risk of sentimentality but here Khatibi's (1995) conception of *aimance*—which brings together friendship (*philia*) and love (*eros*) is helpful. Zembylas (2017, p. 23) describes how Khatibi's *aimance* is a 'constructed term for affinity, affection, tolerance and friendship' and a 'powerful concept for invoking love as a force for social change' (23). Love, understood as *aimance*—'opens possibilities for affective solidarity toward and with otherness' (Taylor & Gannon 2021, p. 120) and introduces ethico-political practices in education by encouraging educators to develop pedagogies that attempt:

to address wound, injury and suffering within a frame that takes into consideration histories of violence, oppression, and social injustice. (Zembylas, 2017, p. 23)

These ideas resonate with The Crex Collective's (2018) touchstone six which emphasises building community with others and 'extending the number of communities to which each of us belong' (33). The Collective highlight the importance of reflecting on 'the complex inter-dependent composition of those communities that always implicates the more-than-human' (33). One is both supported and challenged by the members of these different communities. Such communities are 'lived spaces', to use Lefebvre's (1991) conception, which combine one's external conceptions and one's perceptions of a space, including the power relations within them, with one's inner mental life. They are spaces where one can depart from the status quo and find 'belonging, friendship, and joy' and the supportive communities we all need 'as we attempt to re-wild our lives, pedagogies, and the places where we live' (The Crex Collection, 2018, p. 34). They are spaces where together, as members of such supportive communities, we can take risks; where we can explore bewildering questions which do not have ready answers and also find embodied, creative ways (understood in the broad sense discussed in this chapter) to explore

questions and issues we cannot even put into existing language. Such, supportive communities have potential to open ‘an orientation to the future that admits of the possibility of future transformations that exceed and resist colonisation by the constraints of the present’ (Facer, 2016, p. 69). Such transformations can open *unexpected, unforeseen* ways to address the ecological and climate threats currently destroying both more-than-human and human life and flourishing. Supportive communities can be spaces to practice what hooks (1995) calls ‘beloved community’ where ‘loving ties of care and knowing bind us together in our difference’ (hooks, 1995, pp. 263–264 cited in Snaza, 2020, p. 119). As humans, especially those raised with Westernised conceptions of the world, we need to extend this love to include the more-than-human as well as challenge the so-called boundaries between the self and the other. ‘Saturating’ spaces of learning with love (Snaza, 2020) opens potential for students to overcome the possible fears and barriers which bewildering and be-wilder-ing education can engender. Practicing beloved communities can encourage students to respond attentively and affirmatively to the opportunities which can burst through when existing androcentric, anthropomorphic, Eurocentric (Westernised) educational framings are ruptured. This is not an easy move, but as hooks identifies in *Teaching to Transgress* (1994, p. 207):

The classroom [and other learning spaces - my addition], with all its limitations, remains a location of possibility. In that field of possibility, we have the opportunity to labor for freedom, to demand of ourselves and our comrades, an openness of mind and heart that allows us to face reality even as we collectively imagine ways to move beyond boundaries, to transgress. This is education as the practice of freedom.

Notes

1. The word bewilderment has its origins in the word ‘wild’. First recorded in the 1680s it is a combination of ‘be’, ‘thoroughly’ and ‘wilder’ i.e., ‘lead astray’ or ‘lured into the wilds’ ([Vocabulary.com](https://www.vocabulary.com/dictionary/bewilderment), n.d.). In this original

understanding there is a negative connotation of the wild which this chapter challenges.

2. Rivers are often associated with river gods and nymphs with Thames known as a male deity - Old Father Thames (The Londonist, 2015). Just as we do not place ‘the’ before a name (i.e. the Susan), I do not place an objectifying ‘the’ before Thames.

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Part II

Dialoguing



5

Journeying with Affective Embodied Empathy for an Ethical Understanding of Environmental Education

Heather Wren

Introduction

To watch the sun sink behind a flower clad hill. To wander on in a huge forest without thought of return. To stand upon the shore and gaze after a boat that disappears behind distant islands. To contemplate the flight of wild geese seen and lost among the clouds and, subtle shadows of bamboo on bamboo.

Zeami Motokivo

With increasing stresses being put on the planet due to climate change, it is important that issues relating to the effect of the Anthropocene are addressed as quickly and as efficiently as possible. Empathy is a key characteristic of the complex relationships between the human and the more-than-human which can be explored to address these issues when conducting environmental education (Gruen, 2015). However, historically empathy has been seen as only a human characteristic in

H. Wren (✉)

School of Education, University of Exeter, Exeter, UK

e-mail: hw474@exeter.ac.uk

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environmental education which means the issues have only been addressed from the human perspective (Clarke & McPhie, 2020). Increasingly, research argues that trying to understand the world from the human perspective only is not conducive to a deep understanding of the problems of the Anthropocene. It is for this reason that this research looks at environmental empathy in education from a more-than-human perspective (Abram, 1996) by seeing empathy as affective and as emerging relationally. In this chapter, I invite you to join me on an exploration of an affective environmental empathy to create a space of co-creation between the more-than-human where new beginnings and new ways of understanding environmental education can emerge.

This chapter explores a novel perspective on environmental empathy in education that emphasises affective relationships between humans and the more-than-human elements of the environment. The concept of empathy is used as a catalyst for change within ethical environmental education. This form of empathy goes beyond human-centric perspectives and instead focuses on affective empathy that encompasses diverse ecological connections which express numerous ecologies of belonging (Braidotti, 2013). The notion of affect is understood as a range of bodily relations that mutually impact each other (Massumi, 2015). By adopting this viewpoint, the chapter creates ruptions by moving away from traditional Western environmental philosophy, which tends to separate humans from other species and perpetuates human dominance over nature (Lindgren & Ohman, 2019). Instead, the emphasis is placed on the more-than-human, while still recognising the essential role of humans in the research (Büscher, 2022). The chapter argues that by understanding the emergence of this type of empathy, it becomes possible to cultivate an ethical mindset that involves thinking and acting in harmony with the environment, aiming to address the adverse consequences of the Anthropocene.

I argue that the shared environment we will entangle ourselves within contains affective empathetic relations between the more-than-human which make up assemblages containing many groups of connections, and which are further connected and disconnected through each other (Deleuze & Guattari, 1980). These assemblages emerge as part of my research process, which are then diffracted. Diffraction is a method of

reading insights through one another in attending to and responding to the details and specificities of relations of difference and how they matter (Barad, 2007, p. 71) and is a way to begin to create ruptions through shifting thinking in new directions. It also maps the effects of difference within them when theory is read through the data alongside the experiences (Barad, 2007), creating new becomings.

I invite you to join me on my research journey through co-creation to gain a richer understanding of the entanglements between the more-than-human in environmental research (Fox & Alldred, 2022) so that you too can create ruptions in your own institutions. The invitations draw from my PhD research site where students took part in a 'Ecosceneography' session making art from outside environmental materials to create a scene as part of the Global Science Opera: a project which creates productions within a global community using science, art, technology and creativity. The research is conducted under the guidelines of BERA (BERA, 2018) and ethical approval is provided by The University of Exeter ethics committee. Consent is gained from all participants to include photographs, recordings, quotations and artefacts which are anonymised, and the right to withdraw at any stage is given. The ecosceneography session is designed by the Norwegian teacher to provide an insight into what it is like to attempt to creatively think-with-the-environment to shift old ways of thinking about environmental education.

N.B—You May Need a Smartphone or QR Reader to Participate

As we (me and you, the reader) construct assemblages and diffract together it is important to see the process, as an enfolding of nonlinear time, space and matter takes place through what Barad (2007) refers to as intra-activity. Intra-activity is where subjects are seen as entangled rather than separate from each other in which objects emerge. Within interactions time, space and matter are relationally constructed between bodies from which continuously changing boundaries emerge. I see this as a lively space from which new thoughts, ways of seeing and new beginnings arise. We also need to be aware of the agency of the entities which

emerge from phenomena within the intra-actions which have their own life force (Braidotti, 2013) or vitality (Bennett, 2010) where things act to disrupt usual ways of being and thinking.

Because I see myself as part of the assemblage of my research, I draw from Taylor's (2016) diffractive musing which offers an approach for academic writing through a series of sensory experiences. This draws upon slow theory (Ulmer, 2017) to think about how to become aware of my body in relation to the more-than-human whilst writing, to take time to contemplate and let things emerge. Taylor (2016) suggests that this allows for the spreading of knowledge rather than the reduction of it. In normative research it is usually elements of human agency that are drawn from to justify phenomena (Pickering, 2001), however in Taylor's (2016) embodied diffractive musing, 'Individual agency is reframed as the co-constitution of confederate agencies in which agency is a becoming-together in an ongoing ebb and flow' (p. 140). In my research this includes the ebbs and flows of agency within the intra-actions between students/teachers/researchers/environment during sessions in Norway as well as the intra-actions between researcher/data/materials/theory following the sessions. By paying attention to these ebbs and flows of agencies in my research, it helps to make me aware of where power lies and if there are any concerns in relation to human subjectivity. In doing this it brings to the forefront the boundaries, properties and the emergences of differentiation whilst remaining entangled as phenomena within the research apparatus. I then ask myself what 'becomes' from this?

Agency is not defined as belonging to something or someone but is seen as a 'force, flow, affect and intensity distributed across a multiplicity of different human-more-than-human modalities' (Taylor, 2016). This means that when I am discussing particular human or more-than-human agencies within the research process alongside the emergences that have appeared throughout the research, I acknowledge that agencies that are brought to the forefront are affected by other agencies.

In the following sections I will highlight moments that have glowed to me (Maclure, 2013) throughout the journey, both within and beyond the ecosceneography making workshop. Whilst explaining the intra-actions during my research process, I attempt to understand the ebbs and flows of agencies by thinking about where they lie in relation to the human and

more-than-human and what this means for agency. These are explained at the beginning of each section using italics. There are also invitations throughout for you as a reader to immerse yourself further into my research so that you can also begin to understand how to think-with-the-environment. I am hoping that if you grasp this idea, you will take it to use within your own teaching/research so that a new understanding of environmental empathy can help to change the future of education incrementally. Instructions to take part are written in capital letters.

In the following sections there are different degrees of the enmeshing of agency between the human/more-than-human when the human opens their senses to allow the more-than-human to come to the forefront. More agency flows towards the human when I invite you to do the task.

Opening up Bodies...

To begin, I open my body to begin practising embodied diffractive musing. To do this I open my senses and move slowly around the site and wait for invitations from the environment to emerge. Invitations from water (Fig. 5.3), wind, colours and movement emerge, which I record using photography, video, sound recording, drawings and note taking. I place them on a PADLET page (a webpage which allows us to place images, recordings, drawings, writings together) to create my first assemblage (Fig. 5.2). Creativity emerges from this when I feel compelled to create a page relating to the intra-actions (Fig. 5.1).

READER INVITATION—*I WOULD LIKE YOU TO TRY TO ENGAGE WITH DIFFRACTIVE MUSING BY GOING OUTSIDE AND OPENING YOUR SENSES. GO ON A WALK IN YOUR GARDEN OR IN YOUR LOCAL AREA AND LISTEN, LOOK, FEEL, SMELL, TASTE (IF IT'S SAFE) THE ENVIRONMENT AROUND YOU. RECORD THE EXPERIENCE IN A WAY THAT YOU FEEL COMFORTABLE WITH: WRITE THINGS DOWN, TAKE PHOTOGRAPHS AND RECORDINGS, DRAW PICTURES...*

In the following section I see assemblage building as more of a fluctuation between the degrees of enmeshing of human/more-than-human agency as more people are trying to think with the environment thus fore-fronting it in different ways. However, thinking in relation to subjectivity means that the degrees of enmeshing of human agency begins to increase again.

Assemblage Building Together

Creating the assemblage in the PADLET creates a snapshot of the past/present/future where each offering's 'past is never left behind, never finished once and for all, and the future is not what it will come to be in the unfolding of the present moment' (Barad, 2007, p. 234). However, if the PADLET is not being continuously intra-acted with, or not viewed, then there is a possibility that new becomings will cease to emerge and it will become stagnant because, as I discovered earlier, it is only through intra-actions that new becomings are produced. It is for this reason I have chosen to ask you to contribute to the PADLET.

READER INVITATION—*FIRST LOOK AT THE SNAPSHOTS OF THE PADLET BY SCANNING THIS QR CODE FROM YOUR PHONE OR CLICKING [HERE](#).*



QR Code 3 Snapshot folder

SCAN THE QR CODE BELOW TO OPEN THE PADLET ASSEMBLAGE ON YOUR PHONE OR CLICK [HERE](#) TO OPEN ON YOUR COMPUTER AND FOLLOW THE INSTRUCTIONS WHICH ARE IN THE PINK BOXES.



QR Code 4 PADLET

By placing on the PADLET the photographs, images, videos, drawings and writings I gathered whilst thinking-with-data-and-environment, questions have emerged which I have dotted around the assemblage. There are also places where I feel unable to describe the affective/empathetic moments of the experience between the human/more-than-human so this is where I ask you to try to experience this to gain a deeper understanding of the affective intra-actions encountered.

ONCE YOU HAVE INTRA-ACTED WITH THE PADLET, PLEASE TAKE A SNAPSHOT OF IT AS SHOWN IN Fig. 5.2 AND PLACE IT IN THE SNAPSHOT FOLDER SO THAT OTHERS CAN SEE THE DEVELOPMENT OF THE NEW BECOMINGS THAT WILL EMERGE WITHIN EACH INTRA-ACTION.

By placing your own experiences of the intra-actions you have recorded in the task above into the PADLET, we together (and with the students, teachers and environments) are not only learning about our own places but also each other's. Here, place is viewed as a continual process of the learning and performing of meaning where a sense of place is connected to an embodied way of knowing about socio-material practices (Page, 2020). When many bodies (both human and more-than-human) are involved in creating this *place-world*, a transdisciplinary approach to knowledge building emerges because both the human and more-than-human from different areas of knowledge, expertise and experiences are intertwined within the research rather than separate from it (Sadownik & Gabi, 2021) in what Haraway refers to as *webbed existences* (Haraway cited in Sadownik & Gabi, 2021). Here, I argue that an affective

environmental empathy is emerging from different senses of place which can alter usual ways of thinking about the environment.

Suddenly, in this section, I feel that the degrees of agency increase abruptly towards the human because I begin thinking about myself in relation to place to understand where I sit within the entanglement. However, thinking about self is still connected to thinking-with-the-environment which means that more-than-human agency is still present because it is forefronted.

The Invitations of Water

READER INVITATION—*THINK ABOUT THE PLACE YOU LIVE OR A PLACE YOU HAVE VISITED FOR YEARS. WHAT DRAWS YOU TO IT? WHAT INVITATIONS EMERGE FROM IT? WHAT DO THEY MAKE YOU WANT TO DO?*

Following a pause for thought where I reflect on the place where I live, my relationship with water (sea and freshwater ley) and my positive experiences I have had here, I notice that the sea draws me to it on a regular basis. Ahmed (2004) argues that affective bodily memories are *stuck* to places and specific bodies which could mean that my attraction to the sea could be related to my positive embodied experience of this place over the years. It is for this reason I begin to create another assemblage attending to the invitations of water (Witt, 2018) by gathering photographs, recordings and writings relating to the glow moments of water in my data, whilst thinking about the entanglement of bodies that brought this to the forefront.

Following this, I am drawn to reading about water which makes me feel closer to it. Consequently, I choose to swim with the data to cut through the assemblage created by the invitations of water. By swimming at my place of home whilst thinking-with-water-data I am affectively intra-acting with water which holds the past and is enfolded with the present and the future (Barad, 2007). The ‘lapping of waves’ enacts the vitality of the world (Piotrowski, 2020) through vibrant affective matter where political potentials such as activism emerge from agentic assemblages such as this. This is because they contain past, present and future relationships between the social and the cultural which, when entangled, can bring out new and different beginnings (Bennett, 2010).

To begin the wild-swimming-thinking, I turn to ‘wild-thinking’ (Witt, 2018) to ensure that I continue to read-data-with-environment, for continuing agency of the more-than-human. In this way I see data moving, me moving with data and data moving me (Ulmer, 2017 in Koro-Ljungberg et al., 2017). For wild-swimming-with-data I turn to Shefer and Bozalek (2022) who argue that using a wild-swimming methodology allows you to explore how talking about subjects (such as environmental justice relating to my research), would change within differing environmental situations such as the ocean. This helps to give me a new perspective of affective embodied empathy in different environments. Swimming-writing-thinking draws from slow scholarship (Ulmer, 2017) and hauntology which intimates that bodies of water are entangled with the past, presents and futures which speak in particular ways to the impact of humans on each other and the planet. Therefore, by swimming-with-data-thinking I am again embodied and entangled with the intra-actions between data/environment/subjectivity. Immersing in water allows the body to move in different ways, and because the sea is constantly moving, this means embodied thinking becomes fluid and shifts and changes with the movement of the sea.

Before I enter the water, I read each quotation and look at the images which make me think of different questions related to environmental empathy for environmental justice. For example, the quotation: ‘And the sound. When we were in the woods and heard the water rushing ...I think that was one of the strongest sensory things I can remember. I can see a lot around me, but sometimes it’s almost too much. So hearing is... it goes in, while what I see, it becomes too much’ (Norwegian Student) makes me aware of the fact that certain senses may become overloading whilst swimming and that I need to stay aware of the others. The quotation: ‘The drops on the way into the cave, the water drops in the roof and right outside the cave there was moss around, but it was very wet, it was so weird, it looked like green jelly. It was very... touched it and was like “Ugh!” (Norwegian Student), makes me think about how the sea is a part of the bigger picture of life. Bennett’s (2010, p. 107) quotation ‘...do sandstorms make a difference to the spread of so-called sectarian violence? Does mercury help enact autism? ...Can a hurricane bring down a president?’ together with Fig. 5.3, which shows reflections and ripples in



Fig. 5.4 Looking out to sea

the water makes me wonder about how the sea affects other matter which affects other matter in political activism? Furthermore, Shefer and Bolazek's (2022, p. 129) quotation: '...we are not only concerned with thinking about the sea or oceans as object of research, but as space, place and medium to think with and through, to diffract knowledges of ocean/s through other knowledges', and the image looking out to sea (Fig. 5.4):

fills me with curiosity about what water 'knows'. Finally, the quotation:

...sea swimming as a hauntological, re-storying project for a justice-to-come scholarship; sea swimming as eco-critical feminist scholarship for thinking the interrelationality of current planetary ecological and social challenges; and sea swimming as Slow, wild scholarship for disrupting normative scholarly logics towards an ontology of relationality and response-ability (Shefer & Bolazek, 2022, p. 130).

and Fig. 5.5 which shows remnants of other things and shadows in the water makes me wonder about the political implications of water.



Fig. 5.5 Shadows and remnants in the water

Following these thoughts, I prepare myself to go into the sea with the following questions in mind:

- What emerges from all senses in relation to an affective empathy?
- What does the sea teach me about the bigger picture of the world?
- What does the sea tell me about ongoing affect of matter in relation to political activism which emerges from an affective empathy?
- What does the water (sea) know?
- What are the political implications of water?

I go to swim...

In this section, agency shifts between humans and more-than-human entities in three cycles. Each cycle begins with a description of matter from the more-than-human perspective, accompanied by my reflections on its significance. I then search for research related to these reflections, which tends to prioritise human agency. This

cycle resembles Pickering's (2012, p. 4) concept of a 'dance of agency,' where actions and reactions occur between humans and the world, emphasising agency distribution and power imbalances. Kipnis (2015) suggests that humans often make choices when uncertain, which brings human agency to the forefront, as seen in my research. However, the author argues that this type of agency is not about power dynamics but rather a different form of agency. Therefore, the affective and empathetic interactions in the 'dance of agency' revolve around differences and their outcomes.

Swim 1

When I return, I feel compelled to write down as much as I can about the intra-actions (Fig. 5.6):

I feel that the sea is relentless and, when I think about this in relation to the question 'what does the sea know?' it makes me think about how knowledge building is relentless. I also think about how the water moves around my body and that the force of the waves is dislodging some of my skin cells which are carried off. I feel that I become part of the sea and it makes me think about the question relating to what the sea can tell me about the world. It tells me that it carries a lot of different bodies and parts of bodies even though they can't always be seen. This means that when intra-actions take place with the sea, they are not just with water. Wunsch (in Duncombe, 2019) argues that the ocean holds memories from past climate states, and this is evidenced through differing states of matter in the deep sea. Thus, the intra-actions take place between water, visible and invisible bodies and parts of bodies. For example, at the beach where I live, a significant accident took place during Operation Tiger, a Second World War exercise for D-Day landing where many American soldiers were killed. When this event occurred, the soldiers' blood spilled into the sea, and it was dispersed throughout it. I argue that it is still there, parts of the soldiers still exist within the ocean, so it holds the history of the horrible event that took place that day, even though it can't be seen anymore. Interestingly, a tank, which sat at the bottom of the sea since Operation Tiger has been raised and sits in the local car park as a memorial for those who lost their lives. The tank, rusted by the sea but preserved with a special paint, is a visual representation of the lives that were lost that can no longer be seen. But the tank, which was present during the moment of

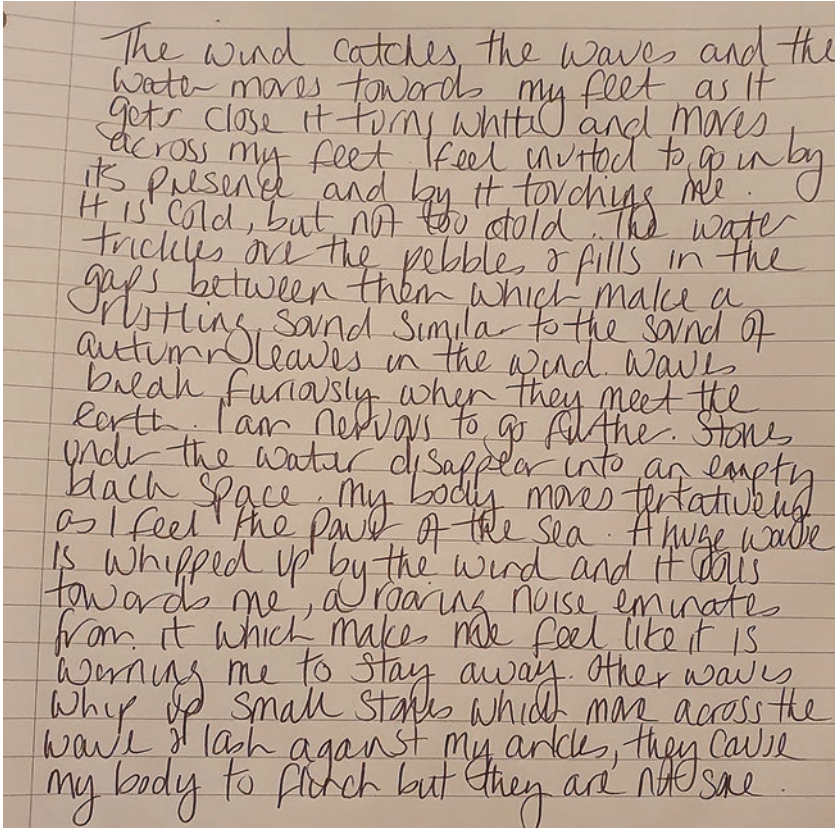


Fig. 5.6 Notes

bloodshed, was rusted by the sea which contained the blood of the soldiers. This means that as a memorial to the dead soldiers:

It alludes to the complex entanglement of the unrepresentable and the representable, or the narrative and the bodily, that is, a mixture of procedures that form together a multidimensional set of information stored in the representational-corporeal memory, translating into a complex recollection of the traumatic event. The memorial character of the site is in fact inscribed into its deep and hidden materiality, which, nevertheless, cannot be accessed through visual means. It remains subcutaneous, enfolded, etched in the materiality of the place, yet—in fact—its physical traces or material wounds could not be easily narrated in visual terms. (Golanska, 2017)

So, the tank memorial becomes part of the entanglement of my research because it holds memories of place, not just of the shocking events of operation Tiger, but also of every memory the sea obtained throughout history which played a part in the rusting of the metal. In this way, when thinking-with-the-sea in relation to place and its history, it can help to answer the questions relating to the political implications of water through affective, empathetic intra-actions because it can bring to the forefront invisible histories and events which have been forgotten about but are relevant to the present and future of the place in question (Fig. 5.7).

I feel like the sea's behaviour is warning me of its power, through its actions. Bawaka Country (2022) argues that the sea (water) has its own language which is understood through its patterns of behaviour such as

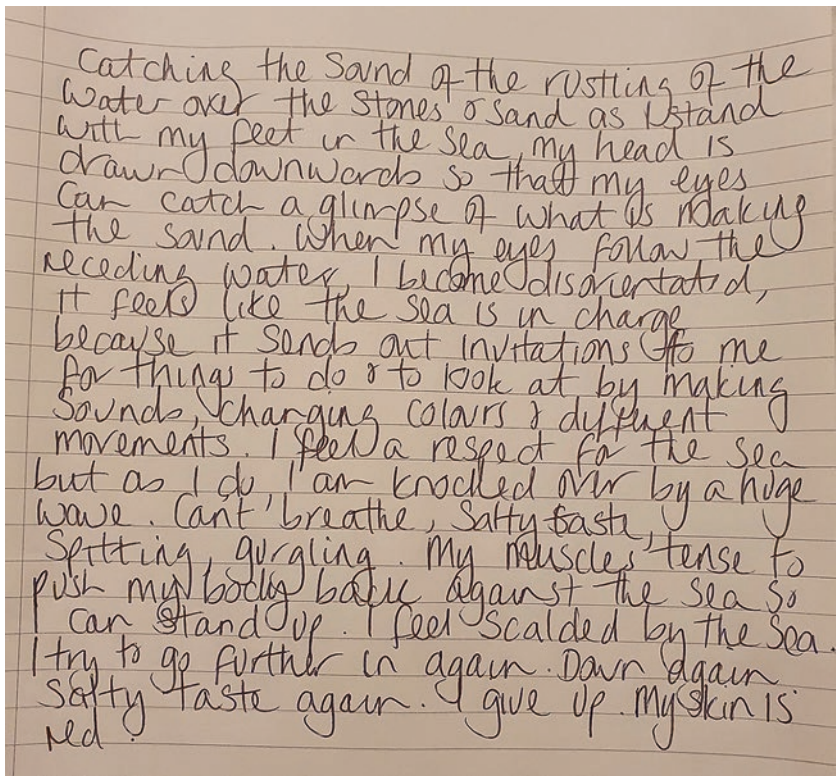


Fig. 5.7 Notes

sounds and movements of which they call 'wäŋa'. However, it is important for me to understand that 'wäŋa' (p. 272) consists of more than just water. The ever-changing tides and winds are also part of the patterns of behaviour of the sea (Gooley, 2017), meaning that when I open my senses to think-with-the-sea, I need to be aware that there are things beyond sounds, things I can see and can taste, feel and smell that are also emerging. Interestingly, some Indigenous peoples (The Anangu) have adopted an embodied type of synaesthesia (when senses merge together), which is culturally constructed through being-with the land (Young, 2005). For example, when the rain falls in the Western Desert the ground becomes a bright green and a strong odour is released from the leaves of the trees on the ground. The Anangu, therefore, understand bright green and the strong odour to mean water and the beginning of growth. The Anangu believe that all bodies on the land are animated and have the potential to be absorbent of one another (Young, 2005). Therefore, Young (2005) argues that all bodies are equally formed with the land through social relations which the author calls a 'Western Desert Synaesthesia' (p. 66). This can act as a form of sensory mapping which can be used to help to understand how both human and more-than-human are connected to the environment (ibid.). To this end I argue that paying attention to affective empathetic intra-actions within a local environment could lead to a bodily experience of the land in which the senses merge, leading to a deep understanding of the environment. This helps to answer the question above relating to what emerges from my senses in relation to affective empathy (Fig. 5.8).

Here, it feels to me as if the sand is now demonstrating its power, the power to slow me down. In environmental research it is often claimed that slowing down leads to more attentiveness of the surrounding area, increasing sensitivities to the possibilities of other-than-human (Witt, 2018). Interestingly, the stones and sand alert me to its presence by slowing me down so that when I finally sit down, I start to think about them more. I start to wonder how the stones have eroded through meetings between sea/other stones/rocks/wind, which leads me to thinking about how long it has taken for the sea to erode a stone to a piece of sand? Linking this to the questions above relating to the political implications of water, I think about how matter meeting matter kickstarts political

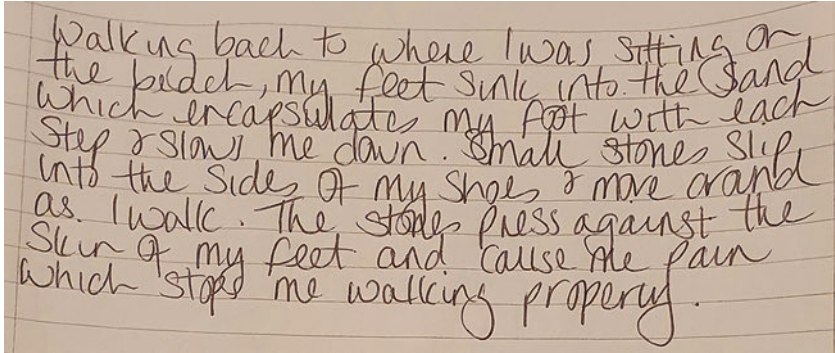


Fig. 5.8 Notes

activism because the more-than-human is eroding evidence of political bloodshed at this place. Here, I believe that the more-than-human becomes a silent activist alerting me to the fact that it has hidden evidence of a horrible past through the awareness of affective empathetic meetings between matter. Once alerted to this, I then begin to think about other evidence the sand has hidden over the years which leads me to read about the political history of this place which, in time, could be brought to the forefront of discussions about this area. However, opening the idea of more-than-human activism reminds me that I need to be aware of how the research is used from the position of the researcher and that power relations remain neutral even when it is published. This means that if hidden political histories are brought to the forefront, I need to ensure that they are discussed in such a way to ensure that the more-than-human is part of the discussion.

In this section I feel shorter, degree changes between the ebbs and flows of human and more more-than-human agency. First, I try to write poetry based on immediate feelings whilst deciding to record the swim so that the weighting of agency is shared more with more-than-human. The degrees of agency seem to shift back towards the human when I use thought to consider what emerges from the poetry writing and then thinking about how the digital mediates film making. During the making of the film, these shifts seem to get even shorter and quicker as decisions are made by me to an extent but what the camera captured is purposefully left as it is. I feel that agency is then extended to the reader, environ-

ment and technology as the film is played and watched. Here, human control, thought and action mean that shorter, quicker degrees of enmeshing of more-than-human become present. Human consciousness means that they can see themselves as separate from everything else in the world and can therefore make choices about things that can have an effect on others. However, if agency is understood to be part of all things but as a different type of agency as I have discussed above, then ethical choices and actions need to be made with this in mind. (Kipnis, 2015)

Swim 2

Because I felt that the sea pushed me back for the first swimming-thinking-with-data activity, I decide to swim again on another day. The day I choose to swim is a calmer day, so I am able to immerse myself in the water. This time, taken from the emergences of the first swim, I swim with an awareness of the memories of place; of embodiment relating to my senses; of understanding the environment as an activist with the things it brings to the forefront; and of power relations and ethics. This time, I strap a Go-pro camera to my chest to record the experience.

As I immerse myself in the water, I pay attention to how my body reacts in relation to my senses. I feel compelled to create a poem relating to the experience so I can show how the senses are connected to the moment of immersion (Fig. 5.9).

I write the poem as one sentence because it reflects the experiences of all of my senses which are engaged in the moment. I think about how I understand the environment through the socialisation of my embodied senses (Young, 2005). I write again (Fig. 5.10):

To this end, the awareness of my embodied senses activates my memory to bring to the forefront what I have previously learned about place. It is commonly known that senses such as smell are linked to the memory of autobiographical experiences which can also be evoked by pictures and words (Mouly & Sullivan in Menini (ed), 2010). This means that when experiences emerge through the senses, they are pedagogical because they teach something that is then ingrained to memory. However, Mouly and Sullivan in Menini (ed) (2010) also state that many of these sensing memories are ingrained between the ages of 11 to 20 which may explain

Shifting smooth rough dark/light mounds/
 Rustling and quiet roaring/skin tingling
 Sometimes high, sometimes low/tensed body/
 Open mouth gasping/Bubbling & splashing
 Salty taste/muffling low booms/fresh, salty,
 fishy aroma/lightness/lapping/fast moving
 mounds/flickering/shifting bodies/salty/
 wetness/connectedness/feeling free!

Fig. 5.9 One-sentence poem

The tingling of the water on my skin tells me the water is not too cold which alerts me the fact that it is not winter. The gentle sand of the water running off the stones together with the light from the sun passing through the water allowing me to see the bottom of the sea, tells me that the sea is calm so it must be summer. This tells me I can swim for longer without getting cold. It also tells me that the mackerel will soon come, followed by the tuna which will attract more fishermen to the beach. memories of place are ingrained in this moment because I already know that the mackerel come at this time of year.

Fig. 5.10 Notes

why Indigenous peoples such as the Anangu have a deeper understanding of their environment due to them being connected to the land from birth. To this end, by being aware of my senses as embodied through affective empathetic intra-actions, it has alerted me to things about the sea that I wouldn't normally notice which has, in turn, activated my memory of what I have previously learned about place. In this way, I have become entangled in the process of activism by opening myself up to more things being brought to the forefront.

To further this entanglement, it is essential that I also include the digital which has emerged through the assemblage building and diffraction process through the various ways I have captured and arranged 'data'. Adams and Thompson (2016) argue that '[t]he digital is encroaching on and penetrating our flesh, infecting all aspects of lifeworlds and has thus inaugurated persistent questions about our relationship with more-than-human and the "more-than-human" world' (p. 5). To this end, during data collection, it is difficult to move away from using digital objects to assist so it is necessary for humans understand technology as co-creating beside them. By me understanding digital technology as both a co-researcher and a participant in my data collection and film making sees technology as having an *essence* which replaces the concept of *being* with the concept of *form* where the *essence* of technology is a process of formation, and essentially a new becoming (Hoel & van der Tuin, 2013). In this way, the data emerging from my data collection, assemblage forming and thinking comes into being through the mediation of technology by also being agentic. I place questions emerging from this into digital software to create an image I can use to remind me of the agency of the digital (Fig. 5.11):

I decide to put the recordings of my intra-actions with the sea and water data together in a film to see how agency emerges from the digital and to provide you with a multisensory experience of the swimming-with-data activity. First, the digital devices record parts of the wild swimming and associations with the thinking around it as an emergent process as I leave the film to record throughout the whole experience. Individual films from the first wild-swimming-thinking place themselves into a

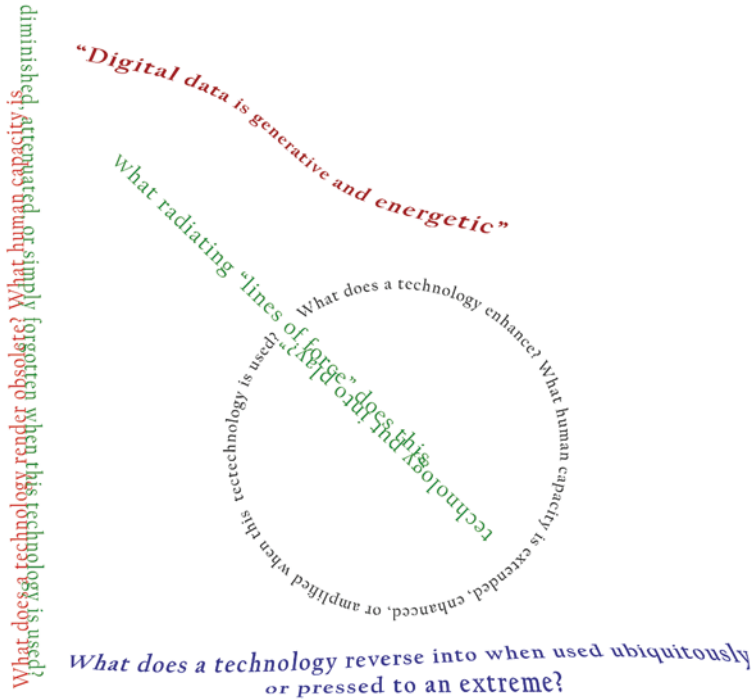


Fig. 5.11 Digital notes

folder at random when I attach wires between devices. These are imported by me linking communication between the computer and the software and each individual film is organised in no order within the software. The films are left in this order. The film from the second swim is overlaid over the film from the first swim using the same process so that the entanglement between the two is recognised. The sound is left to merge from each film which means that the dominant sound is heard more.

READER INVITATION—IF YOU HAVE ACCESS TO THE SEA, GO AND GET YOURSELF A CUP OF SEA WATER TO SMELL WHILST WATCHING THE FILM. IF YOU ARE NOT NEAR THE SEA YOUR SMELL SENSES SHOULD BEGIN TO LINK TO THE SEA IF YOU BECOME IMMERSSED ENOUGH IN THE FILM. GET

YOURSELF A TRAY OF COLD WATER, TAKE OFF YOUR SHOES AND SOCKS AND PLACE YOUR FEET IN THE TRAY TO FEEL THE WETNESS OF THE SEA. OPEN THE WINDOW TO FEEL AND HEAR THE BREEZE OUTSIDE. SCAN THE QR CODE BELOW TO ACCESS THE FILM AND KEEP IN MIND THE QUESTIONS IN THE IMAGE ABOVE (Fig. 5.11).

OR CLICK [HERE](#)



QR Code 5 Film QR Code

Starting from the Middle for a Non-conclusion

By sharing my journey with you I am hoping that this chapter has given you an insight into what I mean by an affective, embodied environmental empathy through a sensory engagement with your environment. I also hope you were able to feel the entanglement of matter whilst feeling part of it at the same time. When experiencing this deeply, there may have been moments when you could not explain what you were feeling. It is within these moments that I like to think of this entangled empathy as similar to the Japanese theory of ‘Mono no aware’ (Prusinski, 2012, pp. 27–28). Mono no aware is described as an empathy towards things and is ‘the ability to discern and bring out the unique inner charm of every existing phenomenon or thing, to identify oneself with the object being contemplated, to empathise with its mysterious beauty’ (Prusinski, 2013, pp. 27–28). Also, in relation to the Japanese term ‘Yugen’ which means a deep understanding of the mystery and aesthetics of the universe

which cannot be described but should remind you of the complexity and the simplicity of the entanglement of life. This moment is:

Hidden behind the clouds, but not entirely out of sight, for we feel its presence, its secret message being transmitted through the darkness however impenetrable to the intellect. The feeling is all in all. (Suzuki cited in Prusinski, 2013, pp. 27–28)

If you did not arrive at these moments, go back and do it again or keep practising daily. You will get there.

Furthermore, by practising and understanding my process in relation to empathy I hope that you understand how knowledge is relational and that activism emerges from the affective relational intra-actions you have experienced:

Practices of knowing and being are not isolable; they are mutually implicated. We don't obtain knowledge by standing outside the world; we know because we are of the world. We are part of the world in its differential becoming. (Barad, 2007, p. 185)

In this sense, I argue that this practice can be actioned in any situation and through any educational subject by sharing the tasks I have set out in my chapter and adapting them to any classroom and outside environments alongside using creative methods for affective intra-actions to come to the forefront. If this is followed, I argue that ruptions which shift normative ways of thinking can emerge in all types of education going forward. In this sense, I understand affective empathetic relations as emerging from creativity and as a catalyst for ethical educational futures. Give it a try.

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6

(Ma)kin(g) Sympoietic More-than-Human Educational Futures

Sharon Witt and Helen Clarke

Living and Learning with a World of Relations

The authors of this chapter are inspired by living and learning with a world of more-than human relations as kin. Our kin come in ‘all shapes and sizes...’ (Van Horn, 2021, p. 2); we are entangled with multispecies plants and animals, materials, features and phenomena that shape the world. We are informed by traditional ecological knowledges and stirred by Wall Kimmerer’s (2022) wise message, of pedagogical significance, that ‘we’ve forgotten we’re surrounded by kinfolk’. We propose kinship as a verb of relating rather than a noun, where ‘we are not human beings, but humans being’ (Krawec, 2022, p. 124). From this perspective, ‘Earth - and everything within it - including all that creates what we call earth - is a verb’, where ‘all is in motion; all is relating’ (Van Horn, 2021, p. 3). So, we are careful, yet playful with language, and we endeavour to

S. Witt (✉) • H. Clarke

School of Education, University of Exeter, Exeter, UK

e-mail: k.a.chappell@exeter.ac.uk

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experiment with languages of kinning—generative, yet imperfect, incomplete and in formation.

Relationality is at the heart of our educative practice with children, teachers, and wider communities. In a kinship world view, humans are part of, rather than separate from, the world, and active in transforming how they relate with more-than-human kin. Throughout this chapter we apply the term *more-than-human* to suggest to readers that humans are always in relation, ‘never outside a sticky web of connections or an *ecology* of matter’ (Whatmore, 2006, p. 603). The world is not a scene or backdrop, but has potential for dialogue, if we are receptive.

(Ma)kin(g) in a Kincentric Worldview

Our work is positioned within posthumanist perspectives, which disrupt human exceptionalism. A kincentric view is a way of thinking and living with ‘a world of kin, grounded in a profound sense of the connectivities and relationships that hold us together, vulnerable and responsible to one another’ (Van Dooren & Chrulew, 2022, p. 2). A kincentric worldview requires a shift away from anthropocentric modes of living, being, and doing, which privilege humankind. In more relational and inclusive approaches, place is a creative companion that invites multiple engagements in a mesh of ‘intra-action’ (Barad, 2007), and where entities simultaneously co-emerge in new relationships (Rautio, 2014).

In this chapter, we explore ruptions in educational practice that open cracks through which learners might respond differently. Our practices put Chappell’s posthumanising creativity to work to ‘create and generate new ideas, actions, and phenomena’ (2012, p. 496). We implore educators to attune and attend to more-than-human kin in pedagogic practices that shift focus to include *all* participants, more-than-human and human. Close attention expands dialogue with the world; ‘responsive listening and dwelling-with that lingers, notices the particularities, variances, and nuances of things, and attends to the hesitant, temporal, and transitory’ (Kind, 2021, p. 1). Close engagement with more-than-human kin includes collaborative and collective making: making conversation, making time, making marks, making kin, (ma)kin(g). Our (ma)kin(g) plays

with Haraway's (2016) idea of sympoiesis (or making-with) to create spaces of collective enquiries. Experimentation energises our activities and enables emergence of surprising and unexpected possibilities through sustained proximity with places. This chapter purposefully draws the reader into productive and provocative questions, which may resonate with their experiences and encourage attention to more-than-human kin. Attending to intra-activity is embedded in our creative pedagogic practices—in dialogue, making, following emergence and generating questions.

We wonder:

What might kinning practices look like in a kincentric worldview?

Attending to Kinning Practices

'Relationality is a principle that is sustained and strengthened through practice' (Tynan, 2021, p. 601). Kinship is rooted in practices of attention. It is a way we can attend to 'what's happening' in spaces by noticing absences and asserting presences (Krawec, 2022, p. 102). As Kimmerer (2023, p. 1) believes, 'deep attention calls us inevitably into deep relationship,' and into richer understanding of places. Ingold (2013, p. 1) explains, 'It is, in short, by watching, listening and feeling - by paying attention to what the world has to tell us - that we learn.' To bring children directly into relationship with the world through affective, embodied, and sensory encounters is to bring learners into dialogue with more-than-human kin. Embracing a pedagogy that presents the 'world as multi-vocal, important, diverse, and deserving of respect' (Blenkinsop et al., 2017, p. 363) is a joyful practice for hopeful futures. We seek to turn up the colour and tune into the world so we can move forward, 'with a positive energy and an attention to the exploration of alternate possibilities' (Geoghegan & Woodyer, 2014, p. 219) for responsive educational futures.

Our *Pedagogies of Attention* (Clarke & Witt, 2017) are ethico-onto-epistemological practices (Barad, 2007, p. 185), that is, an entanglement of ethical caring, doing and knowing. Figure 6.1 illustrates the three

<p>It's ethico-</p> <p>Caring with the world</p> <p>Attuning to relational encounters</p> <p>Noticing details of everyday places</p> <p>Engaging actively and immersing all senses</p> <p>Caring-with attention.</p>
<p>And...It's Onto-</p> <p>Being with the world</p> <p>Being unhurried; pausing, lingering, dwelling</p> <p>Being playful; embracing emergence, complexity and messiness</p> <p>Being receptive to the invitations of a lively world</p> <p>Being-with attention.</p>
<p>... And It's Epistemological</p> <p>Knowing with the world</p> <p>Being open to enchantment, serendipity and uncertainty</p> <p>Being storymakers and storytellers; it matters what stories we tell</p> <p>Modelling appreciative attention, noticing in a respectful way</p> <p>Recognising & celebrating gifts in the company of more-than-human kin</p> <p>Attending in generous reciprocity with the Earth</p> <p>Knowing-with attention.</p>
<p>It's being in the middle</p> <p>Careful thinking, being and doing.</p> <p>...with Attention</p>

Fig. 6.1 Pedagogies of attention (Clarke & Witt, 2017)

foundations of *Pedagogies of Attention*: to *care* with places attentively is an ethical stance; to *be* with places attentively is to cultivate relationships; to *know* with places attentively is to value different ways of knowing, both literal and lyrical. A kincentric worldview underpins each foundation.

Within our educational context we put these pedagogies to work through *field-visiting* (Clarke & Witt, 2022), a new way to engage

MAKING-WITH
 mark-making, collaging, building, writing,
 composing, painting, gilding, folding, threading,
 constructing, arranging, doodling, tracing,
 weaving, drawing, knotting, MAKING-WITH -
 colouring,
 threading, yarning, MAKING-WITH -
 SYMPOIESIS

Fig. 6.3 Making with

Ingold (2013, p. 6) describes the relationship between thinking and making as an:

... art of enquiry ... where the conduct of thought goes along with, and continually answers to, the fluxes and flows of the materials with which we work. These materials think in us, as we think through them.

Making-with more-than-human kin is a radical act of ruption to change and transform knowing, thinking, and being. Our work is attentively creative—making-with new knowledges, generating questions, and finding agential cuts—as learners go field-visiting, attend to provocations, and reveal new combinations, connections, and relations.

To practise this method is not to describe the world, or to represent it, but to open up our perception to what is going on there so that we, in turn, can respond to it. That is to say, it is to set up a relation with the world. (Ingold, 2013, p. 7)

We wonder:

What educative stories unravel when kin yarn together?

Stories of Kinship Encounters

This section explores stories of place encounters as pedagogic intra-actions; opportunities to bring children into dynamic relations with more-than-human worlds in space and time, in generative ways. Our intention is to draw readers into proximity with places and practices, as ‘relationality is learnt from stories’ (Tynan, 2021, p. 597). We share two lively elemental, accounts that involve lake, garden, children, teachers, student teachers and researchers.

Both stories share commitment to creative field-visiting, as examples of emergent learnings—unforeseen and serendipitous engagements and responses—(ma)kin(g)s with place. Collaborative ‘research creations’ combine generative and scholarly practices in thinking-doing-making together, and experiment with relational responses (Springgay & Truman, 2018). The examples bring together a cacophony of materials, ideas, images, and questions. Our stories reveal exchanges of gifts in relational reciprocity; gifts of attention, insights, creative wisdoms, and makings. Through creating collage with Hiltingbury Lake and curating journal pages with Gilbert White’s Selborne Garden, we commit to putting our *Pedagogies of Attention* to work (Clarke & Witt, 2017). Each gift is an eventful and celebratory story, through space and time, guided by questions of kinship. Our diffractive stories demonstrate growing responsibility—new ways to be attentive and grateful with kinfolk, in ‘... making through thinking ...thinking through making...We cannot make the future without thinking it’ (Ingold, 2013, p. 6).

We wonder:

**What if we attune and attend to the presence of more-than-human kin
in education spaces and curricula?**

Research Creation 1—Collaging with Lake-Kin

Research Creation 1 (Fig. 6.2) is a gathering with Hiltingbury Lake, Hampshire. On a hot July day, we visited with sixty 9- and 10-year-old children, with ethical permission to include their data contributions. This more-than-human entanglement experimented with creative ways learners might be present and participate with multispecies worlds through acts of attention. We share research creations as we introduce assemblages as intra-acting entities in place. We bring readers closer to field-visit happenings through research creations, where data, theory and questions meet each other in unforeseen ways.

Collages are collections of found texts, images and textures that are arranged and re-arranged ... to produce new possibilities, new ways of thinking and knowing that have not been previously thought. (Franklin-Phipps and Rath in Kuby et al., 2019, p. 147)

Research Creation 1 (Fig. 6.4) is a collage of photographs, writing, theory, patterns, artwork, questions, and voices as modes of relational kinning. Children co-created connections as generative co-emergent data stories (Koro-Ljungberg, 2016).

Research Creation 1b (Fig. 6.5) is an invitation to access a short film of the collage (via QR code), and entangle yourself, to zoom in on some emergent happenings and provocations. We invite you to get up close, move around, and share moments in place and time.

The collage is a deep map of multiple layers and dimensions, which presences lake assemblages. It is difficult to contain the collage as an abundance of joy, weavings, wateriness, and knottings spill out to flow through this story:

Lake as a gathering of relations—assemblages of:

water - sunshine - children - leaf litter - ripples - gulls -
boat - heron - trunk - flowers - grass - ducks - shadows -
- rats - anticipation - teachers - tree stumps - and ...

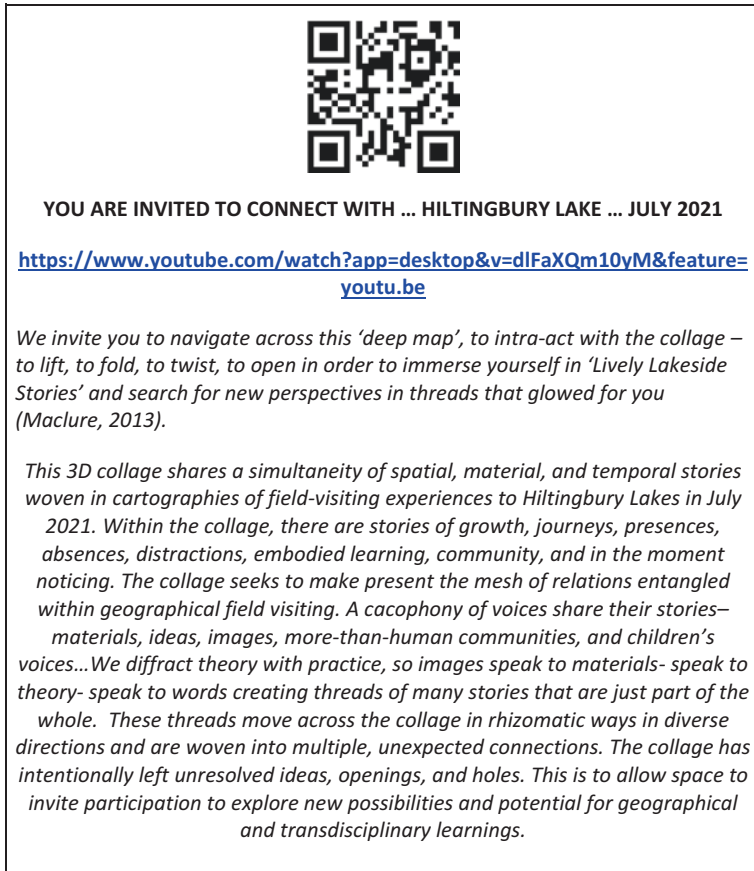


Fig. 6.5 Research creation 1b: An invitation to attend

It is a low-key, ordinary, everyday kind of response that values and trusts the generative and recuperative powers of small and seemingly insignificant worldly relations... These are the kinds of non-divisive relations that many young children already have with the world. They are full of small achievements. We can learn with them. (Taylor, 2017, pp. 11–12)

The field-visit to Hiltingbury Lake exemplifies our situated engagement with everyday places and local more-than-human communities as we, 'lean a little on the complexity and mystery of the natural world'

(Macfarlane, 2017). However, ‘you cannot demand a relationship’ (Tynan, 2021, p. 599), it takes time, effort, and sensory engagement to connect, build familiarity and respond-with a world of more-than-human relations. Entering into dialogue with entities in a world of kin and being open to the world is not easy. The path is not clear; and we stumble, we encounter tensions, we negotiate differences, we redirect. When we way-find we attend, create and connect in relationship, rooting our educational stories in the local and in the moment of the here and now. This is a generative dialoguing-with the world.

‘Response-ableness ... cultivating collective knowing and doing’ (Haraway, 2016, p. 34), connects kin and strengthens kinship bonds between children and places. Educators have a role in creating and mediating learning spaces where learners come into relationship with place. Humans are not the sole knowledge makers at the lake (Stengers, 2012). Opportunities to learn and think-with the world as kinfolk offer possibilities for collective flourishings. The more we dialogue with the world the more, and the deeper, we learn together.

The reader is now invited to engage with a series of diffractions—where data meet and new insights generate—within place assemblages that, ‘spread thought in unpredictable patterns ... productive emergences producing different knowledge’ (Mazzei, 2014, p. 742). The following diffractions are led by three guiding questions: What kinning practices were enacted? How did response-ableness manifest? What thinking of pedagogical significance (ruption) was set in motion?

Diffraction 1 (Fig. 6.6) shares examples of lake-kinning practices in action.

Happenings in field-visiting spaces were intra-actions between kinfolk. When we attend to hands, bodies, and traces we reveal there is more going on than we might imagine. Here, place-children intra-actions show that ‘... in making new knowledge we will come to inhabit and know the world differently than we did before’ (Somerville, 2008, p. 209).



Fig. 6.6 Lake diffraction 1: Kinning practices in action

Guiding Question—How Did Response-Ableness Manifest?

Making-with engages in inclusive, enacted relationality. Everything is relevant in children's responses, including perceptions, feelings, inventories, patterns, stories, doodlings, and foldings. Diffraction 2 (Fig. 6.7) is a gallery of creative gifts, which emerged intra-actively between children and place-kin.

Each of the gifts is evidence of time given, attention paid, and processes enacted. Each is a celebration of experience, intra-action, and companionship with kinfolk. 'Emergence, as a process of wondering and generating ... cannot begin with logic but comes from a place of not knowing, informed by intuition and responsiveness' (Somerville, 2008, p. 209). As a research diffraction, the gallery shares children's emergent noticings of colour, texture, shape, pattern, detail, and makings with kin.



Fig. 6.7 Lake diffraction 2: Gallery of creative gifts

Guiding Question—What Thinking of Pedagogical Significance (Ruption) Was Set in Motion?

In diffracting happenings at the lake, three ripples of significance (amongst many others) provoked us, set us thinking, wondering, and questioning: kinship as nested; kinship as embodied; kinship as ceremony.

Kinship as Nested

The place revealed tales, which the children were committed to telling—tales of animals, plants, materiality, life, death, and action. Lively stories are inspired by witnessing (Blaise et al., 2017). Diffraction 3 (Fig. 6.8) is an anthology of children's noticings expressed as tales of the lake.

Multiple tales are nested within the lakeside setting and reveal complex possibilities in this place. As a collection of speculative noticings, gathered and embedded, they draw us closer as place-kin. We can create stronger relationality within educative practices, inspired by children's lively encounters and their 'propensity to ascribe liveliness to all manner

Kinship is nested - tales within tales

The story of the **annoying goose**

The story of the **blue hat**

The story of the **curious dog**

The story of **jumping fish**

The story of **dying beetle**

The story of **hurtful nettles**

The story of **rusty gate**

The story of **statue seagull**

The story of **disruptive boat**

The story of the **heron that went fishing.**

Fig. 6.8 Lake diffraction 3: Lakeside tales

of things that matter to them in the environment' (Merewether, 2019, p. 235). We can learn from, and with, children in their world making.

Kinship as Embodied

The place invited tactile engagement. 'A relational reality... is an affective force that compels us to not just understand the world as relational, but feel the world as kin' (Tynan, 2021, p. 600). Diffraction 4 (Fig. 6.9) shows collective makings that emerged as a Momigami (Japanese paper-making method) lakeside installation, composed of materials and thoughts, in hessian, paper, words, and natural items. Bodies gathered around to share, peer, lean in, nestle, jostle, and hustle—a moving together in 'co-motion' (Manning & Massumi, 2014, p. 4).



Fig. 6.9 Lake diffraction 4: A Momigami art installation lorio et al. (2017)

The art installation brought together place, materials and ideas in a careful weaving together of wordings and placings in intra-action, as 'emergent workings out of affective material and spatial happenings of curriculum practices...' (Taylor, 2016, p. 21).

Kinship as Ceremony

We gathered for ceremony—a performance of ritual, sharing, chanting, dancing, and processing—in gratitude and celebration for the 'right here, right now'. Ceremony 'helps emphasise and perform the transformative potential between entities rather than focus on entities as separate and individual beings' (Tynan, 2021, p. 601). Diffraction 5 (Fig. 6.10) is an annotated record of the ceremony in image and words. We invite you to access a short film (via QR code or by clicking [here](#) and [here](#)).

The children walked slowly around the installation, chanting aloud lines of found poetry, in 'a moving, sonorous, gestural, textural, material, improvisational' parade (Kind, 2018, p. 9). This 'dance of attention' (Manning & Massumi, 2014, p. 5) emerged as a bridge between place and people. Ceremony connects, builds community, and strengthens belonging – both more-than-human and human – in reciprocity.

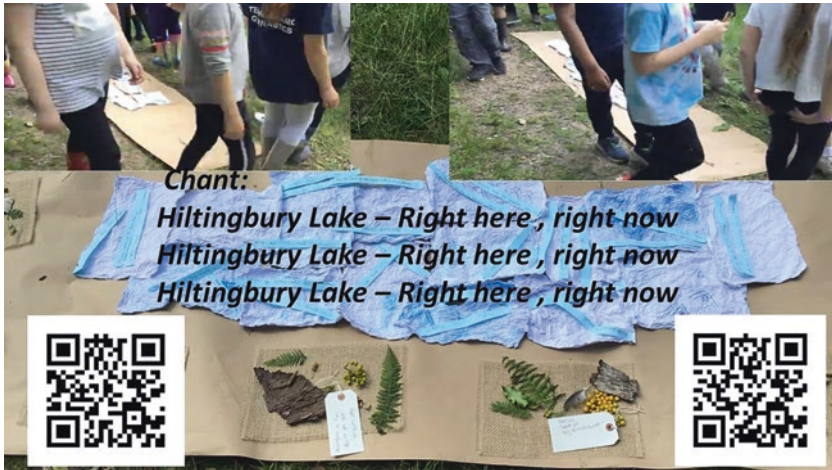


Fig. 6.10 Lake diffraction 5: Lakeside Ceremony

‘Ceremony brings relationships together’ (Tynan, 2021, p. 601). The curated video documents this event, (re)-immersing viewers in movements and sounds, places and times, and provokes new wonderings.

Tensions at the Lake

Field-visits are full of invitations. Making kin is not always straightforward. Some invitations are not possible to follow. Some invitations are discomfoting. Inclusive, non-colonising pedagogies involve conflicts, difficulties, and disruptions. We have to learn to work with, and balance, these tensions to consider how to dwell with oddkin and badkin (Haraway, 2016).

To respond to the complexity of the world in this way, including ourselves with/in it, we need to perceive without looking away, without reducing the world for our comfort. We must actively refuse to exclude or ignore even that which is uncomfortable and difficult, contradictory and painful. (Cutter-Mackenzie-Knowles et al., 2020, p. 108)

Our lakeside visit was not without incident. The initial disruption of soil, and the turning to generative ruption, is told through found poetry:

A lively story of Soil and Children
 On a very hot day of Sunshine
 We came for Hiltingbury Lake.
 Yet Soil demanded our attention
 The children sat on dry rich Leaf Litter
 Becoming soil as outdoor classroom.
 A welcome place of shade
 Of Shadows playfully dancing
 telling stories of Leaves, of Pens, of Paper, of Children
 Imprinted on Soil floor.
 Leaf Litter announces its presence entangling-with Child-Pine Wood
 relations.
 Leaf Litter searches out encounters with others.
 Leaf Litter clings, spreads, covers, envelops, disrupts.
 Soil permeates everywhere.
 On Trousers, in Boots.
 Water Bottles, in Hair, over our Hands,
 under our Nails and in our Bags.
 Soil interrupts our collective collage responses, intercepts, interferes and
 travels.
 Soil clings, holds, grasps, embraces...
 Tiny particles infiltrating the smallest of spaces.
 Soil stories grow as Leaf Litter-Children move, touch, smell, feel.
 As Children become marked and make marks with Soil.
 Disruption becomes ruption as
 Earthing, grounding,
 Co-mingling,
 Co-composing,
 Composting,
 Soil generates happenings.

These lakeside encounters illustrate practices of kinship, and stories of deep knowings with place. Thinking of pedagogical significance was set in motion—of kinship as nested, embodied and ceremony. Hiltingbury Lake became a ‘pedagogical contact zone’ (Common Worlds Research

Collective, 2020), where children learned in entanglement with place. Responses generated feelings of belonging within a lake community becoming-kin.

We wonder:

What sorts of gifts are exchanged in research creation with more-than-human kin?

Research Creation 2—Journalling with Garden-Kin

Research Creation (Fig. 6.11) is a gathering with Gilbert White's Garden, Selborne, Hampshire on another hot July day, in more-than-human entanglements. We, as researchers, experimented with ways to be present with multispecies kin through emergent acts of attending and noticing.

Gilbert White (1720–1793) was a naturalist-clergyman, whose way of relating with nature was 'reverent and attentive'. White's days were 'packed with incident', he spent a great deal of time in his garden and 'nothing was too small or humble to escape his investigation' (Martin, 2021, p. 10). White regarded nature as a subject not a backdrop, with a cast of more-than-human characters as relations (Martin, 2021). His writing was a combination of scientific precision, poetic narrative, conversational anecdote, and his journal is full of whimsy, things that crop up, reminders, and idiosyncrasies (Mabey, 2006).

White's garden is a place where voices and provocations abound. On the day of our field-visit, it was the hollyhocks that unexpectedly drew our attention, so we went 'hollyhocking' for the day. We made journal pages, with garden, as sympoietic gifts:

Journalling

is proximity, intimacy, connection.

Journalling

is a verb of attending, cherishing, conversing, remembering, creating.

Journalling

*takes you deep into noticing minute particulars
and nurtures sense of place and spirit.*



Fig. 6.11 Research creation 2 Journal as sympoietic gift

Our journal (Research Creation 2) is not an art book as such, but a curation of responses in photographic, linguistic, and artistic forms as research creation. As a gift, the journal includes observations, doodlings, speculative thinkings, emergent lines of enquiry, threads followed and new questions that invite further musings.

The journal pages are a deep map of multiple layers and dimensions that presence garden assemblages. There is an abundance of colour, texture, light and flourishings that grow as this story:

Garden as a gathering of relations - assemblages of:

lawn - sunshine - hollyhocks - researchers - shadows -
 bees - robin - poppy seed heads - tulip tree - seats - clouds -
 gardeners - pollen - blue sky - petals - paper - breeze - scent and ...



Fig. 6.12 Garden diffraction 1 Kinning practices in action

In this place, we drew on Kimmerer’s ideas of ‘seeing with both eyes’ (2023), a simultaneous thinking with both indigenous and scientific wisdoms, engaging multiple ways of knowing Gilbert’s Garden. At this time and place, a multiplicity of wisdoms intra-acted: hollyhocks turned their flowers to the light, bees sought pollen, breeze carried scent, skin greeted petals, fallen flowers suggested characters and stories, height and aspect allowed faces to meet blooms.

Guiding Question—What Kinning Practices Were Enacted?

Garden Diffraction 1 (Fig. 6.12) shares examples of garden-kinning practices in action:

Happenings in the garden were intra-actions between kinfolk; ‘It was the collective and collaborative which we wanted to nurture, creating a relational space of investigating and creating together; constructing, making, and composing understandings’ (Somerville, 2008, p. 8). When we attend to hands, bodies, and traces we reveal there is more going on than we might, at first, imagine.



Fig. 6.13 Gallery diffraction 2 Gallery of creative gifts

Guiding Question—How Did Response-Ableness Manifest?

Making-with engages in inclusive, enacted relationality. Like White himself, within the broader horizon of the garden, we watched narrowly, in relation. Responses included doodling, playing with colour, tracing, naming, smudging, rubbing, imagining, photographing, drawing, sorting, noting, and magnifying. Garden Diffraction 2 (Fig. 6.13) is a gallery of creative gifts, which emerged intra-actively between researchers and place-kin (QR Code or click [here](#)). Each shows a desire to get closer; to get to know hollyhocks.

Each of the makings is evidence of time given, attention paid, processes enacted. Each is a celebration of experience, intra-action, and companionship with kinfolk. As a research diffraction, the gallery shares our learnings with colour, texture, shape, pattern, scent, change, pollination, and makings with kin.

Guiding Question—What Thinking of Pedagogical Significance (Rupture) Was Set in Motion?

In diffracting happenings with the garden, these buds of inspiration (amongst many others) provoked us, set us thinking, wondering and questioning: kinship as temporal; kinship as attuning to multiple voices; kinship as reverence.

Kinship as Temporal

The place revealed notions of time. This garden is a legacy of thinking, making and being; a combination of past and presence, past and present; of formality and wilderness. We are regular visitors to this place, meeting one another in different garden moods, throughout the year. For:

... becoming kin... consists of repeated intimacies, familiar encounters, and daily undoings and transformations that are dependent on visitations and conversations within a smaller circle of place. (Van Horn, 2021, p. 9)

Garden Diffraction 3 (Fig. 6.14) is a play on garden time and resonating oices (QR Code or click [here](#))

This diffraction helps us to wonder about rhythms and patterns of time and place in the company of hollyhocks. It holds echoes of ancestors—more-than-human and human—noticing the past, with thick attention to the present. This summer encounter is one of a repetition of meetings: ongoing cartographies of stems, blooms, eyes, footsteps and... It shares commitment to ongoing hollyhocking practices and speculative fabulations for possible futures.

Kinship as Attuning to Multiple Voices

The place reveals and values the voices of hollyhocks as summer companions.

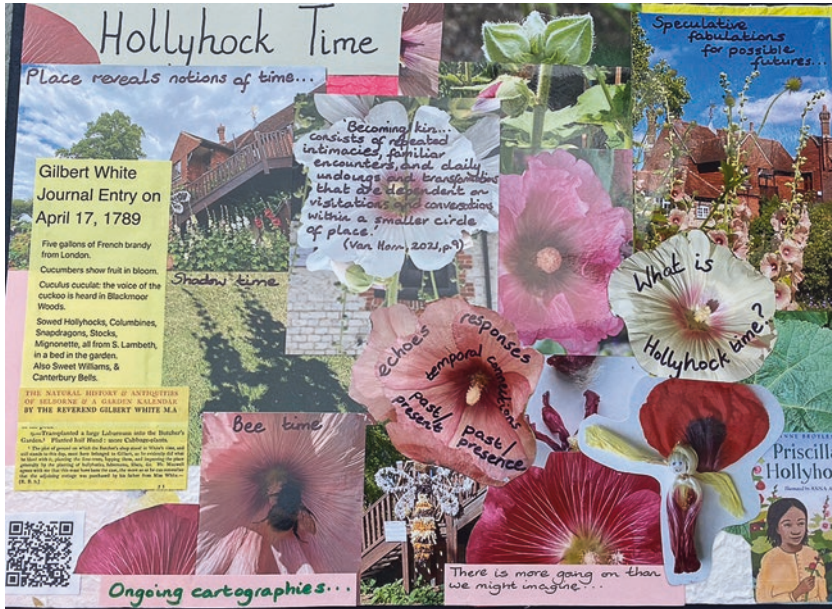


Fig. 6.14 Garden diffraction 3 Journal page of temporal connections

Earth language is never monological; always relational, it is a call to enter into encounters, to be co-present and engaged. We know that nonhumans communicate in multiple registers, and perhaps it is necessary, therefore, to be able to listen in multiple registers. (Rose, 2013a, p. 107)

Garden Diffraction 4 (Fig. 6.15) plays with voices in the moment (QR Code or click [here](#)).

This diffraction animates garden-kin in speculative voicings, suggesting pedagogical openings for others to attend to, and think with, hollyhocks. To amplify a voice is to hear differently, grow relations, and build understandings of hollyhock worlds. (Ma)kin(g) together transforms hollyhock–human relationships, in sympoietic processes of mutual becoming, ‘we become-with each other or not at all’ (Haraway, 2016, p. 5).

A kincentric approach requires us to listen to and dialogue with more-than-human kin. However, building relations is always a political act. There will always be an element of ‘directional selectivity’ (Hannah,

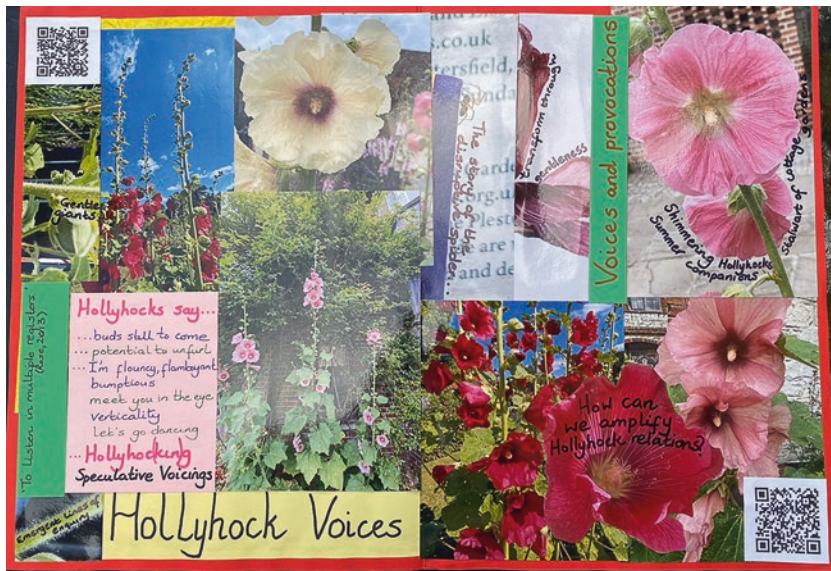


Fig. 6.15 Garden diffraction 4 Journal page of speculative Hollyhock voices

2013, p. 35) as you consider who and what you pay attention to, whose voices you dialogue with and whose voices you ignore.

Kinship as Reverence

The etymology of journalling originates in daily prayers, as records of day-to-day living. So, with this place, we engaged with kinning practices as ritual and with reverence. These included: meeting hollyhocks, recognising uniqueness in each, noticing softness of petals, radial patterns of colour, glow of pollen, hum of bee-kin visiting, collecting fallen petals, holding with care, responding with journal pages that celebrate relations. Garden Diffraction 5 (Fig. 6.16) is a gesture of reverence, and a gift of deep respect (QR Code or click [here](#)).

This diffraction celebrates hollyhocks as garden-kin in their moment of summer glory. As Morris (2022) observes, ‘Each act of creativity is a form of prayer if the heart is in the making’. Through journalling, and



Fig. 6.16 Garden diffraction 5 Journal page as a record of garden reverence

celebrating beauty, we amplify kin relations and create openings for future flourishings. On another visit to the garden several months later we shared the journal with the garden as an act of reciprocity and gratitude. Together, in proximity, we marked passing of time, seasonal change, promises of fresh growth, and new wonderings.

These garden encounters illustrate practices of kinship, and stories of deep knowings of place. Thinking of pedagogical significance was set in motion—of kinship as temporal, multi-vocal, and reverent. All that was in assemblages became pedagogically significant. Responses generated feelings of belonging within a garden community becoming-kin. We will visit again.

We wonder:

What does gifting generate?

Kinning Practices Entangle and Implicate

Our kinship encounters with both lake and garden, entangled and implicated us. Being implicated is ‘a commitment to life: to exploring the living world in its beauty and its challenges and to making a stand for flourishing, for inclusive possibilities’ (Van Dooren & Chrulew, 2022, p. 10). Bryan (2022) identifies the need for pedagogical models that illuminate the complex layers of worldly relationships; her *Pedagogy of the Implicated* (2022) prompts critical reflection on one’s own positioning as an implicated subject, whose everyday non-innocent actions affect more-than-human kin.

We put our *Pedagogies of Attention* to work as field-visiting, through engagement with arts practices as pedagogical experimentations that have potential to transform relationships. A relational pedagogy is an affirmative rupture:

Don’t give up on the world.

To refuse to turn away

to remain true

to the lives within which ours are entangled,

whether or not we can accomplish great change (Rose, 2013b, p. 9).

To turn away, to disavow, to forget.

All are modes of abandonment

That must be resisted in times of colonisation and extinctions.

when living beings and their ways of life

are under threat on mass.

(Van Dooren & Chrulew, 2022, p. 10)

As ‘place-lings’, (Van Horn, 2021) we are implicated with locality. We are committed to a kincentric worldview and propose making-with as generative practice.

We wonder:

What relations might arts-based kinning practices craft?

(Ma)kin(g) More-than-Human Educational Futures

In cultivating (Ma)kin(g) within education we suggest a shift from individual, human-centred approaches to pedagogies of kincentric, collective, co-creation with field-visiting spaces. In this chapter, research creations of lakeside and garden happenings are sympoietic (art)efacts created as post-qualitative responses to place (Ma)kin(g)s. They are both incomplete and mark the beginnings of ongoing kinship happenings.

Relational pedagogy does not end when we leave a place. Relationships and implications continue in dialoguing, making, new thinking and transformations. *Pedagogies of Attention* call us to attune to different voices, engage in new relationships with more-than-human kin, and ask fresh questions. This is the work the world needs right now, a radical yet gentle activism (Burnard, 2022) that brings learners close to the world (St Pierre, 2017), through small, yet significant, actions. A kincentric worldview offers possibilities to reimagine local areas as meeting places of lively entities; possibilities that disrupt contemporary feelings of alienation, disconnection, and separation. You are never alone in a more-than-human world.

Sympoiesis is a creative practice that fosters inclusive, non-colonising pedagogies. Making-with the world can be challenging to put into practice, yet positions creativity as a powerful and provocative agent of positive change. As celebrations of specific local encounters these are not intended to be a 'how to' guide or a script to support teachers to go a-kinning when field-visiting. 'It would be contrary to the spirit of postmodern emergence to try to come up with a list of principles or a recipe through which to describe or enact these ideas' (Somerville, 2008, p. 212). Instead, our rupture opens a 'crack in the here and now' (Anderson, 2006, p. 705) in traditional school place-based practices. We propose a shift to focus on learning for place attention and responses through acts of reciprocity, care and response-ableness. (Ma)kin(g)-with is a radical commitment to generative multispecies relationality for more-than-human and human futures.

We wonder:

What opportunities will you embrace to make kin with the world?

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7

Sensing in Liminal Spaces: Words, Music and Dementia

Ursula Crickmay and Caroline Welsh

Introduction



QR Code 6: Audio 1: [Poised at the edge—Bass note D](#)

Considering dementia as a site of learning raises some critical questions about the relationship between education and the future. Placing learning within a context of cognitive decline causes a ‘ruption’ (Chappell et al., 2024) in the prevalent Western logic that considers education to be a process in the present leading towards more knowledge or skills for the individual learner in the future. It leads us to question what is involved in the education-future relation-

U. Crickmay (✉) • C. Welsh
School of Education, University of Exeter, Exeter, UK
e-mail: U.Crickmay2@exeter.ac.uk

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ship: if it is by necessity no longer a primarily cognitive matter, then how might we come to understand it differently? If the logic of centring the relationship on the individual is undermined, then how can we consider instead what a person (with dementia) might contribute collaboratively, communally or intra-actively (Barad, 2007) in their own becoming in a space of learning? And if we loosen the pull of the future on education, then what different possibilities may be released in the present? Drawing attention to these questions through a posthuman (Taylor, 2016) reading of a practice involving dialogues between music, words, images, voices and people, some of whom are living with dementia, we will argue that different possibilities emerge that are relevant both within and beyond this context: a rupture in our perception of education. Quinn and Blandon (2020, 2017) have articulated eloquently the potential for using posthuman theory with its questioning of binaries and boundaries, of hierarchies between different orders of people and things, to broaden our perspective on dementia, contesting a deficit understanding which places those of us with dementia solely within a context of loss. We build on their arguments for including people with dementia as essential participants in lifelong learning and extend this line of thought to focus on learning as a response-able encounter—in other words, an encounter in which we responsively and ethically open ourselves to change (Beausoleil, 2015). We invite you into our exploration of this learning as a co-creative emergence: a joint, collective or entangled (Barad, 2007) making of something new, in an in-between or liminal space that opens towards the unforeseeable future.

There is an emerging interest in posthuman ideas in relation to music education, which highlights embodied, affective and relational understandings of music-making and learning within musical ecologies (Cooke & Colucci-Gray, 2019; Woods, 2020; Crickmay & Ruck Keene 2022; de Bruin & Southcott, 2023). An engagement with the materiality of sound (Wilson, 2021; Powell & Somerville, 2020) also contributes to revealing hierarchies in knowledge and ways of knowing and being in music (Woods, 2020, 2019; Koopal et al., 2022). The understanding of posthumanism that we adopt in this chapter builds on a number of these themes.

Introducing the Posthuman Framework

Here we draw out some aspects of posthuman theory to provide a definition of posthumanism in relation to music and dementia, describing what we consider to be its potential to create ruptions, developing new understandings in this field. We present each part of our definition in response to a short description of musical practice in action, drawing on the moment recorded in the audio accompanying this section (Audio 1, <https://on.soundcloud.com/jMMFK>).

John (who has dementia) has an embodied engagement with a bass bar, the momentum of the beater drawing his arm up and down, 'oooooo,' the vibrational affect of the sound, his animation, his being alive to it, his immersion in the moment of making the music, of embodied becoming with the music as it emerges (See Fig. 7.1).

Understanding music-making as a fundamentally *embodied* experience, one located in and contingent on the body, is by no means unique to

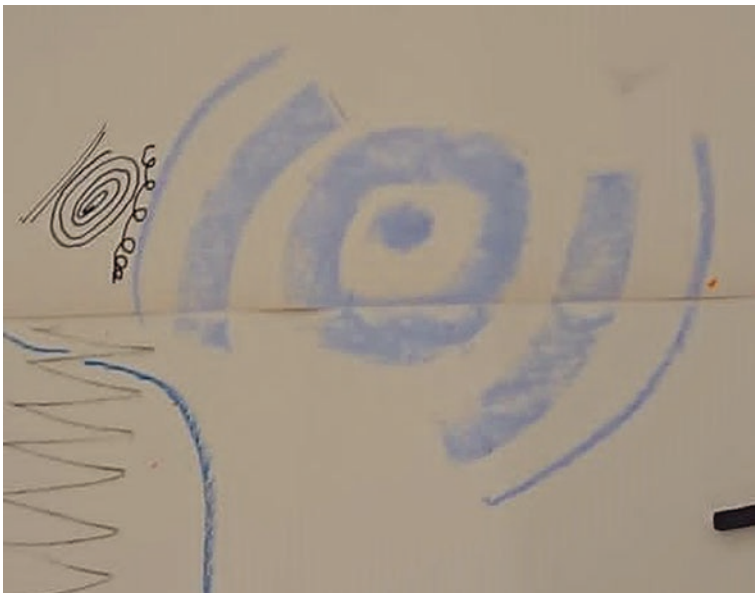


Fig. 7.1 Musician's drawn response to this moment

posthuman theory, but posthumanism guides us firmly in this direction. Braidotti (2013) argues that it is the duality of mind and body in humanist thinking that leads us to equate subjectivity primarily with consciousness and universal rationality: a measure of subjectivity that may easily exclude people with dementia. If we allow posthumanism to lead us beyond humanist assumptions, then those with dementia can guide us in deconstructing this binary, body/mind, helping us to experience our musicking, our multiple participations as performer-listener-composer-dancer in music-making (Small, 1998), with attention refocused on ‘acts and bodies... materiality... and the agency of things’ (Quinn & Blandon, 2020, p. 25).

Space is made for the human participants of the group (both those with dementia, and their family members who are also participating) to respond to the material invitation of the instruments, to discover what might be interesting about them.

We are making explicit here the agency not just of the human participants, but also that of the instruments, highlighting how the instruments might themselves be a source of creative action. We are recognising what Bennett (2010) describes as the ‘vibrancy’ or ‘energetic vitality’ (p. 5) of diverse materials as active players in a creative endeavour—in other words, recognising their creative agency.

Within the music-making, the agency of the instruments comes together, entangles with that of the human participants and also with the emerging sounds and many other materialities to form a fluid emerging collective or ‘assemblage’ (Bennett, 2010, p. xvii)—a bit like an open-ended musical ensemble that is made up of all these things. This is significant in the practice we describe since it spreads the idea of creative agency further beyond the bounded, or impaired, cognition of the individual, and disperses it amongst a diverse material-musical ecology (to borrow the term from de Bruin & Southcott, 2023). In our ensemble, music emerges from our agentic assemblage, which may at different times include a variety of sounds, instruments, bodies, affective flows, musical journeys of becoming, spaces, the weather that day, dementia and much more.

The emerging harmonic framework exerts a pull on us, suggests that we might progress somewhere, we're not quite sure where, it is thick with ambiguity and hard to put into words but in the moment we know that something special is starting to happen and we are care-ful in our sounded response, tending the potential.

Murriss (2016) describes the limitations of a 'dualist epistemology' in which education is focused on knowledge *about* the external world, rather than a material engagement *with* it. In her critique, she highlights how a hierarchy is established in which representation, and in particular language, is given power over matter, which has a number of consequences. First, it puts other material engagements with the world—aural, oral, visual, affective—outside of the domain of knowledge. This might include our feeling of being pulled by the music, our collective awareness of 'something special starting to happen'. Second, it positions those of us with fully functioning linguistic abilities above/ outside the material world and away from those without such skills. Murriss (2016) places children in this latter group, but we could apply the same insight to highlight how those who have dementia might be disadvantaged by such power being given to language and representation. A third consequence, drawing now on Maclure's (2013) argument, is that language, as a dominant tool of representation, has a 'categorical and judgmental' quality. She is commenting on the tendency of language to hold the material world *still* in order to label it, suggesting it is thus poorly equipped to deal with the flow of 'difference, movement, change and the emergence of the new' (p. 659) in the material world. In our discussion, we explore how dementia may help us to engage more broadly with the materiality of both sound and language. This creates a rupture, not only in disturbing traditional understandings of education, but also by making spaces for unanticipated further change as we choose to engage with the endless mutability of the present moment.

Bringing posthumanism, music and dementia together in our discussion of a musical/educational practice in this chapter, we are therefore describing an embodied practice that emerges within a musical ecology or assemblage and engages with a variety of different ways of knowing—with sound and dementia.

Introducing the Musical Practice



QR Code 7: Audio 2: [Opening music](#)

‘This is for you, our opening music... just to warm you in...’ (from fieldnotes). Each Music for Life workshop opens with music improvised by the professional instrumentalists in the group. Our introduction to this musical practice begins with the opening music from a recent session.

The specific practice that we are discussing has been developed through a music project that has been *becoming-with* people living with dementia since it began 30 years ago. The project is called Music for Life and discussion throughout the chapter draws on our own involvement in the work over an extended period: Ursula in developing the project between 2005–2014; Caroline as flute player in the team from its foundation to the present day. Innovative as a field of practice at its inception in 1993, Music for Life now sits in the context of a rich and varied flourishing of musical work involving people with dementia yet still retains its character of discovery and innovation (Clements-Cortés, 2019; Smilde et al., 2014). The following short account of the project describes something of this character, written from our own experiences as members of the collective Music for Life team.

The work of Music for Life is specifically situated amongst people living with dementia, their families, carers and supporters, with and in response-ability to whom we have been learning to become in music over many years. The project is managed by Wigmore Hall, a concert hall in London, and takes place in a range of care settings and community spaces; a long running partnership with social care organisation Jewish Care has been an intrinsic part of its development over the years. Through a range of improvisatory approaches, our practice comes alive in the quickening in-between of dialoguing, of emerging connection and

exchange, amongst the multiple participants in words, music, voices, bodies, images, material encounters and ideas. In this practice, all participants, musicians and facilitators, people living with dementia and their family members and carers, are invited to contribute their voice, their presence, in their own way: we try to capture something of this spirit by describing participants collectively as 'player-pieces' in this chapter. At different times this includes playing instruments, singing, directing other musicians, sharing ideas, listening, making eye contact, being in a space together, contributing words, breathing, bringing images or objects, dancing.

Music for Life team members are improvisers of connection. Using musical skills, communication skills and deep attentive listening, we draw a group into a consciously uncertain space where we can hold each other in a care-ful, or ethical response-ability. We see this as an 'ethic of encounter' (Beausoleil, 2015, p. 2) exploring connection, acknowledgement and belonging, and allowing ordinary barriers of communication to fall away. Situating all such encounters in Beausoleil's (2015) 'delicacy of openness' (p. 6), where the perspective of each player-piece can only ever be part of an unknowable and dynamic whole, gives the work a firm footing in what she calls 'a dispositional ethics' (p. 8).

We experience the practice of Music for Life as one of entangling (Barad, 2007), one with another, with all 'others' indebted to difference (Beausoleil, 2015); meeting in improvisation, staying with troubling uncertainties (Haraway, 2016) and holding open the possibility of transformation for everyone involved. The whole Music for Life programme seems to us to be poised on the live edge of continuous becoming, within each interaction as well as each project, each new strand of our programme of work, and each year of our story. There is an ongoing striving to stay on this edge, between knowing (shared trust and confidence in our skills, our experience of what has happened before) and conscious unknowing (choosing, in Beausoleil's [2015] words 'to remain receptive and responsive within the encounter, despite the challenges it might present to our worldview and implication of our role within it' [p. 2]). There is a commitment both in the ethos of the practice and embedded in the structure of the work to questioning and reflecting. This supports our intention to stay in the vulnerable in-between places, questioning and

inviting, without certainty and with the potential for all to be equally important in the making process. From the earliest days of this long-standing programme, it has always been the way of Music for Life to tease out questions from our reflection, individually and as a team; to enrich our awareness of the nuances of co-becoming and create a deepening reservoir of possibility from which to risk ourselves anew in every interaction.

Introduction to Diffractions

The discussion that follows takes the shape of a series of diffractions that cluster around different aspects of the practice. Following Mazzei's (2014) description, we have understood 'diffraction' in our research to mean a reading of data through theory, a threading through or plugging in of 'data into theory into data' (p. 743). Each of our diffractions takes a different form, but within each you will find extracts from the data, fragments of creative work by participants and others, extracts from a series of readings which we have completed as part of our process of researching together, and echoes of a longer collaborative diffractive process of dialogue or making with (Ingold, 2013) the materials.

Our diffractions draw on data generated during one Music for Life programme in Autumn 2021 as part of a PhD research study. Ethical permission for this research was granted by the Health Research Authority Social Care Research Ethics Committee. All human participants gave their consent to be part of the research and pseudonyms are used throughout so that participants remain anonymous. Words from our participants are presented here not only as data, but also appear integrated, sometimes one at a time, into the more descriptive aspects of this chapter. It has not always been practical to credit the source of single words, so we therefore acknowledge their presence here, each one entangled with the practice, and travelling with us in our co-writing.

Diffraction 1: Words/ Sense

Audio 3: Sense <https://on.soundcloud.com/6ddiy>



Resist the effort to bring what happens into a scheme of representation... do not assume it must 'mean' something.
(adapted from MacLure, 2013, p. 663)

Things are always changed.
What things are changed?
Us?
The poem?
The workshop space?

A word needs so many words to translate the feeling it is trying to communicate

(Caroline, comment during a workshop)

How can dementia affect how a person communicates?

Dementia can affect how a person communicates and the language they use. They may:

- not be able to find the right words
- use a related word (for example, 'book' instead of 'newspaper')
- use substitutes for words (for example, 'thing that you sit on' instead of 'chair')
- not find any word at all
- not struggle to find words, but use words that have no meaning, or that are jumbled up in the wrong order
- go back to the first language they learned as a child. For example, if they learned English as a second language, they may forget how to

'Deleuze identified something wild in language: something that exceeds propositional meaning and resists the laws of representation. Deleuze called it sense, this non-representing, unrepresentable, 'wild element' in language. ... Sense 'happens to bodies and ... 'insists in propositions' ((Deleuze, 2004), p. 142), allowing them to resonate and relate, while never being reducible to either 'side' of that old duality that separates the material world from the words that putatively represent it.' (MacLure, 2013, p. 658-9)

Fig. 7.2 Screenshot: Alzheimer's Society, 2022



Fig. 7.3 Helen Cammock, 2021. Commissioned by Art on the Underground. Courtesy Kate MacGarry and the Artist. Photo: Thierry Bal, 2021

Audio 4: Rose
<https://on.soundcloud.com/xqBYm>



Without the rustle
of the leaves.
Beneath
Breathe
On
Me
Your
Ecstasy
[spicy scents]
That flow
Beneath your breeze
*[Rose's reading, from original poem
by Patricia Cisco]*

'In these flat and proliferated assemblages, the world is not held still and forever separate from the linguistic or category systems that 'represent' it. Language is deposed from its god-like centrality in the construction and regulation of worldly affairs, to become one element in a manifold of forces and intensities that are moving, connecting and diverging.' (MacLure, 2013, p. 660)

'be non-representational,
non-interpretive,
a-signifying,
a-subjective,
paradoxical and
embroiled with matter.'
(Maclure, 2013, p. 663)

making space for a poetic
logic
a felt sense of connection
allowing
(non-sense?)

QR Code 8 : Audio 3: [Sense](#)



A Reflection on Diffraction 1

Diffraction 1 began with Rose's reading of the poem *Sing to me, Autumn* by Patricia Cisco (2016), which took place during an online Music for Life workshop. The text is transformed by Rose's reading, becomes something entirely new as the words form in her mouth, some words exchanged for others, Irish lilt emphasising their musical qualities, an unequal metre in the reading adding new sense to the moment, and an aptitude for telling a story drawing the rest of us into her telling of this story, now. But what is the meaning of this transformation? What does it tell us about Rose? About her dementia? We ask you to let go of these questions, to sit in not knowing, to rest alongside a while, to breathe (Cammock, 2021).

Now re-experience the wildness of this language: listen for it.

Back to the workshop, Elena, a musician, sets the same poem to music, singing above a rhythmic double stopping on her violin, a pulsing. Ursula's sound assemblage 'Sense' Audio 3 (<https://on.soundcloud.com/6ddiy>) starts with this pulsing. Allow yourself to feel it through your own pulse. In the assemblage you will hear other words, a 'word salad' (Veselinova, 2014), magnified here through layering, whispering, and a stretching of Rose's own words, 'breathe, on, me' which you can hear only as a distorted electronic backdrop—their meaning obscured, or perhaps released to become something new.

What we are invoking here is a different intra-action with language, a material-sensorial-communication-creation, playing with materials, as poets and musicians might do when expressing themselves. We are elucidating how, in this musical practice in which some participants have dementia, this same artistic and expressive process finds this a natural kind of happening, in response to circumstances, to the context, the situation of all the participants. We are wondering if it is perhaps a quality of their dementia that opens a certain kind of listening in those of us whose speedy cognitive capacities might propel us to unwittingly overlook the work of language on the world, jumping forward to interpretation and meaning before we have really listened to the experience of the words and their capacities in and on our own bodies.

We allow the propositional meaning of words to flow more freely in and around our dialogue, listening to each other with the intention of finding something to revel in, something to overlap with, a connection or co-becoming that can be found in the voice of the other when joined by ourselves. It provokes a listening ‘in the pulse and pause of attentiveness’ (Beausoleil, 2015, p. 2), alongside stillness and space, listening as an ongoing shape-shifting willingness to be reinvented, reimagined, renewed, remade, reoriented, repositioned, re-birthing.

Diffraction 2: Response-Ability

Shall We Dance in the Space Between Us?

The project of responsibility as responsiveness asks and offers insights regarding not *what* we do, but *how*: how can we be more receptive and responsive to that which challenges our worldview and implicates our place within it? (Beausoleil, 2015, p. 8)

In this diffraction, we return to the moment with which we started this chapter, John and his bass bar D. This time we put the moment back into its slow unfolding to respond to the question of *how* through the selection of three audio excerpts from a 15-minute section of a workshop. The writing here emerges in both description and response to these excerpts, drawing attention to the tide of response-ability that can be heard waxing at its own pace, moving softly between the skittering of everyday banter, into something deeply resonant and unmistakably shared.

Invitation—Into ‘the radius of an invisible circle of belonging?’ (O’Donohue, 1998, p. xv)



Navigating the nursery slopes can be hard; it can feel uncomfortable. Not everyone is ready to respond at the same moment. At the start, it is uncertain where we will go, and anxieties and scepticism are always hovering close by. The musicians in the clip converse, cajole, tease, suggest, beckon in numerous ways to draw all the player-pieces in. Care and attention must be given to each as an individual, as well as to the overarching musical potential for the piece we might make together. Response-ability on both micro and macro levels is enacted, ripples of care extended by each player-piece to the others as the encounter quickens. The music will create its flow more irresistibly if there are no by-standers, if everyone is willing to come in. Caroline, as a musician in this process, extends her attention as far as she can, listening with her body to other bodies, listening with her eyes for other eyes, attuning to material seduction by the instruments, scanning for the glowing moments of attraction upon which to lift our music into the flowing motion of something delighted in together (Maclure, 2013). Through the companionship of people living with dementia in this process over a long time we are awakened to a new and subtle language of emotion, of the senses. Through these trusting guides we are introduced to, and rendered more capable of (Haraway, 2016), distinguishing a plurality of experiences that exist alongside the sense we make ourselves of any interaction.

Becoming, Belonging



QR Code 11: Audio 6: [Moving into making together: surfing the edge](#)

In order to anonymise the sound recording 'Moving into making together: Surfing the Edge,' it has been necessary to make some tiny cuts where names are mentioned. Audio clips are otherwise direct field recordings and have not been processed or edited.

Even as we risk ourselves, we remain, though the terms of that self may change; we continue to form, ever indebted and in response to every encounter to which we open ourselves. (Beausoleil, 2015, p. 12)

Within the tenderest, fragile beginning of a new shoot is the blueprint of all its potential futures, a whole rich reservoir of all that may come, building on but not bound by all that has gone before. Tending to the emerging in our session can be heard in the audio. As the leader here Caroline is acting as a guide, stepping forward with practical musical direction to create a sense of safety, stepping back to give space for something to grow. She is cultivating, in the words of Haraway (2016, p. 127) ‘the wild virtue of curiosity’, listening intently, giving time, paying attention to the bass bar note that is leading the way, enacting an ethic of care-taking. She is indicating her willingness to take response-ability for what Beausoleil (2015) describes as the shifting dimensions of ‘safety, risk, curiosity and trust’ (p. 11) in an ethical responsiveness, all ingredients needed for something new to emerge in the space. By inviting everyone to wait before joining in, encouraging attention to cues, the intention is to protect the possibility of the material, to bring its language into the field of play for everyone, to keep it alive.

In the stillness and quiet of attention, John and the repeated sounding of the bass bar are in the spotlight together; all the other player-pieces wait in the wings. Once the space is cleared for the D to be heard, its call answered first by the hand pan, few cues are needed to know when to play. All player-pieces find their way into the assemblage.

For us, this process of becoming has an element of wonder to it, a commitment to resist the ‘stifling impotence’ (Haraway, 2016, p. 131) of only being able to recognise ourselves or another if we conform to all that we’ve been before. This is especially potent in the case of people living with dementia, who are often identified in relation to the loss of what has gone before. In this dance of response-ability, we are, ‘becoming what the other suggests to you, accepting a proposal of subjectivity, acting in the manner in which the other addresses you, actualising and verifying this proposal, in the sense of rendering it true’ (Despret, 2008, p. 135).

The Echo of Belonging



QR Code 12: Audio 7: [Dropping in at the shared ending](#)

‘Surrounded by silence, it takes on more shape’ (from field notes)

The time–space emerging moment is held open with attentiveness and loving listening in which we ‘render each other capable’ (Haraway, 2016, p. 8) of something else, something new, a change or ruption. We are enabled, through relationship across our different worlds to find new becomings, belongings and ways to move towards each other from our difference, to allow ourselves to learn.

The piece has taken almost 15 minutes from the white noise of exploration to the protected space where John and the bass bar make their presence known, to the gradual assembling of all player-pieces—the shimmering and jingling of tambourines creating a suggestion of whispers, threads woven into the music with voices rustling, murmuring, in the distance. At a moment, reached as a player-piece-semblage, there’s a turn we take together to bring the music to a close. The approach of the ending is irresistible in the music, guided by paying close, deliberate attention, by listening deeply for the moment to suggest itself and responding, enacting a shared response-ability to each other and our music. There is a quality of vibrancy, a musical energy, that can be heard in the silence that surrounds us at the end of the music. This silence, extended and richly resonant, is alive, becoming a new player-piece in our assemblage.

In this practice, people living with dementia are leading, teaching deep and instinctive listening—in the music, in conversational exchange and in bodies and movement. They teach us to listen for resonance, for an answering wavelength in our communication, where some aspects of each other’s experience might be sensed alongside one another. Where

the seductive richness of a low bass bar sounding D can be delighted in without the pressure of expectation or a predetermined direction. This practice teaches us that in this moment where something, in this case a bass bar with a single low pitch, can be allowed to be in stillness, complete in itself, in a space that resists being anything else, we can enter a world of possibility. There's a reciprocal exchange, a parallel capacity between musicians, trained to hold time, to hold affect in music, and people living with dementia. As musician/researchers in this practice, we see the potential to meet in the encounter, the opportunity for people living with dementia to take their equal place in music-making. Anything might happen... if we can wait.

Diffraction 3: Liminality¹



QR Code 13: Audio 8: [Before a sound takes place](#)

the flow of time and sound already, and yet there is a feeling of pause, of expectation, of collective in-breath:

Shall we try another?

Yes?

Shall I start?

Breath sounds into flute unvoiced, fingers sound lightly on strings.

We conceive of this as the liminal space; a betwixt and between (Conroy, 2004), the space that Turner and Hall (2021) have characterised as the ‘period during which transition can take place’ (p. 46) and from which there ‘is no going back’ (p. 47).

Within this musical practice, we see this transitional, liminal space as the space of learning—the space where change may happen. There is no knowing this space: as soon as it is fixed, knowable, named, it has slipped through our fingers, melted away. There is an inherent ambiguity to it, an ‘absence of certainties’ (Beausoleil, p. 2), ‘it isn’t made yet’ (from field notes). We’ve chosen here the moment before playing to highlight these qualities, but this ‘performance of ambiguity’ (as Tesar & Arndt [2020, p. 1102] describe liminality) might be chosen from any moment within this improvised workshop practice. We are spinning, in motion, moved from the centre of our individual experience into the liminal space between, into something individual together, a quickening happening between us and within us.

Deriving from the Latin *limen*, meaning threshold, liminality is often associated with being on a threshold or in a state of crossing one (Lorenzi & White, 2019). Within the music practice we have described this as finding the edge: an edginess, a barely comfortable tiptoeing along a boundary of discovery, the edge of a note, the edge between knowing and conscious unknowing, the edge of yourself and the instrument you hold or touch, the edge of your own sound and another person’s sound, the edge of the sound that is about to emerge, the edge that is never still (Cammock, 2021) Fig. 7.2. It is similar to MacLure’s (2013) concept of ‘surfing’ (p. 662) the glowing moments of energetic quickening—surfing as an energetic liveliness, a ‘new state of creative energy’ (Turner & Hall,

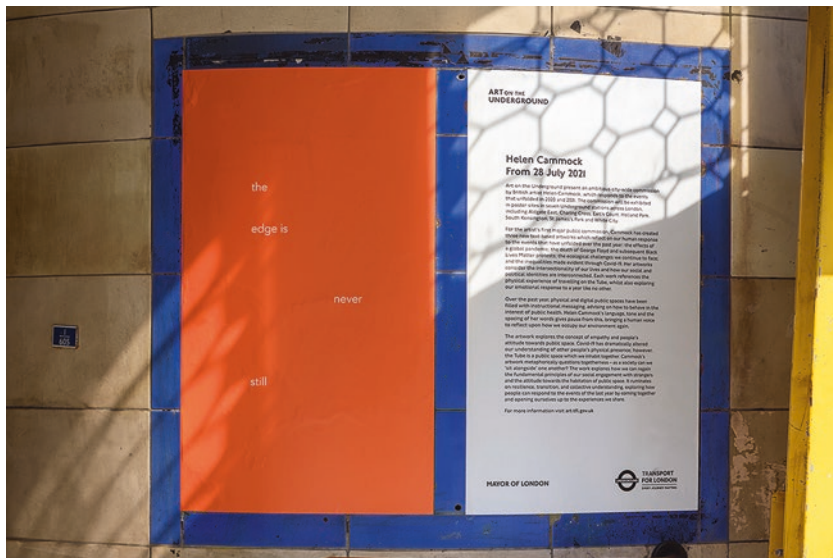


Fig. 7.2 The edge is never still—Helen Cammock, 2021. Commissioned by Art on the Underground. Courtesy Kate MacGarry and the Artist. Photo: Thierry Bal, 2021

2021, p. 47), that emerges on a threshold, at a moving edge, keeping it alive.

Choosing to make ourselves alive to this liminal space, to stay on this ambiguous edge, to be response-able to it in our attentive listening, asks for a kind of vulnerability from all those present. It is a deliberate resistance to the pull towards fixing meaning. The decision instead is to relinquish agency, to be an equal, affective, responsive participant in the assemblage: ‘you have to sort of block out all expectations of where you want it to go in order to give it enough chance to be something which might want to go somewhere’ (Caroline, musicians’ conversation in field notes). Participants with dementia might be seen at different times to be co-participants, player-pieces or teachers in this endeavour. The learning that may emerge is not situated exclusively within any one participant or group of participants (those with dementia for instance), but emerges on the surfed edge, the in-between, the liminal space, as a ‘rupture of previous thinking’ (Turner & Hall, 2021, p. 47).

Improvising with the Emerging Future



QR Code 14: Audio 9: [Closing music](#)

Amsler and Facer (2017) draw attention to how an instrumental education, geared towards a range of desirable outcomes for the individual or for society, could run the risk of limiting education to fulfilling ‘foreseeable futures’. They urge us to pay attention to the ‘new beginnings and unforeseen possibilities that emerge in the encounter between each human being and what has gone before’ (p. 1). Our posthuman reading of a co-creative music education practice expands our own understanding of the learning encounters that might be involved in this endeavour, considering material dialogues between human bodies, sound and other materialities, and listening for the contribution of music and of people who have dementia.

Here we have been sharing our own ongoing processes, considering this practice through a series of creative diffractions, entangling our understanding with theory and data, that draw us onwards differently, releasing playful ways of knowing that respond to the circumstances, that emerge from the assemblage in a fluid and flexible unfolding. This process has provoked for us an attentive, multidimensional listening containing the possibility of response-ability within the learning encounter: opening ourselves to change. Alongside Beausoleil (2015) we have considered anew how this might involve a care-ful attention to;

re-birthing
recycling
reimagining
relationship
resonance
reinventing
responsiveness
risk
reaching out
rendering capable
renewing
resisting
reorienting
richness
receptivity
restlessness
remaking
repositioning
ruption

Finally, through an attention to the energetic quickening of the in-between, the unfolding moment, we have been drawn into the liminal space, the emergent, lively edge which we consider as the space of learning, where change may happen, and the unexpected arise. We perceive this as a re-centred or alternative view of community that allows full presence in the moment to be a positive development of continual new beginnings, alongside the perception of continual loss in dementia.

Improvisation opens its arms in welcome to a future as yet unknown. An offer is made, smiling, encouraging, inviting dialogue, provoking a leap into something new, and we frame our discussion as improvisation. Here is our offer, come and dance with it yourself, arouse your awareness of what has gone unnoticed before and untether your thinking by extending your care-ful, loving attention. We leave you here in the space between, accompanied by questions, in an open dialogue that waits for you to join in. We hope that our invitation will quicken in your understanding, opening into the emerging unknown, creating ruptions—reimagining and transforming the future, one glowing moment at a time.

Notes

1. Diffraction 3 freely extracts words and phrases from theory and data: full references to published texts are provided in the commentary that follows.

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8

Creativity in an Emergent and Improvisational Global Educational Environment

Oded Ben-Horin

Background

Today, humanity finds itself in a position which has not been held by any species before us (Trinastic, 2015). A growing number of humans feel burdened with the realisation that, for the first time in the history of our planet, the global society to which we belong is playing a central role in the destruction of natural ecosystems, and our atmosphere (Malhi, 2017). Governments are instigating mitigation through our scientific, technological, ethical, environmental, pedagogical and economical capacities to reverse some of the damage done, and to prevent further damage. They are tying those mitigations to research, development and innovation in the above-mentioned disciplines (Norwegian Ministry of Education and Research, 2022b).

O. Ben-Horin (✉)

Department for Arts Education, Western Norway University of Applied
Sciences, Bergen, Norway

e-mail: oded.ben@hvl.no

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Global challenges need collaborative, global solutions (Bernstein, 2015). This is true in the field of education as well (Sutoris, 2022; World Economic Forum, 2017). However, Sutoris (2022) claims that the modern-day educational policy-makers' stated aims regarding humanity's possibility of schooling ourselves out of several simultaneous planetary-level environmental crises may only be a utopian way of approaching the challenges ahead (p. 103). In this chapter, I do not attempt to prove or disprove that claim. I do, however, provide details of an educational initiative which addresses these complex global challenges. Little literature is available regarding how higher education institutions (HEIs) may accommodate and manage initiatives of this kind. Global Science Opera¹ (GSO) (Global Science Opera, 2016), however, constitutes an approach to the process and product of creative global inquiry processes across the disciplines of science and the arts in schools. GSO is a 'global creative educational initiative in which science and arts are explored simultaneously in a transdisciplinary framework' (Straksiene et al., 2022, p. 5). It is a 'network of scientists, art institutions, schools, and universities, in all of the inhabited continents' (Global Science Opera, 2016). Examples of scientific themes which have provided inspiration for the initiative's productions are the topics of eco-system restoration, the oceans, the universe and the creative human mind (ibid.). GSO operates as a co-created educational structure characterised by a flat hierarchy (Chappell & Craft, 2011). That flat hierarchy is apparent in the educational structure because the exact design and content of each lesson is only partially pre-defined by the GSO organisers and the teachers in each GSO location around the globe. The actual content is emergent, and all participating students and teachers are seen as active co-creators of that content. In GSO, real-world scientific and social challenges are negotiated within an educational environment that draws on practices and philosophies from science and the arts, often referred to as the Science, Technology, Engineering, Art, Mathematics (STEAM) movement (Colucci-Gray et al., 2017; Ben-Horin, 2021).

There is no single, ultimate definition of creativity in education (Kampylis & Valtanen, 2010). In their recent review of creative pedagogies, Cremin and Chappell (2021) examined evidence regarding creative pedagogical practices and their potential impact on students' creativity.

Their findings revealed seven features which characterise creative pedagogical practice. These were generating and exploring ideas; encouraging autonomy and agency; playfulness; problem-solving; risk-taking; co-constructing and collaborating; and teacher creativity (ibid.). In this chapter, I detail how GSO pedagogy resonates with most of these features, at the same time as I approach the phenomenon of creativity from a posthuman perspective (Chappell, 2021; Chappell et al., 2019) which extends beyond a human-centred approach to what creativity is.

The kind of pedagogy which GSO represents is a creative rupturing of the structure of a traditional school² for the following reasons. First, GSO's structure is implemented as an educational environment which is freely available for the participation of any school, regardless of students' ages, their country of origin, or each school's specific pedagogical approaches. Second, this pedagogy avoids pre-defined educational and social structures, and refuses the idea that social structure is solely innate and pre-defined. Third, this approach to a global-level pedagogy acknowledges the environment and other-than-human as part of a creative process which is not human centred (Chappell, 2021; Barad, 2007). Rather, inclusion of the environment in which we live, and the technologies we use to communicate globally during the operas' creation, as integral parts in this creative process, is a prerequisite for the realisation of that creative process. This also holds true for the scientific phenomena which provide inspiration for inquiry during the operas. They, too, then, become part of the global community's creative process.³ The creative exploration (Chappell, 2018) of any scientific phenomenon must therefore also impact the phenomenon itself (Chappell & Ben-Horin, 2023).

Thus, GSO teachers and students need to explore physical matter and that matter's meaning, together (Chappell, 2021; Chappell & Ben-Horin, 2023). Matter and its meaning, and, especially, the ethical dimensions of exploring the world around us, are not independent educational processes in GSO. They must be taken hold of simultaneously (Barad, 2007). Matter, though, is dynamic, constantly shifting and emergent. The creative process which explores matter is thus an emergent one too. This chapter takes a step towards describing that creative process, what it requires and what it may enable for management in higher education.

Managing Creative Research and Development Initiatives in Higher Education

European research and development (R&D) funding bodies have consistently invested in creativity in education during the past years. The foundation for this investment was described in European reports, and among them the European Ambassadors to the Year of Creativity (2009) which defines the opportunity to participate in a creative education as a right of all European school pupils, and the report *Science Education Now* (Rocard et al., 2007) which argued for a more inquiry-based science education (IBSE). A central argument for strengthening IBSE was its capacity to create favourable conditions and attitudes for reaching deep levels of knowledge for the ‘most talented, creative and motivated students’ (ibid., p. 12).⁴ One of the areas prioritised for investment has been arts integration in schools, and specifically STEAM education (Colucci-Gray et al., 2017). The reasoning provided for these investments has largely been economic and market oriented: the need for creative thinking in education in order to generate levels of innovation necessary in a competitive society (Rocard et al., 2007). Beyond the economic, market-focused considerations, the European Commission has also acknowledged the need for sustainable solutions to global challenges (Kvamme, 2021). These are not necessarily related to the competitive dimension of a market-driven economy. Rather, they aim to place nature, the environment and equality between humans in inclusive societies as the focus of attention (Kvamme, 2021).

The granting of the above-mentioned investments to applicant institutions, typically in the form of R&D projects, requires the recipient institutions to take responsibility for all aspects of implementation in accordance with each project’s application to funding bodies, as well as with each funding body’s regulations. Implementation of R&D projects which have creative education as their focal point necessarily includes unexpected elements: creative educational environments empower students to be at least partial initiators of what is being learned and how that learning happens (Ben-Horin et al., 2017; Chappell & Craft, 2011). Handing control of elements of the learning process to students, rather

than strictly following pre-defined governmental learning plans and outcomes, will thus often yield unexpected results. Indeed, an understanding of the creative process as one which includes the environment and the other-than-human (Chappell, 2021) implies that much of that process lies beyond the control of humans and is therefore emergent. This is the case for two reasons. First, such a creative process must place at least some of the needs and priorities of other-than-humans before our own. Human dominance will be disrupted, even if only in limited areas of our lives, leading to new hierarchies between humans and our surroundings. New hierarchies will require new solutions with regard to, for example, food production. It is difficult to foresee how those will be resolved, as they will rely on political, market and biological processes. Second, the dominant position held by humans which characterises the Anthropocene is largely a result of an economy of global corporate capitalism which sustains inequalities between humans and other-than-humans as well as between different groups of humans (Kvamme, 2021). A renegotiation of that system is likely to result in social and political unrest of the type which has historically led to emergent, unforeseeable social structures and new political ones.⁵

Institutions implementing R&D in the field of creative education which aim to provide new, innovative solutions to complex global challenges must therefore explore models of governance of that innovation (e.g. European Commission, 2014). Those models need to conceptualise the planning for flexible structures in which risk (Biesta, 2014) is embedded. Specifically, higher education management must provide the legal, economic and scientific frameworks needed to implement R&D, while enabling researchers' freedom of exploration and their ability to identify and capitalise upon unexpected, emergent opportunities (Scaglione et al., 2019). That freedom, however, is provided against the backdrop of a complex reality in which management is obliged to deliver quality education programmes on one hand (ESG, 2015), and high-level research, development and innovation on the other, as well as synergies between them (The Guild of European Research-Intensive Universities, 2023).

Global educational environments require simultaneous interaction with different cultures, modes of communication, legal structures, values, curricula and timetables. In order to create these infrastructures,

leadership at the higher education level needs to enable spaces for them to flourish within the institution, something which often creates friction and associated risk. In this chapter, therefore, I provide a description of how leadership at higher education institutions may approach the risky (Biesta, 2014) and improvisational (Scaglione et al., 2019) task of participating in such an endeavour. The aesthetic of improvisation relies on improvised content (e.g. music) emerging spontaneously as a result of the simultaneous contributions of all participating musicians: that music would not exist had those musicians not improvised together (Monson, 1996). I, therefore, draw on theories of intra-action in which Barad (2007) distinguishes between interaction and intra-action. Intra-action ‘recognizes that distinct agencies...emerge through their intra-action’ (p. 33). Interacting elements exist prior to their interaction. In intra-action, though, ‘they don’t exist as individual elements’ prior to intra-action (ibid.). Intra-action in global educational environments therefore calls into question the very existence of the independence of several structures central to the current-day educational field. Indeed, GSO represents a transformational rupture which weakens their independence. Examples of these structures are national curricula, distinctions between higher education and school education and the organisation of school activities in distinct disciplines, such as mathematics, art, science and history.

It is also relevant to turn to other work in the area of improvisation in educational contexts (Ben-Horin, 2016; DeZutter, 2011; Holdhus et al., 2016; Sawyer, 2011) in order to contextualise this claim. Much of the work in pedagogical improvisation (Donmoyer, 1983) has relied on frameworks and phenomena related to improvisation in the arts (Maheux & Lajoie, 2011), and especially jazz music (Sawyer, 2011). HEIs’ needs for structures which enable risk-taking (ibid.; Biesta, 2014) on the *outside* of their defined structures in order to be able to accommodate emergent situations which are unforeseeable in advance could turn to jazz music’s improvisation outside the harmonic progressions of a given composition. In broad terms, this refers to one or more musicians, typically soloists, who, for a limited amount of time, play a melodic or harmonic sequence (or both) which includes notes that do not *belong* in the musical scale or chord according to a strict, traditional interpretation of music theory.⁶

When performed against the backdrop of an established harmonic framework with which the listener is familiar, the musical phrase improvised outside the harmony belongs to the composition being played while at the same time creating dissonance resulting in musical tension. The length of each excursion *outside* the harmony, and how far it ventures beyond a composition's underlying harmonic structure is a function of each improviser's style, musical interpretation and intra-action with her fellow musicians. This analogy is useful as a way of conceptualising risky R&D ventures which take place outside the organisation's stated frameworks, yet which still belong to the organisation and signify new potential areas of R&D activity in that organisation.

Achievement of the United Nation's (UN) Sustainable Development Goals will require seamless intra-action (Barad, 2007) of all knowledge, societal and industrial sectors (European Commission, 2022). The United Nations (2023) defines higher education institutions (HEI) as follows:

...HEIs...are preparing future professionals, conducting meaningful research, and engaging with the community and stakeholders to tackle local, national, regional, and global challenges. These HEIs are at the forefront of the solutions required to advance the Sustainable Development Goals, which underscores the fundamental role of education in creating healthy and inclusive societies... – (United Nations, 2023)

HEIs' organisational structures typically include units (departments, faculties, centres) dedicated to educational programmes, research, development and innovation, as well as administrative units. HEIs are evaluated according to their achievements in these fields of activity. In Norway, substantial portions of public HEIs' budgets depend on documented and quantifiable results with regard to student production of ECTS, number of students who graduated during a given year and the number of research grants approved (Norwegian Ministry of Education and Research, 2022a). Workloads of scientific personnel typically include more than one of these fields. Personnel are thus often required to balance multiple teaching duties with duties in the fields of research (internally or externally funded), development (internally focused, e.g. development of new courses or externally focused, e.g. development of new practicum

programmes), and innovation. Balancing work between and across boundaries of these fields of knowledge offers several advantages. It allows personnel to experience different perspectives of their HEI's activity, thereby including multiple organisational and epistemological dimensions in their work. That balancing also poses logistical (scheduling considerations, coordinating numerous deadlines, etc.) as well as epistemological challenges. Balancing these fields of activity and knowledge is crucial, though. Indeed, the seamless integration of R&D in programmes for higher education students is described as a criterion for achieving quality⁷ in European higher education. Management of R&D has therefore been the focus of both debate (Norwegian Ministry of Education, 2020) and renewal (Norwegian Ministry of Education and Research, 2022a) in Norway. Norwegian HEIs must, therefore, continuously develop approaches to integrate R&D in their study programmes (Norwegian Agency for Quality Assurance in Education, 2022). The broader context for this is the need to navigate several macro-level challenges relating to relations between the EU's Research, Development and Innovation programmes, as well as the need to improve systematised implementation of results of funded EU projects in their study programmes. This, in turn, will require that HEIs formulate and take into use specific measures for how knowledge attained in research projects will be implemented after each project's formal lifetime as it has been defined by the programmes that funded it (typically 2–4 years).

I will now contextualise this background in a case study (Lichtman, 2010; Stake, 1995; Yin, 2014). The real-world context for this study is the Global Science Opera (GSO), which I have coordinated since its inception in 2014. That coordination has overlapped with my role as an HEI middle-leader since 2018. This dual perspective provides an important angle of perception for the qualitative case study: an angle which allows me to base the study's conclusions on an intensive, detailed acquaintance with the GSO case, including its ideas, implementation and its management.

GSO emerged through, and as a result of, R&D projects funded by the European Commission, the European Economic Area and the Norwegian Research Council,⁸ and those projects' interactions with the international educational networks Global Hands on Universe (GHOU),

Galileo Teacher Training Program (GTTP) and the European Network for Opera and Dance Education (RESEO). GSO was initially proposed to the International Astronomical Union as a cornerstone project of the United Nations–sanctioned International Year of Light 2015 (International Astronomical Union, 2015). GSO's metaphorical backbone thus materialised as a synergy between several educational frameworks and funding bodies. Such synergies are desirable (European Commission, 2021; The Guild of European Research-Intensive Universities, 2023), yet complicated to manage.⁹

Middle Leaders' Handling of the R&D Portfolio

The higher education sector needs to establish clearer, explicit and more visible connections between epistemological and organisational needs for synergies on the international macro level, and those same needs for synergies between research and educational programmes within the HEIs themselves. HEIs must, therefore, place themselves more decisively in relation to, and in the context of, international frameworks such as the EU Missions (European Commission, 2022). To achieve this, individual HEIs need to become more conscious of where they see themselves in relation to the current day's biggest societal challenges, such as climate change, pollution and equal access to quality education, and what they can uniquely contribute to the solution of these challenges. The connections between the international level and synergies within each unique HEI must be understood and facilitated by the meso-level of middle leaders. It is those middle leaders' responsibility to ensure that higher education student involvement in staff's R&D initiatives is contextualised as part of the EU's need to achieve synergies between its various funding programmes of research, development, innovation and education, which represent different approaches, systems and mechanisms to knowledge creation in the European future. Many middle leaders in European higher education do indeed aim to increase integration of R&D in their institutions' educational programmes (Norwegian Agency for Quality Assurance in Education, 2022). Yet their attention is often focused on the micro level of this issue, such as the single research group,

the single Erasmus+ project, or the work-plans of specific personnel. Increased focus on how integration may be planned and implemented on the macro level of the EU, National Research Councils, or OECD tendencies, strategies and plans is needed in order to more specifically clarify how micro levels should operate in a way which contributes to the macro level's integration goals (Bronfenbrenner, 1979). Working in this way will, furthermore, provide middle leaders at universities of applied sciences with clearer understandings of how to provide the national and EU levels with new mechanisms for the application of new knowledge in the local, regional, national and international societies in which those institutions are embedded. In the absence of these more clearly defined frameworks for middle leaders, those leaders may lack capacity to reach their full potential with regard to their contribution to their country's financial competitiveness and ethical stance. Furthermore, managing and applying externally funded R&D projects, which is a taxing task in terms of time and resources, will become more difficult. Since global challenges require global educational frameworks, lacking a systematic approach to portfolio development also implies an unclear concept of each HEI's role and profile in the international higher education sector, as these are functions of the specific ways in which that institution conceptualises, theorises, implements and evaluates intra-actions between research, development and innovation, and the courses which its students attend. Thus, a systematic approach to long-term R&D portfolio development is needed at each HEI. That approach must rely on portfolios of R&D projects and those of university courses being developed as a unified whole.

Applying New Knowledge

Universities of Applied Sciences, with their focus on professions which apply new knowledge, are especially well-positioned for the development and implementation of long-term approaches to integrated portfolios. The Norwegian government has specified the need for HEIs to be active in providing good examples and mechanisms for applying sciences, and knowledge more generally, as a prerequisite to achieving solutions to societal challenges which are international and global in nature (Norwegian

Ministry of Education and Research, 2022b). It does not suffice for HEIs to develop knowledge. New knowledge, whether in the form of research, development or innovation, must be produced with a specific plan for how that knowledge will be applied. That knowledge must also be made available, and taken into use by industry, the public sector and the civil society (ibid.).

The EU has defined its Missions as a ‘new way to bring concrete solutions to some of our greatest challenges’ (European Commission, 2022). The Missions are designed in the way that they are in order to develop and implement concrete results by 2030 (ibid.). This will be achieved by ‘putting research and innovation into a new role, combined with *new forms of governance* and collaboration...’ (ibid., italics added). These goals are ambitious, and the defined time frame for reaching them is short. The Missions’ design acknowledges that responding to challenges will require collaboration between practitioners of different disciplines. This, and the previously mentioned reasons, imply that it will be necessary to provide flexibility of reaction for researchers contributing to these solutions. The need to engage with society (United Nations, 2023) implies involving the broader society in the formulation and ethical dimensions of research questions and finding optimal ways for informing the broader society of results of research (Ben-Horin et al., 2017; Sotiriou et al., 2017). However, the new roles of research, innovation, governance and collaboration (United Nations, 2023) need to be further developed as a response to Sutori’s (2022) description of current methods of education for sustainability as being merely utopic. To achieve this, the new roles, at least in the case of management of R&D with creativity at its heart, will need to ensure that the intra-action (Barad, 2007) with the world around us is not limited to the creative educational processes taking place within the confines of the single R&D initiative. New world realities, such as the emergence of artificial intelligence (AI) in education (U.S. Department of Education, 2023) and wicked problems (Bernstein, 2015; Rittel & Webber, 1973), such as recent climate-change induced weather disasters (Roberts, 2022), need to instigate a new phase in higher education. Higher education, then, needs to go through its own ruptures.

Until these ruptures are introduced and implemented, we will continue to see that standards and concepts of the impact of how we apply

our sciences are not reconciled with sustainability goals through overarching institutional strategies, with regard to (a) acknowledging specific contexts and conditions within which impact emerges, (b) consistent integration of R&D initiatives in higher education's study programmes and (c) intra-actions between profession-oriented study programmes in education and the practice field of schools. HEIs, then, and especially universities of applied sciences, could benefit from a clearer concept of their impact on international innovation, practice and industry fields. This can be achieved by developing theoretical and practice-based approaches and analyses of HEIs' impact as a function of the unique disciplinary, geographical and geo-political placement that they have.¹⁰

The Improvising Higher Education Institution

GSO provides an appropriate case study for this discussion due to its provision of a framework for creative teaching and for teaching for creativity (Ben-Horin, 2014; Chappell & Ben-Horin, 2023), and for its focus on the practice field. Due to its geographical spread, GSO must provide a flexible framework which can be adapted to the different curricula of various countries, different levels of availability of technical support, as well as different cultural approaches, regulations and pedagogical attitudes, all within a single educational environment which invites schools from different countries to intra-act. Managing a framework of this kind within higher education requires middle leaders to be able to exercise the freedom to step outside established structures in their own institutions when the need arises, and to improvise on behalf of their HEI. This can be likened to the jam session in jazz music (Brunstad, 2023) in the sense that each HEI's top management provides musical riffs as a foundation, with the aim of enabling middle leaders, educators and researchers to improvise with, and interpret, that foundation in their own ways. Indeed, GSO was enabled through synergies across EU and other R&D funding programmes in both the practice field of schools, science and art institutions, as well as in research. Such synergies require robust measures of flexibility during the planning, implementation and data-harvesting phases of the unique R&D projects which work together as a

portfolio. As an example, planning for future synergies requires the authoring of several funding proposals simultaneously. In another example, using didactic training materials created by one R&D project in order to provide the foundation for creative educational activities in another requires formulations which align with both, as well as meticulous post-project reporting of why and how these materials were used in both projects. Consequently, explicit communication from an HEI's highest leadership needs to be made to middle leaders, ensuring them that improvisation as an organisation is not only tolerated, but encouraged (Scaglione et al., 2019). The concept of taking risks in order to produce robust research results, and to take advantage of opportunities in the international R&D field, thus needs to be anchored in the documents which describe middle leader management approaches, and in training courses of new middle leaders.

Leadership Approaches for Educational Futures

The role of management is to make space for risk-taking, to understand what the researchers are going through, to protect them from bureaucracy and to lead and facilitate integration of research, development and innovation with educational programmes. Such an approach to management must be characterised by abundant trust between middle leaders and the researchers and educators they lead. It is not the leaders' distinct vision which defines how new knowledge is developed and applied. Rather, staff and students exercise the freedom to pursue their own visions. They feel free to exchange information with their leaders in challenging situations for which no clear solution is available. They dare to discuss differences of opinions with their leaders, who exercise a relational approach to management, and who are willing to transfer control to staff and students for the benefit of risk-taking and an improvisational approach to the creation and application of new, emergent knowledge. An important responsibility, then, lies on the shoulders of staff themselves, as it is crucial that staff involve middle leaders in long-term plans for their research, development and innovation.

HEIs' middle leaders and, in turn, the highest management levels, must tolerate research, development and educational processes characterised by unknown results. This is no easy feat: annual financial reports tend to highlight monetary results which can be documented as having been achieved within each year's budget. Likewise, reports about each HEI's number of courses, number of enrolled students and number of confirmed R&D projects do not typically include mechanisms for reporting risky in-the-making initiatives which may take years to develop and document. Middle leaders are at least partially evaluated according to such numerical results for units they manage. Allowing staff and students the freedom to explore their own visions may therefore be experienced by some middle leaders as unsafe and uncomfortable.

Conclusion

Achieving the UN Strategic Development Goals (United Nations, 2023) will require a rupturing of several mechanisms in higher education's structures, and its relationships with the practice field of global schools. Higher education should eschew dualisms which conceptualise research, development and educational courses as separate entities, each with their own administrative procedures and economic considerations. Rather, we need a detailed conceptualisation of how and why risk is taken as a desirable (Biesta, 2014) characteristic collectively in the pursuit, dissemination and application of new knowledge in numerous forms and disciplines. It is for this reason that a transdisciplinary approach to working across subject boundaries plays a unique role in educational intra-action (Barad, 2007).

Transdisciplinarity entails understanding disciplines through the eyes of other disciplines. It is, for example, impossible to study science in this transdisciplinary framework without adhering to the methods and philosophies of music. Likewise, separate entities do not pre-exist their intra-action.¹¹ The very act of knowing relies on intra-action (Barad, 2007). Science and music, then, cannot exist without each other. The risky, emergent and improvisational reaching across disciplinary boundaries which characterises STEAM education (Colucci-Gray et al., 2017), and

other transdisciplinary frameworks, is a necessity in today's world of education, rather than electives which we may choose to omit from curricula in educational futures. Consequently, teacher education programmes in which pre-service teachers study science education and arts education, but without explicit concepts for how science and the arts intra-act, are not preparing teachers for educational futures in which education for sustainability is more than just utopic.

It is my hope that these mechanisms will be taken further and offer something to higher education more generally, namely, explicit concepts for intra-action between an HEI's internal units and between its various roles of leadership, scientific personnel, educators and administrators. The rupture which we need to bring about in higher education implies that an HEI cannot engage in innovative research without expecting that research's results to change something in the way that HEI is managed and structured. New models of innovation which aim to strengthen quality (ESG, 2015) in the form of R&D integration must therefore rely on R&D projects being systematically designed to be embedded within higher education courses. Only in this way will middle leaders be able to ensure direct lines between the micro and the macro levels of the world of education in the Anthropocene.

Notes

1. Britannica Dictionary's definition of opera is '...a kind of performance in which actors sing all or most of the words of a play with music performed by an orchestra' (Britannica Dictionary, 2023). This definition is only partially relevant as a description of Global Science Opera (GSO), which aims to include all schools regardless of their access to orchestras. Also, due to GSO's geographical distribution and multitude of musical traditions, instrumentation of several GSO scenes has relied on, e.g., African percussion, electronic computer-generated sounds, or Bossa Nova bands rather than on an orchestra.
2. In this context, 'school' mainly refers to primary, secondary and high schools, as these institutions constitute the largest group of GSO participants. In some instances, university-level, professional artists and

scientists and pre-schoolers did indeed participate in GSO productions. However, the reference in this chapter to a traditional 'school' is intended to open doors for new approaches to the design of curricula and teaching approaches in primary, secondary and high schools.

3. This claim is underlined by the fact that observation necessarily impacts the object being observed (Lincoln & Guba, 1985, p. 98).
4. A description of some students being more creative than others is not unproblematic. While some approaches to understanding creativity in educational contexts do compare the products of one student's process as being more or less creative than their peers' (e.g. Elliot, 1995, p. 2016), GSO has, throughout its development, relied on understandings of creativity which eschew competitiveness as a foundation for the understanding of how the creative process is defined (e.g. Chappell, 2018).
5. Examples of such processes are the civil war in the USA (nineteenth century), and the Russian civil war (twentieth century).
6. In a very simplified example, a soloist playing melody notes belonging to the chord F# major (the notes F#, A# and C#), while the rest of her ensemble is playing the chord C major, can be said to be playing outside the harmony at that point, since the chord C major does not include any of those three notes.
7. A European focus on standards of quality in higher education (ESG, 2015) has been a catalyst for the Norwegian government's implementation of a series of reforms in this sector. A main reform has been the merging of higher education institutions (HEIs) with the aims of enabling research and study programs of high quality; students' access to robust academic communities in all parts of the country; world-leading academic communities; effective use of resources.
8. During its first two years of existence, various aspects of the GSO initiative were made possible by the projects *Implementing Creative Strategies Into Science Teaching (CREAT-IT)* (Craft et al., 2016); *Write a Science Opera (WASO)* (Sousa et al., 2016); *Integrating Science of Oceans, Physics and Education (Iscope)* (Urbaniak et al., 2021); *Developing an Engaging Science Classroom (CREATIONS)* (Chappell et al., 2019).
9. Europe has not yet maximised the potential of such synergies, due to challenges embedded within the programs (OECD, 2022) for the following reasons. First, the long tradition of considering research, education and innovation separately is entrenched in both national and European policy. Responsibilities for managing these areas are divided

between three different Directorate Generals, resulting in a lack of coordination of instruments for education on the one hand, and research and innovation on the other. A similar challenge relates to calls for proposals and deadlines: there are no incentives for enhanced levels of synergies between R&D initiatives funded by different programs (Regjeringen.no, 2017). Despite the potential for linking research and education, and the common *objectives* of different programs, few beneficiaries have succeeded in exploiting the synergy potentials. Indeed, the European Commission's new Horizon Europe program specifies synergies as one of its main goals (European Commission, 2021, p. 6).

10. See Muhonen et al. (2020) for a discussion of the need for more empirical work and policy interest in the 'complex frameworks' (p. 35) in which societal impact of HEIs' research actually emerges. The authors (*ibid.*) specified that need as a response to tension which arises between a culture of a mainly numerical assessment of society's interactions with HEIs and the conditions in which knowledge is actually made 'useful' (Research Council of Australia, 2018, in Muhonen et al., 2020, p. 35). An interpretation of interactions between research institutions and societal actors must occur through acknowledgement of contexts, conditions and pathways within which societal impact emerges (*ibid.*). Numerical assessments must be supported by qualitative descriptions of how institutions facilitated impact realisation (*ibid.*, p. 36). To accommodate this, the authors provided a typology of different architectures for how research in the Social Sciences and Humanities leads to societal impact.
11. An example of this is a creative process in which school pupils explore the environment. The very existence of human consciousness depends on its intra-action with the environment, and the environment itself has a central role in designing those pupils' creative process.

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Part III

Resistings



9

The Aesthetics of African Participatory Music Making Through the Eyes of Utu: An Alternative Approach to Music Education

Nancy Katingima Day

Introduction

Music and music making humanises us. Seeing through the eyes of Utu, a philosophical framework found in East and Central Africa, affirms this.¹ This chapter will begin with an exploration the etymology, epistemology and ontology of Utu. It will then be followed by the understanding of music and music making used within the framework, with the understanding that they are spaces of knowledge creation, interrogation and production. It is then proposed that the emergence of knowledge within participatory music making arises from the relationships between the entities and participants and their action/interaction. This knowledge is embedded and embodied into the lives of the participants who will then validate its truth. Through the principles of relationality and connectivity, the *aesthetics of life* in and through music and music making will be described.

N. Katingima Day
School of Education, University of Exeter, Exeter, UK
e-mail: nnkday327@gmail.com

This exploration will highlight some of the limitations of the descriptions of African music which has been the prerogative of anthropological and ethnomusicological inquiry, framed by Western hegemonic knowledge structures (Murungi, 2011) for a non-African audience. Therefore, the rupture that Utu offers in guiding this exploration on African ways of being, proposes an alternative approach to the philosophical discourse on music education, arguing for the human right to participate in life in and through music and music making.² It also argues for an alternative approach to creativity and education through the principles of relationality and connectivity. This framework and the principles highlighted can therefore be applied to conceptualisations surrounding the participants (human and non-human) of an educational encounter, and how their diversity, creativity and care can be provided for.

Therefore, what is Utu? A definition of the word Utu is problematic for two main reasons. Firstly, definitions have the tendency to confine meaning in fixed boundaries that may not comprehensively capture all that the term entails. Secondly, answering a *what* question is a mechanistic approach that positions Utu as *some-thing* that can be observed, measured, and analysed. That is a form of methodological colonisation because this objectification relegates Utu to a list of characteristics which are, at best, only indicators. Cognisant of these pitfalls, Utu will be described in three ways; etymologically (as a word), epistemologically (as a form of knowledge) and ontologically (as a way of being).

Etymologically, Utu is a linguistic and textual reference from *Kiswahili*, the language of the Bantu tribe of the Swahili found at the coastal region of Kenya. Kiswahili is the regional lingua franca in East and Central Africa, 80% of words being Bantu and the rest being Arab, Indian and East Asian influences. Utu therefore is derived from *Mtu* (a person) and the essence or quality they possess is referred to as *Utu*.³ The deliberate choice to use this geopolitical reference is because of its unifying potential within the region rather than the socio-cultural references of the Swahili people. It is also acknowledged that other similar frameworks such as Ubuntu (a Bantu term) have informed Utu because a considerable proportion of Kenyan Indigenous communities (KIC) are Bantu.⁴

Epistemologically, Utu has a unique nature and scope of knowledge, validated through human experience, implying that it is more important

to know than to know about. The validity of any knowledge claims or proposals rests on several factors, including *how* one arrives at knowledge or truth, *what* the aim of such validation is, *who* tells this truth and finally, *who* validates it. In the case of Utu, it is proposed that knowledge is arrived at through human experience – created, embedded, embodied and validated by those who participate in all knowledge-producing spaces (including the creative arts).⁵ The aim of knowledge production in any given context may vary but in most African indigenous contexts, it was primarily utilitarian. Thus, education and knowledge production were a creative and dynamic process, woven into the living fabric of the people and generated within communities. According to Omolewa (2007), African Indigenous education is

based on practical common sense, on teachings and experience and ... holistic – it cannot be compartmentalised and cannot be separated from the people who are involved in it because essentially, it is a way of life (p. 596).

Ontologically, and intricately linked to the above, Utu closely examines *being* and *becoming* human through *doing*, in this case, through participatory music making. This is because Utu is understood as a ‘lived’ form of knowledge. Thus, instead of asking *what is Utu*, this discussion asks, *where is Utu?* in the transitional and dynamic nature of life. This means that Utu encompasses all of life (the physical/non-physical/metaphysical, the tangible/intangible/abstract/conceptual, to mention a few). It implies that the indwelt element of Utu is present in its awakening of awareness and consciousness, in its provocation to positive action and transformation and in its sustenance of life in the past, present and future. In short, I argue that Utu endorses life as a recurrent and dynamic creative endeavour and the principles of relationality and connectivity are key indicators of creativity.

Music, using this framework, I argue, is identified as an *aesthetic object* and *aesthetic experience*. Hence, I broadly describe the aesthetic object as the concept, phenomenon or captured representation of a coherent entity of sound. This means that the primary medium of music is sound, ranging from the intangible subtle abstractions of sound (its unique

properties and vibrations that lend to all things audible), to tangible representations of the same (audio recordings, musical works, musical instruments, musical notation, and the like). Any captured representations of music are static forms of that music actualised during or after a musical happening. Therefore, within this framework, music aesthetic objects become a memory or archive for posterity. In other words, apart from being a present temporal existence, music can be captured as a representation (just as a photograph captures a given moment in time) of what happened or what can happen. The capture of the past (unlike the photograph analogy) proposes an emergent future through its potential for a repeat enactment, human or otherwise.

Using the same framework, music is seen as a social and cultural entity within which people encounter an *aesthetic experience*. The experience can be approached as a past and a present, the former suggesting its captured representational nature, and the latter as an active experience in a present temporal timebound existence.⁶ In both cases, the happenings or events do not exist without some form of present human or nonhuman action. The human action is in the form of music making, thus music making is here defined, in the broadest sense, as the human actions that bring into reality the concept and captured representation of music (the aesthetic objects identified above).⁷

In short, music making in the eyes of Utu is an aesthetic experience through human action that leads to an aesthetic object. The actions associated with music making have tended to be identified as performing and composing. To this list of actions, Small (1998) adds what he calls 'musicking', defined as 'to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composing), or by dancing' (p. 9). Despite the comprehensive list, Small has not clearly indicated if actions such as 'composing' or 'listening', which can also be realised in the past or future, offer an alternative aesthetic to the present musical experience. The list also falls short of comprehensively identifying the roles of those involved in these actions (performers, listeners, spectators or creators) and how their action contributes to the aesthetic realised.

For this reason, what Thomas Turino (2009) identifies as ‘participatory performance’ provides a suitable description of music making for this discussion which includes not only the actions but the actors in music making. Participatory performance, according to Turino, is ‘...actively contributing to the sound and motion of a musical event through dancing, singing, clapping and playing musical instruments *when each of these activities is considered integral to the performance*’ (italics by author, p. 98). This will be the starting point of the working description of participatory music making in this chapter.

The Aesthetic of Life

The current understanding of aesthetics in Western thought, according to Elliott (1995), has been influenced by the enlightenment period in the eighteenth century. It is based on the aesthetic object, that ‘existed to be contemplated in a special way – with a “disinterested” or nonpractical and distanced attitude of *aesthetic perception*’ (p. 22). This understanding implies an aesthetic based on matters of beauty—its existence and people’s response to it in the form of music appreciation. Other scholars like Roger Scruton (1997) have moved away from this conception to highlight aesthetics as ‘an interest in appearances: its object is not in the underlying structure of things, but the revealed presence of the world – the world as it is encountered in our experience’ (p. 5). This is a fair argument that reflects the revealed aesthetic in life through aesthetic objects. It could, however, be argued that revelation of the presence of the world encompasses more than what is observable, measurable and tangible. Instead, it could embrace not only musical cultural artefacts and other intangible possibilities, but the process or entities/participants leading up to those aesthetic objects. All this suggests an alternative means of validating aesthetics.

The framework provided by Utu proposes a rupture through an ontological shift. It argues that music and music making is a creative and emergent process where dynamism and relationality within life is inextricably linked to music and the creative arts. Put differently, the aesthetics and music (and by extension other creative arts) are subservient to life,

shaping and being shaped by life. Murungi (2011) recognised this relatedness in describing aesthetics as a human ontology, saying, 'A human being is axiomatically an aesthetic being, thus, when we inquire into aesthetics we are inquiring into our being' (p. 47). This points towards aesthetics defined and determined by life, an *aesthetic of life*, as opposed to an aesthetic in life. For this reason, music encounters through the eyes of Utu are not only a reflection of life but are, in fact, life (Nketia, 1984).

It is through the principles of relationality and connectivity that an aesthetic of life can be realised. Relationality here refers to *belonging* that is beyond kinship or similarity. It is based on the potential to form a link and share lived spaces. Creativity in music making processes therefore endorses belonging through the realisation, identification, awareness, affirmation, discovery and creation of relationships between entities and participants of the musical experience. This is because, as Senghor (1966) put it,

As far as African ontology is concerned, ...there is no such thing as dead matter: every being, every thing – be it only a grain of sand – radiates a life force, a sort of wave-particle; and sages, priests, kings, doctors and artists all use it to help bring the universe to its fulfilment. (p. 49)

This was demonstrated in a participatory seminar on African ways of knowing at the University of Exeter.⁸ Participants arrived in that music making space with great anticipation and curiosity about an area of knowledge that was unfamiliar to them. Their mere presence in that space validated their belongingness because of their potential to share themselves (their histories, skills and experience) and the music making space (with tangible and intangible aesthetic objects) available to them. The participants encountered an other in familiar and unfamiliar ways primarily using sound. Their immersion in the music making space was filled with questions, moving bodies, tactile experimentation with objects, and singing voices. Through their interactions with potential relationships and their shared experience, they were engaging in creative activity. At that moment, they related and connected with one another and with their environment by doing and being in life.

Their human action describes the other principle of Utu, connectivity. It is the *link* (operative word) that enables relationships to exist and enact for the transformation of the participants and entities present. This means that without the formation of links, they remain mere potentialities. Connections through participation and active interaction are strong indicators of the creative processes. However, connections need not occur between homogenous entities, nor at all moments or in all spaces. That is because not all connections are relevant to the music experience, since they align themselves with the purposes and socio-historical contexts within which they occur. This demonstrates how agency is an integral part of participating in life and thus a creative endeavour.

Coherence in the Music Making Space

The music making space described above is a complex and active educational space that holds diverse types and ways of knowing in coherent balance. The discussion now will focus on two nonmaterial and metaphysical entities, Affect and meaning, that help sustain stable coherence for creativity in the music aesthetic experience.⁹

Affect

Through the eyes of Utu, Affect is an active, non-material and metaphysical *participant* in music and music making. For instance, in the earlier mentioned participatory seminar, the emotions displayed shifted at the start, from absolute terror at the prospect of holding an instrument, moving one's body or singing competently before each other, to the laughter and smiles while moving in rhythm in a circle chanting a musical response to a call in a language they did not know. The presence of Affect within, without and in between their interactions and connections was easily recognisable because of their transformation. This is because of the propensity for Affect to be aroused within active musical engagement to be 'known' especially through embodiment. This process of relating,

connecting and transforming is what affirms the humanity of the participants.

Affect as another participant in music making suggests that music making has less to do with the material or technical musical content and more to do with the facilitation of the dynamism of relatedness that creates new knowledge that accommodates human experience.¹⁰ As an essential part of human engagement, Affect surfaces within, without and in between the entities and participants of a music encounter in embodied, intuitive and tacit ways. The surfacing of Affect, described by Ahmed (2014) as an experience of intensification that alerts our consciousness and attention, brings forth our sense of being, both individually and collectively. An awareness of Affect in this way opens new creative possibilities in music making encounters because as a participant it fulfils various roles, including,

- facilitating the fluidity of connections in the negotiation of present and emergent realities. This maintains the flow of the musical encounter that enables risk taking and experimentation to find relevant connections within the musical space.
- validating and reinforcing the sense of belonging of all entities and participants because it resides within, without and in between them to affirm their presence, and
- fostering coherence made possible through active (as opposed to passive) subjective and embodied listening.

Therefore, the interactive and intersubjective engagement that affirms the other expressing *I sense your humanity as you sense mine* validates Affect as a significant marker of creativity within the musical aesthetic, and, by extension, the aesthetic of life.

Meaning

Another significant marker based on the framework of Utu of the musical aesthetic and the aesthetic of life is meaning, recognised within participatory music making as the formation of significance, purpose, relevance,

truth and value. Thus, meaning making within musical encounters is a conversation that leads to emergent possibility through individual and collective understanding of both musical properties and their performance (actual, idealised, imagined or remembered). This suggests that just as life is emergent, *meaning is emergent* within music making encounters, and although they are sometimes unpredictable and ambiguous, they are nonetheless present, dynamic and fluid. In addition, the validity of meaning as another participant is made possible through the agency of the participants exercised at various stages of the musical encounter.

Meaning formation in most African music encounters, according to Nketia (1964), have a 'close identification of music with African social life' (p. 1). It suggests that life's significance, purpose, relevance, truth and value inform and are informed by the musical properties, the socio-historical context of the music and the related epistemological and ontological underpinnings within that context. This validates meaning embedded in music making just as it is in all that encompasses life. This includes the social context, the other arts included in the music making encounter, the musical and non-musical properties employed and the human and nonhuman relationships.¹¹ Crucially therefore, Nketia proposes that investigations in meaning 'must be regarded not as involving one statement but a plurality of statements' (p. 5), a position recognised by this discussion, as will be discussed further in the implications on music and education momentarily.

During the symposium *Have You Heard: Using Music as a Decolonising Tool* run by the Music Research Network (a part of Creativity and Emergent Educational-Futures Network, University of Exeter), in November 2022, participants were invited to an embodied music experience after sharing their stories of colonisation and decolonisation.¹² The participants brought with them creative potential in various forms, including in the form of stored embodied knowledge of the past, as well as in the anticipation for the aesthetic experience and musical space that was about to be opened. Participation was key for transformation. The sudden gasps of empathy or unconcealed anger at some of the disturbing stories given made visceral the interconnectedness of the participants through Affect and meaning as these stories emerged. This visceral engagement evoked the enactment of relationships and connections to

become a collective creative and active human encounter through the music making that was later shared.

Participants in that musical space embodied and were being embodied by the narratives and presence of all the other entities and participants (physical/nonphysical, tangible/intangible). Through that music making, each had the opportunity to have agency to address their colonial and decolonial past in the present thereby sensing their humanity as they connected to the agency and sense of humanity of others. They were inter-related and interconnected because of the safety a musical space can provide to address their past in the present, subsequently transforming themselves to the emergence of new knowledge. This emergent knowledge, both individual and collective, became a new future reality with the potential to influence coming musical encounters. For this reason, the validation of new knowledge in music and music making is most effectively done by the participants of the encounter. The spectator or observer perceives, but the participants embody and know.

What this experience exemplifies is how Affect and meaning within the framework of Utu are recognised as valid participants of a musical encounter, evoked through human action. When present in the music aesthetic experience, they play significant roles in facilitating spaces for interaction and transformation by sustaining coherence between entities and participants of the encounter. These roles promote creative engagement through the provision of agency for expression, access to interaction and connection and a space for risk taking and negotiation. In other words, in participatory music and music making, Affect and meaning are the fuel through which creativity can flourish.

Summary

The aesthetic of life affirmed through the eyes of Utu as regards music and music making is indicated as follows. Firstly, it resides and is revealed in *the acknowledgement of already existing relationships between entities of the music making encounter*. These entities encompass all that is found in life, including cultural histories and objects, individual and collective memories as well as the Affective memories from the past, to form an

ever-expanding body of existing knowledge. Secondly, these entities and participants are potentialities that lie in anticipation and expectation of evocation but must participate in the present by *connecting and interacting in relevant and stable ways* for coherent flow through embodiment. In other words, connections are made possible through deliberate engagement of all relevant entities, made more effective through the evocation of Affect and interaction of meaning. This is an ever-emergent space, made so because of the unpredictability and complexity of the interactions and connections and results in the emergence of new memories, new meanings and new relationships between entities. Thirdly, the aesthetic also lies in *the validation and affirmation of the outcomes of the music encounter* by the participants of that encounter. This follows on from the epistemological and ontological positioning of Utu that emphasises the validity of human experience in the creation, production and subsequent storage of knowledge.

Implications for Music and Education

The theoretical framework provided by Utu through the principles of relationality and connectivity posits a rupture in knowledge systems and structures. For instance, the growing discourse on decolonisation has tended to concentrate on decolonising content and practice of music education. Much as this is of value, wider considerations, especially the plurality of theorisations and presentations of colonisation and decolonisation within different contexts, provide an alternative perspective. Alternative realities have alternative experiences which require alternative methods of addressing the consequences of colonisation. The diversity that comes from this plurality will ensure relevant practical and holistic engagement in dealing with decolonisation in different contexts. For instance, this plurality can provide a better understanding of the relatedness and connectedness of both the colonised and coloniser, as Guillermo Rosabal-Cotto (2019) suggests, especially when both simultaneously exist within the same entity or participant. This consideration can be applied to music education, education or other contexts of knowledge creation and production. It can do so in the following ways.

Firstly, if the aesthetic within music and music making is an aesthetic of life, then it implies that music education is *more* than the acquisition mechanistic and technical skills. Instead, it encompasses the holistic development of the individual—their physical, cognitive, psychological, emotional and spiritual being. Therefore, much as musical skill (playing of instruments, composing, singing and dancing) play a significant role in the coherence in a musical encounter, there is more to the encounter than its technical components. Understanding and being aware of the belongingness of each entity and participant grants each the agency to encounter the other. Without this awareness and engagement with other relationships between music and life, including the music encounter, no meaningful transformation can take place, thus no meaningful education can take place.

This suggests that the axiological position of music and the creative arts in contemporary education needs reconsideration in favour of further integrating them into other disciplines and primarily to life. Doing so opens new possibilities of discovering and creating new knowledge that is relevant to the given time and context. It will also undermine the colonial agenda in education through limiting educational encounters (including music and music making) to mechanistic and technical parameters, reliant on behavioural change. Specifically, it will endorse a decolonising agenda that leads to holistic changes in ways of being. This problematises the 'Africanisation' project that many postcolonial African nations seem to endorse, by challenging cosmetic changes such as changes of curricular content without change of ways of thinking (or vice versa). At best they are tokenistic gestures or a recolonial trajectory, both of which are not sufficiently decolonial.

Secondly, active participation in the unique and temporal musical spaces affords agency to interrogate and critically understand the realities and experiences of the participants, which in turn allows them to further participate in life. Musical spaces are vibrant spaces of conversation between entities and participants of life, interacting, negotiating and experimenting to make relevant and stable connections. The more visceral the aesthetic experience, the more creative and transformational for the participants. Therefore, a shift in focus from the aesthetic object to the aesthetic experience within music making encounters creates a more

open, transient and inclusive space for all, regardless of their 'musical abilities'. This implies that through the eyes of Utu, every human being is essentially artistic, (which includes being musical), something McAllester (1985) noted while staying with the Venda people in South Africa, saying, 'Every musician/human is also a composer, as a matter of course, and is also a dancer/choreographer' (p. 1). Put differently, in the continuum between basic musical competence and musical mastery, all have equitable opportunity for holistic education that includes the holistic development of the individual and the collective. This means that being musical is synonymous to being a good human being, with good character, knowledge of cultural history and a willingness to participate in life *with others*. Providing access to music and music making empowers and educates, just as participating in life does.

Thirdly, because of this humanising element is understood to reside in music and music making as well as in relation with other creative arts, there is an imperative to affirm the role the creative arts play in education. The example they set regarding knowledge creation, production and storage suggests a rupture regarding educational futures that embraces holistic knowing *with* knowing about. Thus, mechanistic and technical approaches to music education that focus on the objectification can be complimented in relation and connection with the powerful yet often understated influence of tacit aesthetic experience.

Fourthly, relating and connecting is a creative process which can be disrupting just as it can be empowering, meaning that participating in life is sometimes a disruptive affair. Relationships and connections must always be negotiated for their relevance to the aesthetic experience because life and education is built on this kind of creative endeavour. The incorporation of other participants such as Affect and meaning broaden, drive and hold aesthetic experiences in stable coherence, qualities that are essential for any emergent educational processes. Transformation is therefore most effective when it is holistic, intuitive and creative. The holistic and lifelong imperative of education is sustained by the participation of all entities and participants of life. Utu affirms this agency for all to create, engage, act, transform and store knowledge because it is a human prerogative to participate in life and therefore a similar prerogative to educate and be educated. It does not have to be limited to specific types

of knowledge or ways of being but instead should embrace the diversity and plurality of life. If, like music and music making, education aims at expanding the plurality of knowing and being, and framing educational futures as an aesthetic of life, then there may be a more sustainable way to approach an emergent and unpredictable future.

Conclusion

This chapter has explored how Utu can create a *theoretical* rupture in the understanding of participatory music making, creative endeavours and education. Through this framework a *methodological* rupture is proposed using two of the principles of Utu, relationality and connectivity. Here, the belongingness of various entities and participants (including Affect and meaning) and their roles in the music making space was highlighted because of the potential for connection they possess, and the links for interaction that can be forged within the musical encounter. Further still a *knowledge* rupture is proposed, where music and music making are considered creative spaces of knowledge production by enacting the relationship between the past, present and emergent future. A *creative* rupture is proposed with reference to aesthetics through the eyes of Utu, where aesthetics is intricately linked to our experiences of life and therefore is an *aesthetic of life* as opposed to an aesthetic *in* life. In other words, life's dynamism and emergence are an ontological basis for aesthetics and creativity. The implications of these ruptions open new possibilities for music and music making in the contemporary African context which continue to be influenced by Western hegemonic approaches in creativity and education. It provides an avenue to reconsider the mechanistic and technical frameworks that have defined contemporary education by offering a framework that endorses knowing and knowing about for holistic development. Crucially, however, these ruptions offer an opportunity to promote creative living because just like life, education is a negotiation between the relationships and connections for an emergent future. It is therefore an imperative to endorse the right to participating in life and that includes participating in and through music and music making.

Notes

1. Seeing through the eyes as opposed to the lens of Utu is a deliberate methodological approach that suggests the perception through an internalised ontological position of personal experience as will be explained in the description of Utu. Looking through a lens suggests an externalised perception that can sometimes alter reality, for instance what spectacles do.
2. The use of the term 'African' recognises that the continent is made up of diverse peoples and cultures, each with unique ways of being in the continent. Therefore, the term is used loosely to refer to that which emanates from the continent as opposed to racial, socio-cultural or political identifiers commonly associated with the term.
3. In Kiswahili, the prefix 'U' is used to change nouns into abstract nouns. Thus *M-tu* becomes *U-tu*; Another example is *Mfalme* (king) becomes *Ufalme* (kingdom and reign). A similar use of affixes is found in other Bantu languages, for instance *Ubuntu* is derived from *Buntu*.
4. Kenya's 44 tribes and cultures are broadly divided into Bantu, Nilotes and Cushites as indigenous people, while Arabs, Europeans and Asians (mostly Indian) as non-indigenous people.
5. The creative arts being referred include music, dance, theatre and fine art, as well as their related subsidiaries. For most indigenous African communities, these creative arts were considered in relation and connection rather than as separate disciplines. This relation and connection rendered them educational spaces, knowledge stores and memory banks.
6. A musical happening or event can also be encountered as a future in the form of the anticipation the happening. In this case, the human action exercised is predominantly in the form of imagination, conceptualisation and abstracting, and is highly dependent on the actualised human action of the present to realise what is intended. However, though it is an interesting area of exploration, it is beyond the scope of this chapter.
7. It could be argued that theorising or conceptualising music (and like imagining mentioned earlier) should be included as music actions, but much as it is a verb and is both implicitly and explicitly integral to music making, it is not the focus of this chapter.
8. The seminar on African Ways of Knowing took place at the University of Exeter on the 14 July 2022 through the support of CEEN (Creativity and Emergent Educational Futures) network at the School of Education.

- It was in collaboration with Blessing Chapfika from the University of Hull, who elaborated on African philosophical principles and was then followed by the authors enactment of these principles through participatory music making with the participants.
9. The use of a capital 'A' for affect signifies the phenomenon that encompasses emotion and feeling, therefore making a distinction between the noun affect and the verb 'to affect'.
 10. This is in line with the proposal of the nexus between music and aesthetics in KIC, that there is a dynamic aesthetic understanding given that participatory music making encounters are also dynamic.
 11. What is of significance in music making practices of KIC are the **actors** (people engaged in the music making act, be it specialist musician, artist performer, engaged listener or spectator as well as the nonhuman actors such as Affect earlier discussed), and their **actions** (behaviours the people exhibit in and around the musical event that may or may not involve sound) for the realisation, negotiation and creation of meaning.
 12. The Symposium took place at Dartington House on 5th November 2022 and included the sharing of stories of colonisation and decolonisation facilitated by the author, active music making facilitated by Jason Singh (a sound artist, nature beatboxer, producer, DJ, facilitator and performer) and a keynote presentation by Professor Guillermo Rosabal-Cotto exploring the conflict between being a coloniser and being colonised in music.

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10

Reimagining Research Methods Curriculum in Education Otherwise: A Decolonial Turn

Riadh Ghemmour

Introduction

It is important to note that some of the terms I use throughout the chapter are deliberately chosen to facilitate understanding. Eurocentric/Western is referred to the dominant socio-economic, political and cultural characteristics of Euro-American ideologies, while Southern and Indigenous refer to the grouping of (some) countries which tend to be labelled as 'postcolonial' and are characterised by political and cultural marginalisation. I use *I* and *we* throughout the chapter. While the *I* refers to my authorial voice, the *we*, *us*, and *our* refers to the community of learning within and beyond university, and this includes (but not limited to): scholars, academics, educators, students, policy makers, etc. Global Majority is used instead of BAME (Black, Asian and minority ethnic) because those seen as *ethnic minorities* currently represent around 80% of

R. Ghemmour (✉)

The Royal Central School of Speech and Drama, London, UK

e-mail: Riadh.Ghemmour@cssd.ac.uk

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the world's population which makes us the Global Majority. Reflexivity is a critical exercise and a methodological tool which invites us to introspectively reflect on our positionality, privilege, power, bias, and taken-for-granted assumptions of education practice. This can enable the ruptions of meaningful and purposeful changes within our respective spaces, including the framing and emergence of educational futures.

Prior to writing this chapter, my ideas about educational futures, creativity and decolonisation were fragmented. My initial engagement with the concept of decolonisation goes back to the scholarship of the Indigenous Māori scholar Linda Tuhiwai Smith (2021), who has written extensively on the topic in the context of research within Indigenous communities. She argues that research is conflated with the legacies of European colonialism and imperialist projects; therefore, it is essential to decolonise research methods to reclaim Indigenous ways of knowing and being in the academy. In fact, I have noticed during my previous degrees both in Algeria and the UK that research methods curricula (since it is the focus of this chapter) were grounded in Eurocentrism—despite the racialised diversity of the student body in the classroom, especially in the UK. Although Smith takes an Indigenous Māori standpoint to discuss decolonisation in the context of New Zealand, the scholarships of Osberg (2010) and Facer (2013, 2021) expanded my thinking to include ideas about creativity and educational futures, and seek a common connector between these three concepts.

When I think of creativity, I understand it in this chapter as innovative orientations which exist outside our dominant Western ideologies, traditional thoughts, linear models, imagination and discourse of education. It is a process of decolonising the mind which involves questioning the taken-for-granted beliefs—usually influenced by a Euro-American framing (Mignolo, 2007). It is also the prospects for (re)imagining what teaching, curriculum development, pedagogy and research may look like in the future. As Zamana (2022) states, 'creativity is among the most critical capabilities to build the future' (p. 1). In fact, the future is not neutral; it is a 'dynamic and emergent reality' (Facer, 2013, p. 5) which is developed out of ideas, historical forces, assumptions and barriers of the present. Therefore, it is shaped by our contemporary struggles, hopes and actions. In the opening of the book, the authors have highlighted an array

of challenges which include the social, environmental, economic and political issues which have led to exclusion, the emergence of racial order and social injustice (Adekoya, 2023). In the context of HE, curriculum development and the politics of knowledge, it is believed that coloniality, which is defined as a complex matrix of power ensued from colonial legacies, and controlled by the Western institutions (Mignolo, 2007), ‘continues to impact how academia is experienced, as well as what is researched, published, cited and taught’ (Moosavi, 2020, p. 1). This is where decolonisation can be used as a creative methodological tool to challenge the status quo of education and respond to these cracks. To understand the concept of decolonisation here, I draw on Hoopers and Richards’ (2012) explanation, who consider decolonisation as an ethical response to the colonial projects which consist of the colonisation of space and body and the colonisation of the mind through disciplines, such as education. Because of the nature of this chapter, I am more interested in the latter. Furthermore, it is worth noting that I am not really interested in what decolonisation *is* but in what it could serve and become. This process of becoming requires a set of individual and collective commitment to dialogue, active listening, accountability, reflexivity and collaboration (Abegglen et al., 2023; Facer, 2021; Moosavi, 2022) which I will refer to throughout this chapter.

Taking care of the future is such a huge task to think about, but what are the tools, terms, knowledges and frameworks that we need to imagine the future of education? This book invites us to pay attention to two other important concepts: care and ethics. Although these terms are not fixed, it is also important to define them. Care and ethics are interlinked in this chapter. Thinking of the future of education through a decolonising lens is in fact a process which may require us to embrace care, empathy and ethics of responsibility. In fact, one of the key aspects of decolonisation is to examine power. This is because critical education scholars claim that education and knowledge are not neutral as they are loaded with power; consequently, this can create power imbalances within and beyond classrooms (between teachers and students, student and other students, researcher and participants, and what knowledge is centred/left out) (Pennycook, 2021; Tisdell, 1993). They further argue that education has also failed to address cultural and social inequality (Apple,

2009; Giroux, 2004). So, Jonas (1984) explains that the possibility of ethics happens when one with more power acts in the interests of others with less power. This is important to consider because HE is characterised by competitiveness and hierarchy (Abegglen et al., 2023), and oppression and exclusion (Alexander & Arday, 2015; Ashe & Nazroo, 2016). So, thinking about educational futures requires reflecting on how power operates and creates imbalances within education spaces. Osberg (2010) invites us to consider the being in relation to power and the future of education: who are we including and excluding to imagine the future? Facer (2021) encourages us to consider the knowing and reflect on what and whose knowledges are being used to create ideas of these futures. If we truly care about the future, are we willing to democratise power? Osberg (2010) states that, 'caring for the future is an important form of human agency' (p. 163), and I shall also add that it is a form of resistance to avoid reproducing existing current power and oppressive structures of HE and imagine a socially just future for education. So, whenever I am using the terms care and ethics, they entail morality and resistance towards the status quo of education which tends to favour neoliberalist and capitalist attitudes (Gibbs & Coffey, 2004). However, in line with Osberg's (2010) suggestion, I keep in mind to engage with these terms openly rather than in instrumental and teleological ways. This should allow new emergences, orientations and knowledges to develop and shape the trajectories of decolonisation and the future creatively and ethically—without colonising it.

The perpetuation of colonial legacies has created a set of global and social hierarchies which have led us to accept and normalise that Western ways of knowing and being are superior and more valid than Southern and Indigenous knowledges. This has resulted in creating and upholding systems of oppression, exclusion and inequality which have had an impact on the Global Majority community in educational spaces (Pyke, 2010). This inequality and injustice are part of the twenty-first-century challenges which have received more attention following the murder of George Floyd in 2020 and the rise of Black Lives Matter (BLM). This is why many universities and schools in the UK are trying to address these challenges in educational spaces to create inclusive pedagogies and anti-racist policies (Walker et al., 2023). As stated earlier, this chapter will

specifically focus on decolonising the curriculum in the context of educational research methods. Based on my experience as a former MA and doctoral student as well as my research and education career, the practices of research within and beyond Western institutions are still dominated by Eurocentrism which have privileged paradigms, ethics, methodologies and methods of Western theorists, institutions, scholarship and contexts at the expense of Southern and Indigenous methodologies (Chilisa, 2012; Smith, 2021; Kovach, 2021; Wilson, 2008). Therefore, as I have alluded to earlier, this chapter will demonstrate resistance to the status quo of education and taken-for-granted ideas, knowledges and practices in HE. Firstly, I share a reflexive account of my education and research journey grounded in Eurocentrism as the only way to see and understand the world. This has consequently led to colonisation of *my* mind. In addition, I further discuss decolonisation in the context of research practice and what this may all mean for educational futures. I will support the discussion using my lived experience and, most importantly, my doctoral research which explored research methodology teaching and learning and students' experiences of writing (MA) dissertations in the fields of education at a single university in Algeria. I also offer a radical and creative alternative to traditional educational models of teaching and learning about research methods using decolonisation to interrogate 'the dominant power/knowledge matrix in educational practices in higher education' (Morreira et al., 2020, p. 2). In fact, I call for the importance of decolonising the curriculum (DtC) given the international diversity of students we have in certain HE contexts like the UK. I also provide some practical steps to begin to think of what a decolonising curriculum may look like. The aim here is to invite readers to explore what decolonising the mind may mean and look like using their own positionality, challenges and teaching contexts to address epistemic violence, injustice and inequality of the past and present so one can avoid carrying them into the future, and develop 'education *healing* futures' (Facer, 2021).

Research Methods: A Personal Journey of (De) colonisation

In this section, I explicitly state the positionality I am writing and researching from. Positionality refers to our worldviews and beliefs about the nature of social reality and knowledge, and how we relate and interact with our world (Darwin Holmes, 2020). Stating and reflecting on our positionality involves looking at our racialised identities, power and privileges. These elements of our positionality shape our teaching, research and work—and eventually how we carry our ideas, assumptions and interests into the future.

I am Indigenous Kabyle originally from a small village called Ath Yenni (Tifinagh reference: ⵓⴰⵢⵏⵏⵉ) located in Tizi-Ouzou in the Northeast of Algeria. The village is the birthplace of my ancestors and my grandparents who moved and traveled across the Northern part of Algeria for financial reasons. However, I was born in a small city in the state of Relizane. My city is small although it is expanding nowadays. I went to primary and secondary schools with friends who have now become teachers, doctors, parents, etc. I went to university in Mostaganem where I did a BA in English and MA in Applied Linguistics. I grew up with a (post) colonial mindset—even though I am still in the process of unlearning colonial attitudes and ideologies. I believed that Western ways of knowing and being were universal, more valuable, superior and valid across all aspects of life including education. As a result, this has somehow detached me from my cultural and linguistic heritage, and Indigeness/ Algerianness altogether. After I graduated from university, I pursued an MSc in educational research and a PhD in education in the UK. I also came to the UK with a colonial mindset thinking that the Western education is more worthwhile. So, I was excited to receive the *right* education in order to assimilate, fit in, and be validated wherever I go. In fact, I wanted to be white adopting white norms, values and ways of knowing (Ortega, 2021).

During my MSc, I studied four modules which introduced me to different approaches, methodologies and paradigms of educational research. Although I found the modules insightful, they were Eurocentric in

nature, meaning that research methods were taught using examples based on Eurocentric perspectives, contexts, theories and methodological frameworks. Having a colonial mindset at that time, I believed that these research methods paradigms were universal, valid and objective. I did not have the language nor the critical and analytical-reflexive approach (Begoray & Banister, 2010) to reflect on the knowledge and curriculum, and their implications on Southern and Indigenous contexts, especially that we were a racially and ethnically diverse group of students taking these modules.

When I started my PhD, I came across the concept of decolonisation which I had never studied before. The scholarships of Indigenous activist-academicians such as Chilisa (2012), Smith (2021) or Wilson (2008) have enabled me to decolonise *my* mind. In fact, this has prompted me to raise important questions which I invite the readers to reflect on:

1. How may we envisage the emergence of educational futures through a decolonising lens to repair past injustice and inequality?
2. How can we centre care and ethics of responsibility to shape the emergence of educational futures?
3. And how can decolonisation be used as a creative approach to reimagine research methods curriculum in education otherwise?

Although there is no right answer to these questions, the latter can be used as prompts to help us think further about decolonisation as a process of becoming and creativity, and its link to educational futures.

Decolonising Education and Research

In this section it is important to further define decolonisation in the context of this chapter although I am not seeking to establish a universal definition here. However, drawing from some helpful definitions can enable us to use the language of decolonisation and begin to think of ways the concept can be used as a creative approach to challenge the domination of Eurocentric knowledges in education and create equitable relations

that challenge the binary of researcher-participant or teacher-student—and eventually frame the emergence of educational futures.

The racism, Western hegemony, discrimination and internalised inferiority of Global Majority communities is the result of colonisation which has created a set of global hierarchies. The latter has romanticised the white, Christian, heterosexual, middle-class men. In fact, this was identified by Grosfoguel's (2011) 15 'entangled, global hierarchies' which brings to our attention how, for example, European people have been privileged over non-European people or how Western knowledge has been privileged over non-Western knowledge. Therefore, the European mode of education was claimed to be universal mostly through settler and colonial projects (Wilder, 2013). In addition, Grosfoguel (2011) explains how the global hierarchies have been accepted, normalised and institutionalised within university structures. The dominance of the Eurocentric nature of education limits which and whose knowledges, beliefs and experiences matter, and are worthy of study. Such exclusion significantly narrows new realities of educational futures to emerge. This is why many decolonial and anti-racist voices in the social sciences have called for a resistance to the Eurocentric nature of education, white supremacy and power structures of HE (Chilisa & Ntseane, 2010; Moosavi, 2020; Smith, 2021), which this chapter addresses, too.

In the context of decolonising research, I have explained, through my lived experience, how learning about research in both Algeria and the UK were Eurocentric in nature, and often HE institutions expect research outputs to reflect Eurocentric ways of knowing and being. Decolonisation is a multi-faceted concept which can be theorised and enacted differently. However, I draw from the following definitions presented by some decolonial scholars such as Chilisa (2012) who explains that decolonisation involves centring the concerns and worldviews of the colonised, and thus redefines where power is situated to theorise, signify and understand themselves through their worldviews. Kovach (2021) and Tuck and Yang (2012) invite us to engage with decolonising research through reflecting and recognising the colonial and imperialist influences in research paradigms, disciplines and knowledge production, and recognise how Indigenous and Southern ways of knowing and being have been suppressed within the academy.

As a result, many ethically and culturally responsive methodologies have been developed in the last two decades or so to better suit the needs and cultural beliefs of historically marginalised communities being *studied* and empower them, including researchers themselves (e.g., Lavallée, 2009; Seehawer, 2018). Using decolonising research approaches allow researchers to become critically reflexive of their positionality and privileges, and reflect on the intersection of power and coloniality in research. It is also important to note that my stance does not reject mainstream and dominant research paradigms in the social sciences (i.e., positivism or interpretivism), but I argue here that research is not an objective and neutral space; it is in fact loaded with power or even exploitation which are not often discussed with students during research methods classes.

In the traditional teaching class of research methods, research is often taught as a systematic process; meaning how a research question is formulated, how a methodological and ethical plan is designed, and how data is collected, analysed, interpreted, discussed and published. While there is nothing wrong with this, it is important to discuss how conventional ways of research practices which we know can lead to inequality, exploitation, displacement, loss of cultural practices and other local damages to historically oppressed and underrepresented communities (Battiste, 2000). In fact, Lincoln (1995) states that the research practices of going to a community, extracting data and leaving when the researchers feel like it has been problematic for many under-represented communities which have been treated as objects of studies for many decades and have been impacted by the exploitation of the Western hegemony. Therefore, decolonising research is a process which can help the researcher to understand the historical developments of research practices and how they may have impacted Global Majority, Indigenous and Southern communities. It also aims at developing community-based approaches for liberation and empowerment (Tuck & Yang, 2014). Decolonisation offers a bridge between Western and Southern/Indigenous ways of knowing and being to (re)define *the* meaning of research as well as recognise the legacies of colonial and imperialist ideologies and the domination of Western research trainings in the academy (Datta, 2017).

Decolonisation played an important part in shaping my doctoral research which received ethical clearance from my institution to conduct

it. In the study, I worked with Algerian students and university lecturers to explore their experiences of teaching and learning about research methods and writing education dissertations at a single Algerian university. Based on the earlier definitions of decolonisation, the doctoral study was based on relationality and relational accountability, meaning that knowledge was produced through a set of relationships. Such relationality is deeply rooted in the cultural symbolism of the Algerian society which I wanted to forefront. Goduka (2000) explains how the *I vs. we* in African communities is strongly intertwined. The scholar states, 'I am we; I am because we are; we are because I am, I am in you, you are in me' (as cited in, Chilisa, 2012, p. 109). The research project sought to disrupt normalised and conventional ways of doing research which may have been unethical or locally challenged in the Algerian context. To illustrate, conventional interview practices are taken suspiciously in Algeria (Mennai, 2020). We do not *really* do interviews, we simply have discussions and talks, and many other Southern and Indigenous scholars have also explained how their communities challenged the idea of interviews (e.g., Chilisa, 2012; Kovach, 2021). I have also challenged the power dynamics and my own gaze about how I perceived and worked with the participants who were not seen as objects of study or repository of data. They were knowledge-holders who shaped the trajectory of the research in terms of the research plan, analysis and discussion. This was an ethical and moral duty to centre care, community work, accountability, ethics and collaboration. The decolonising agenda in the research process sought to create a socially just and community-based approach to avoid reinscribing harm and exploitation given the past histories of research with minoritised communities as well as the colonial and Black Decade trauma experienced by the Algerians. The Black Decade was a civil war which happened in the 1990s. Indigenous Maori scholar Smith (2021) said, 'the term research is inextricably linked to European imperialism and colonialism. The word itself, 'research' is probably one of the dirtiest words in the indigenous world's vocabulary' (p. 1). It is from this grounding that I have become more interested in using decolonisation as a creative way to address past and present historic violence and erasures, and imagine how can educational futures *repair* injustice and inequality. It is to this question I turn next.

Educational Futures: Towards a Decolonising Practice

There are many ideas and orientations which we can work with to think of the future of education. This chapter is concerned with the vision of an educational future as a space for troubling the politics of knowledge and university curriculum to address and repair injustice and inequality through a decolonising lens.

There is a growing interest in analysing and reconciling history and futures. Fields such as race, queer and decolonial studies critically interrogate ‘disciplinary divides between history and future as domains of inquiry’ (Facer, 2021, p. 16). This can be evidenced in the previous sections where I have explained how decolonisation is used to rethink how research and education are historically and inherently ideological, and therefore they can (re)produce exclusion and inequality. In fact, if we are not engaging with our past histories then we are doomed to repeat it. Facer (2021) explains that working through these histories enables us to uncover new realities and relations grounded in equality and dignity. But for this to happen, Sriprakash et al. (2020) argue that dialogue is the starting point for this critical engagement—although uncomfortable and challenging. The decolonising lens which I am suggesting here allows us to inhabit an educational future which interrogates past and present injustices. Furthermore, working in solidarity is key. Abegglen et al. (2023) argue that ‘collaboration can break individuality and hierarchy that emphasises reflection, discussion and collective action for inclusivity, diversity and change’ (p. 4). These dialogues can form relations of solidarity and co-producing creative ideas and orientations of the future in education. It is also important to note that the practice of interrogating, critically engaging, resisting coloniality and repairing futures is about examining power—as discussed earlier in this chapter. The claims we make about the future are not neutral. Therefore, Facer (2021) reminds us to approach our futures with modesty, care and ethics of responsibility. This also aligns with Stein’s (2022) claim who also invites us to interrogate our efforts and vision of the futures, so we do not exclude other

possibilities and realities. In the context of decolonisation, this should be fore-fronted, so we do not run the risk of colonising the future.

Decolonisation lays the ground to (re)orient us toward creating educational futures which may avoid reproducing the harm of the past. In addition to collective dialogue and working in solidarity, actively listening to the lived experiences, hopes and creative imagination of those who have been historically oppressed are also essential for the co-creation of knowledge and ideas of an imagined educational future. We may question ourselves at times regarding the rationale and significance of bringing the past into the future. But I turn to Facer (2021), who explains that ‘the past is also a site of unrealised possibilities, an abundant reservoir of lost knowledges, unfulfilled talents and hidden capabilities’ (p. 20). Therefore, envisaging the future through a decolonising lens enables us to self-scrutinise our positionality, power, privileges and hegemonic forces influencing our beliefs and actions (decolonising the mind), address gaps and frictions in our education system, and respond to them accordingly to restore justice, collective healing and agency. In what follows, I offer some practical guidelines to begin to think of what decolonising a research methods curriculum in education fields may look like and mean for the emergence of educational futures.

Rethinking the Research Methods Curriculum: Proposing a Decolonial and Reflexive Turn

As a result of this ongoing work, I have become more interested in critically interrogating curriculum development through a decolonising lens in order to challenge the status quo of education and cause ruptions in the way we think about research and education—and our relationships with each other (e.g. teacher-student, student-student, researcher-participant), knowledge and the university. In fact, in recent years, there has been a growing interest to decolonise the curriculum and challenge those who dominate spaces of knowledge and power. According to Moosavi (2022), a decolonised curriculum *is* defined as the inclusion of valuable yet neglected knowledge into HE provision and practice as well

as reflecting Global Majority students' experiences, beliefs and cultural heritage. However, according to Stein (2022), decolonisation is often misunderstood because there is not enough intellectual scaffolding which supports the build-up of a rigorous, reflexive and dialogic analysis. Consequently, this leads to decontextualisation, lack of literacy and inability to hold space of discomfort, struggle and collective agency which are needed if we want to reconcile the past and the future. So, it is essential to ask ourselves: how can we think and plan something better, more creative and collaborative? The *we* in imagining educational futures and a decolonised curriculum should also involve our students and colleagues across different disciplines and departments to break individuality and hierarchy, and nurture the practices of reflexivity, collective dialogue, active listening and ethics of responsibility. Such dialogic collaboration is also encouraged by scholars such as Facer (2021) or hooks (1994) who claim that we need to invite students to think reflexively and critically about the future of education and go beyond the mastery of bodies of knowledge only. In addition, we need to encourage them to look at research paradigms and practices through a critical and ideological lens to understand the potential harm, exploitation and violence of research—especially in the context of working with marginalised communities, and within diverse cultures. As there is a need for practical resources to allow the emergence of new and creative realities (Facer, 2021), the following table hopefully offers guidance to those who are interested to decolonise their curriculum, teaching and research. It can also encourage teachers and students to disrupt passive modes and forms of learning and be creative and innovative with their approaches to knowledge production and thinking of educational futures. The proposed framework is the result of my extensive work in the field and the common themes and questions that the community of practice within and beyond HE which I am part of often asks. This collective imagination and agency would help us imagine what reparative, inclusive and socially just educational future may entail and look like to achieve what Morreira et al. (2021) refers to as 'epistemic humility' (Table 10.1).

Efforts to decolonise clearly require time, patience and resources, but most importantly ongoing reflexivity. Reflexivity plays a crucial part in understanding how this work is navigated, theorised and actioned.

Table 10.1 Reflexive questions to consider when decolonising the curriculum

	Question(s) it can raise	What it may look like in practice	What it will do for educational futures
Reflexivity and positionality	<p>What do I believe DtC to be?</p> <p>How does my positionality, biases, and beliefs inform my curriculum, teaching and knowledge?</p> <p>How can I involve students in reflecting on their positionalities and identities to shape classroom dynamics, knowledge and curriculum?</p>	<p>Creating a classroom where teachers and students reflect on their positionality to explore their location and situatedness in the geopolitics of knowledge production, privilege and power (Abu Moghli & Kadiwal, 2021) and what it may mean for decolonising the curriculum</p>	<p>Cultivate critical reflexivity to invoke creative ideas about educational futures (Facer, 2013)</p> <p>Break hierarchy and individuality and focus on collective dialogue and actions (Abegglen et al., 2023)</p>
Decentring Eurocentrism in the curriculum	<p>Is my curriculum dominated by white Eurocentric ways of knowing, methods and methodologies?</p> <p>What are the lacks, absences and omissions in my curriculum?</p> <p>What research paradigms, practices and theories am I excluding from my curriculum?</p>	<p>Broadening the canon and diversifying the reading lists</p> <p>Exploring the history of research and its intersection with Eurocentrism, imperialism and colonialism (Smith, 2021)</p> <p>Encouraging dialogic approaches to explore what decolonisation can offer in terms of resisting and challenging dominant knowledges and research practices</p>	<p>Challenge and avoid reinscribing coloniality (Mignolo, 2007)</p> <p>Engage with histories of exclusion and exploitation</p> <p>Repair epistemic exclusion</p> <p>Achieve epistemic humility</p>

(continued)

Table 10.1 (continued)

	Question(s) it can raise	What it may look like in practice	What it will do for educational futures
Working with ethics of responsibility and care	Am I able to hold difficult conversations if they arise? How may conversations of decolonisation make me and my students feel? What are the implications of these feelings on teaching, learning and classroom dynamics? How can I create a classroom atmosphere of trust, collaboration and care?	Co-creating shared principles of learning to hold a space of discomfort Creating wider emotional support structures (e.g., counselling services, coaching and mentoring schemes, etc.) Encouraging a collegial workplace and professional development opportunities to hold a space of learning, dialogue and reflexivity	Centre and sustain ethics of responsibility and care for change, inclusivity and educational <i>healing</i> futures
Reimagining the research culture	What is the research culture like at my department? What paradigms, methodologies and methods are we teaching and encouraging students to consider in their research?	Inviting Global Majority speakers in the field of decolonising research Hiring Global Majority academics with expertise on decolonisation and social justice Planning study days, conferences and symposiums to advance understanding and practice	Fore-front inclusivity, diversity and multiple ways of knowing and being

(continued)

Table 10.1 (continued)

	Question(s) it can raise	What it may look like in practice	What it will do for educational futures
Sustainability and change	How far should I decolonise my curriculum? What does decolonisation <i>mean</i> for the future of education and research? Who <i>should</i> be the change maker(s)? What ongoing support do I need to sustain the work?	Creating funding opportunities for further research Creating a staff and student working group Involving senior leadership to support the work with resources Creating a departmental/institutional strategy for cultural and epistemic change	Create conditions for ongoing imagination and collective aspiration to anticipate what is to come/emerge

Decolonial scholars argue that it is essential to use reflexivity as part of decolonising the mind, and scrutinising our decolonial efforts and how this is translated into the wider context of the university. It also enables us to evolve and be aware of how we may reinscribe colonial and exclusionary practices in teaching and research. In terms of the future of education, Facer (2013) also mentions the importance of reflexivity as this has not been cultivated enough in our ideas of the future. Therefore, if we care about the future, it matters we do it with the necessary tools, knowledge, critical reflection and resources. However, Moosavi (2022) reminds us not to turn this process of reflexivity about ourselves only. Within the context of decolonisation, he claims that looking at our decolonial efforts does not mean we should

engage in narcissistic self-indulgence for the sake of overcoming our insecurities but to revisit our analyses, theories, concepts research and teaching with a frankness that will enable us to build on existing attempts to decolonise. (p. 3)

The process to decolonise a curriculum invites us to think about our positionality, power and privileges and challenge the traditional, individualistic and knowledge transmission approaches to education. Decolonisation recognises the implications of coloniality in education and research; the ideology of Western superiority which controls knowledge and power and works towards the decolonisation of the mind and body (Pirbhai-Illich et al., 2022). It refuses epistemic violence, decentres Western logics and commits to explore different possibilities of the future.

Conclusion

The aim of this chapter was to foreground a creative orientation based on decolonising thinking to work with ideas of the future—in the context of university curriculum and educational research more broadly. The concept of decolonisation is not new. It has always carried a significant value to those who experienced colonisation, racial trauma and racism within and beyond educational spaces. For decades, Global South and postcolonial scholars have developed multiple forms of decolonial activism to resist systems of oppression. Decolonisation fulfils different roles, all of which have a significant value to inform educational futures: imagination, creativity, healing, transformation and repair. Facer (2021) argues that such roles are about the practice of power—and its democratisation (my word)—which has been a central theme throughout this chapter. The chapter has told the story of my journey of decolonising *my* mind—although this is ongoing—through critical reflexivity and experimenting what it may mean to decolonise research and the curriculum. Such orientation and proposed framework to decolonise and think of the future are not intended to impose a teaching model (although anyone is welcome to use it), but my overall aim is to invite all to think about the role which decolonisation can fulfil, and its link to past histories, present and futures. It can be used as a starting point to think creatively, carefully, ethically and responsibly about the knowledges, ideas and stories which we can create about the future of education.

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11

Care as Resistance within Educational Practice

Sarah Campbell, Sarah Dyer, and River Jean Nash

Introduction

In summer 2021, in the long shadow cast by the Covid-19 pandemic, we three authors came together to work on the Arts and Culture University of Exeter Creative Fellowship (CF), to explore care and creativity in higher education. Arts and Culture is one of the University of Exeter's sovereign strategies, championing creative activity across the four University of Exeter campuses, sited in Devon and Cornwall. The Arts and Culture team works with staff, students and creative practitioners to

S. Campbell (✉)

Arts and Culture, University of Exeter, Exeter, UK

e-mail: S.E.Campbell2@exeter.ac.uk

S. Dyer

Manchester Institute of Education, University of Manchester, Manchester, UK

e-mail: sarah.dyer@manchester.ac.uk

R. J. Nash

Queen Elizabeth Scholarship Trust, London, UK

build creative confidence and promote the interdisciplinary work of the University. In this chapter we reflect on our experiences to draw out themes which we think could usefully inform others' practice.

If care-ful, ethical educational futures are to responsively emerge, we must understand what this requires of those designing learning environments, educating students, and accrediting and assuring qualifications. University educators are often researchers or practitioners. They are also employees, colleagues, and learners themselves within organisations driven by competition which has resulted in learning and working cultures of 'pedagogic frailty' (Kinchin et al., 2016), or a lack of adaptive capacity. This is inconsistent with the need for 'psychological availability' and 'psychological safety' to 'fully engage in creative efforts' in the workplace (Stephens & Carmeli, 2015, p. 273). In the face of institutions which seek to address every educational challenge with a requirement for educators to 'just do more and do it faster' (Kinchin et al., 2016, p. 4), we explore *care* as a radical act of resistance and a mutually sustaining and expanding practice.

The CF saw one of the authors, creative practitioner River Jean Nash (River), engage in a five-week placement in collaboration with Sarah Dyer (Sarah D) and Kerry Deacon of the Exeter Education Incubator. The CF placements are run by Arts and Culture at the University of Exeter, led by Sarah Campbell (Sarah C), to open up new approaches and conversations between creative practitioners and their University hosts, while developing and enriching their creative practice. The Exeter Education Incubator is an initiative for supporting innovation in education practice across the university. It was set up and runs with the recognition that 'encouraging pedagogical creativity requires more than just an emphasis upon the individual educator. Innovation also demands a focus on the interaction between peers, the networks of support, and the spaces in which these emerge' (Winks et al., 2020, p. 133). As such, it is worth noting that creativity was at the heart of the approach, as well as an important aspect of the substantive focus of this project.

The authors wish to acknowledge Lewis Winks (Exeter Education Incubator), Naome Glanville, Anna Bunt, and Cerise Johnson Bird (Arts and Culture) for their additional input and support on the Creative Fellowship.

Ken Robinson (2001) provides an elegant definition of creativity: ‘imaginative processes with outcomes that are original and of value’ (p. 118) and goes on to include criticality as part of the definition: ‘creativity involves a dynamic interplay between generating ideas and making judgments about them’ (pp. 133–134). His framing neatly summarises two fundamental components of the creative process—divergent and convergent thinking (Design Council, 2023)—but does not tell the full story. When we look to a more detailed definition of creativity, such as Tepper and Kuhn’s (2011), characteristics arise that are deeply entwined with care and caring:

- ‘The ability to risk failure by taking initiative in the face of ambiguity and uncertainty;
- The ability to heed critical feedback to revise and improve an idea;
- A capacity to bring people, power, and resources together to implement novel ideas; and
- The expressive agility required to draw on multiple means (visual, oral, written, media-related) to communicate ideas to others.’ (p. 13)

These characteristics are underpinned by discomfort, vulnerability, collaboration, and community, all themes discussed in this chapter to explore the intersections of care and creativity.

For the purposes of this chapter, the Tepper and Kuhn definition is helpful for describing the complexities of creativity and its relationship with care, but it should also be held lightly. The definition is rooted in practice and the importance of doing and making. The four points above speak to abilities and capacities within individuals but it is their activation, through ‘taking initiative... heed[ing] feedback... improv[ing] an idea...’ that really count. Similarly, as authors, we are drawing on tacit understandings of creativity, developed through doing and making, with a collective knowledge that spans decades. The purpose of this chapter is not to argue terminology around creativity, but to bring each of our lived experiences and knowledge of creativity in practice to bear to reflect on its interrelationship with care. We are not writing from a position of a unified interpretation of creativity. Instead, we acknowledge and

welcome the differences and nuances in our perspectives. To borrow from Richardson (2008), ‘... to have any chance of even beginning to understand complex systems we must approach them from many directions – we must take a pluralistic stance’ (p. 17).

We present the chapter as an edited transcript of recorded dialogues between the three authors towards the end of the CF. We do not directly describe the process of the CF but instead draw out our reflections and learning in the hope that they are interesting to others engaged in similar work. The conversation format models our commitment to alternative modes of communication, pushing against received forms of knowledge transfer and holding space for spontaneity, possibility, and inspiration as we spark off each other’s ideas. We begin by explaining why we came together in this project: why care? We then discuss our four themes: core and margins, vulnerability, comfort and discomfort, and finally the institution and the individual.

Why Care?

To borrow from Chap. 1, through the CF we were interested in resisting ‘traditional, linear, logic-based, verbally-centric educational models’, that centre learning in terms of quantifiable, measurable and marketable modes of neoliberalist education.

As Ball (2016) states, ‘market, management and performance’ have changed educational experience on all levels, and ‘management is altering social connections and power relations to less democratic and caring forms’ (paragraph 1). We wanted to think on what those collaborative, caring forms of education could be, on non-productive moments, and the lesser valued, but crucial components of learning and reflection. As Cameron (1963) put it, ‘in education not everything that counts can be counted and not everything that can be counted counts’. (p.13).

In this sense, the CF placement *was* a rupture. We all, at different times, felt that in our guts. It is the uneasy feeling as you realise you have yet to understand what each other needs from the project, nor sense how it will proceed; and that you need to negotiate in your not-yet-shared

language. The focus that brought us together—care—is in itself a radical rupture for contemporary higher education (HE), despite an upswell in the language of caring and wellbeing during the pandemic. We mean instead to see care as a radical political act, care as a relationship and an interdependence, responsive to the person and situation as they are. In this way care offers ethics – normative claims about and acts of being in the world - which promote empathy, relationships, and embodiment.

In co-writing the brief for the CF, Sarah D and Sarah C considered care to be essential in creating spaces of innovation and creativity:

We are keen to explore the themes that we think are fundamental to enabling meaningful change in education practice: care and hospitality which support educators' continuing professional development; connection with others and our values; and/or creativity which enables educators to think differently about their practice.

Following a competitive shortlisting and interview process, River was selected. River is a specialist artistic fabricator, joiner, carpenter, designer, artist and educator. At the time of their selection, they had been funded through an Arts Council England *Develop Your Creative Practice* grant to research *The Workshop as a Site of Violence*, which involved instrument making and generating a cathartic soundscape within the workshop. The questions that River was holding at the front of their mind in relation to the workshop felt relevant to the concerns of the Exeter Education Incubator in relation to the university, specifically:

What potential creative methodologies are there to explore when considering de-conditioning the industrial workshop, moving away from a site of social and capital violence toward the regenerative? How can creative approaches to technologies and social dynamics embed new cultures, particularly at a time of emerging digital technologies within the construction industry? What wider social implications could come about from embedding radical cultures of ritual and care in the workshop setting?

In transposing these questions to an HE context, we had the opportunity to consider how educators conceive of, receive, enact, and embody the

various forms of care (Tronto, 1995) required to fuel creativity; and what are the interdependencies, if any, between care and creativity in establishing new approaches to learning.

Care: Cores and Margins

Our discussion began with an exploration of marginality and power structures in relation to care and creativity. We discussed how change can come about, and where care and creativity are positioned to drive that change.

Sarah C: When you have an established status quo—I'm thinking about current modes of learning or teaching—to my mind, the creativity comes in from the margins, supported by schemes such as Arts and Culture, and the Exeter Education Incubator, that sit across disciplines and departments. We don't have the tidy discipline shape that structures most of how universities work, and that gives us freedom. There is also something about the perspective you have, when looking at it from the outside. You can look across themes as they come up, and that's so helpful.

So do you have to be in that marginal space in order to be creative? I get the feeling that the enactment of care, and really valuing care, are coming from the margins. On the one hand, we have this huge desire to mainstream it, to make sure that it goes through everything. At the same time, there's a real risk that the core, as soon as it's *something for everybody*, then becomes co-opted, and loses the essence of what it's trying to achieve. So, for either of you, is there an ambition to be in the core? Can the core ever be changed, or will the resistance always need to have that marginal advantage?

River: I feel in both centring care and an educational practice that really enhances criticality—and seeing creativity is linked to criticality—that process of viewing something that you're looking to disrupt, alter, and change *is* a creative process. And part of the reason we're talking about care is because it seems like there's a scarcity of care in the workplace and in educational environments. But ultimately, I feel that when you integrate care—care and criticality, I guess I'm seeing them as running along in parallel to each other—you ultimately destroy the beast from the inside. So

maybe there has to be a comfort with care as a disruptive, even destructive, creative act.

Paulo Freire (1972) talks about ‘the awakening of a critical consciousness’ (P. 36) such that once a learner becomes hyper-aware of the way in which they suffer within these workplaces, they then look to devolve the systems that they are oppressed within. In order to achieve that kind of change from within, from the core, we’re talking about those that are in positions of power, changing their position, such that the systems that they monopolise would fall. Sarah, you and I talked about that. You spoke about meritocracy, it would be the same idea, that it would require some people to wish to destroy the systems that favour their position, don’t you think? So here the issue is within whose hands can *care* even become potent or disruptive. Is care from the margins enough?

Sarah D: My response is that care has to be taken into the centre. It has to be, otherwise we’re thinking about care in opposition to other resources. At the moment care is the oil that makes some really creaky machines work; keeps organisations going at the expense of the people who do the caring. And so, I think that it’s really important to think about how care could be taken into the centre of organisations.

There’s a whole spectrum of what it might mean to be a caring organisation. It may not be politically radical. We can imagine an organisation that sees care as part of capitalist production; that says, *well, actually, I see that care is required to deliver this service, and therefore resources are allocated to that caring. Therefore, I remunerate the people who are doing this care; those who make these other things possible in the institution, these people who give these students an amazingly creative, transformative education.* It feels like this would make *good business sense* and would perhaps not be so exploitative of the people who do care work in organisations. It does pose questions about whether our understanding of care and exploitation in capitalism mean this is sustainable. I think you can move the dial. It’s not an either/or.

We were in agreement that there is a perceived scarcity of care in the contemporary workplace. While not exclusively the concern of HE employees, pressures such as contract precarity, oppressive workloads, shrinking pensions, the cost-of-living crisis, and adjusting to pandemic and post-pandemic working conditions were all seen to be taking their toll on the physical and mental health of staff (Davies & Preston, 2021).

This combination of societal and organisational stressors has predominantly been met with institutional solutions that emphasise individualised efforts (such as yoga and apps) and has yet to recognise either the collective and communal necessity for care, or those individuals who are taking on de facto caring roles for their colleagues and students.

Considered in relation to marginality, informal care by staff members was seen as operating in the power hinterlands—relied upon as the *oil* of goodwill that kept the organisation functioning, but coming at substantial personal cost and inadequately acknowledged. In this context, vulnerability—usually considered an important prerequisite to creativity (Robbins, 2018)—was felt to be potentially unsafe as it risked overburdening individuals with a never-ending requirement to care more.

Criticality also came up in our discussion and is interesting to consider in relation to both care and creativity. Robust honesty and critical reflection, with one's self and others, can be seen as acts of care that support greater self-awareness if handled constructively (Amaechi, 2021). In relation to creativity, criticality is vital to ideas-development, where testing and honing are means of progressing initial inspiration into finished work (Design Council, 2023). On a larger scale, the arts recognise marginality as a valuable space to foster criticality (hooks, 1992, p. 343); it is a well-established trope to refer to the arts as a 'mirror on society', a mode of reflecting back that, by its very nature, must exist outside the core.

Marginality is a strong vantage point to provide critique back into the status quo to drive change—for example, strike action by HE staff is coming from a place of marginality. The protestors sit outside senior leadership, and the action is critiquing the norms of remuneration. It is a space that promotes new thinking, making it a natural habitat for ruptions. As ideas become accepted and routinised in the core, new thinking springs afresh from the margins to challenge again, and the cycle is repeated (Mulgan et al., 2007). However, the margins are not solely occupied by progressive change-agents and creative agitators, they are also a form of power *oubliette*, where work perceived as low value—such as care—is relegated. Working from the margins can be a space of freedom (when people are liberated by that position), but it can also be a space of disempowerment (when people are kettled into that position).

Care: Vulnerability

River writes movingly on their project website about *why* they wanted initially to focus on social and professional constructs through the CF, and tapped into their own vulnerabilities as a means of circumventing these barriers in others to engage in a deeper and more personal form of dialogue.

I was interested to invite a space of vulnerability, or at least lack of being guarded and self-reliant, in order to counter the tendency toward the kind of professional performativity that is specifically born of masculinist and capitalist values. I believe professional performativity to be similar to the social construct of ‘gender performativity’ (Butler, 1999); that we both act, and is acted upon us.

There is a connection in my mind between this sense of being misaligned and dissociated professionally, disconnected from others, and my experience of gender dysphoria. As someone who has experienced the oftentimes excruciating vulnerability of gender transition and simultaneously what the ramifications of a willingness to be vulnerable has brought to my life—alignment, exploration, intrigue, surprise—I am curious to explore how socially constructed professional roles can also be deconstructed and unlearned, and what surprises, if any, might emerge from that vulnerability?

Their interest was in transposing their experiences of vulnerability in art making and as a Trans Queer person into the culture of academia. Trans and Queer communities are often spaces of disruption, resistance and creativity based in aesthetics, but also in radical human ecologies. Due to the ‘conditions of extreme precarity’ and the need for ‘survival through strategies of collective care’, these communities can be hotbeds for *avant-garde* forms of ‘kinship and world making’ (Horak, 2018, p. 96).

Vulnerability is a familiar state of existence to Trans and Queer communities, both in terms of the personal and exposing experience of *coming out*, or *disclosing* in heteronormative society, and in the political vulnerabilities of being a marginal group susceptible to prejudice, discrimination, and even persecution. ‘The concept of vulnerability has

become central to Trans activism in terms of both the political work of survival ... and political organising that centres the experience and leadership of the most vulnerable' (Horak, 2018, p. 95). Vulnerability in this sense is both a site for harm, and paradoxically a powerful political tool and site for new imaginaries. Halberstam and Halberstam (2011), undermines heteronormative definitions of success, to argue that the failure to live up to societal standards by Queer and Trans people can open up more creative ways of thinking and existing in the world. They point out that Queer and feminine success is always measured by male, heterosexual standards. The failure to live up to these standards, Halberstam argues, can offer unexpected pleasures such as freedom of expression and sexuality. This 'project of failure' (Halberstam & Halberstam, 2011) was a subject that River and Sarah C could recognise as welcomed in both the arts and Queer expression.

Sarah C: The art world loves being in this space of the unknowing, and failure, and knowing through doing. There's real interest and curiosity in that space, because everyone's trained in that way of working. It's okay, when you're surrounded by people going 'look at all the great unknowing you're doing', it's very different [in academia].

For Sarah C, the invitation inherent in the Creative Fellowship programme is one of playfulness and trying out new ideas. Deliberately, there is no expectation for a final, fully realised artwork or output. The intention is to alleviate the pressure to resolve an idea, and to embrace opening up one's thinking as a form of respite and inspiration. The invitation is toward unknowing, process, and reconstituting ideas of success.

However, in applying the question of vulnerability to HE beyond the arts, we asked whether the conditions of employment and the culture of academia allowed for vulnerabilities also to be experienced positively. Questions that emerged were: *do we need to make ourselves vulnerable? And is that a reasonable thing to require of people?* This line of enquiry situated this interrogation into the broader consideration of the politics of vulnerability, and realities of the emotional landscape in neoliberalist and capitalist workspaces.

Sarah C: I was thinking about vulnerability - whether it's practical, and what environments are suitable within the workplace, so that it will be acknowledged and rewarded through support. In a complex organisation like the university, you'll have a lot of pockets where that happens, and you'll have a lot of pockets where that doesn't happen. And maybe it's impossible to speak in any kind of absolutes about what an institution of 5000 people can ever achieve. It's more (about) finding and creating the possibility to build a community. So what channels are available for staff to be in spaces where - should they seek it - that vulnerability is there, and is being met in an honest way?

There are certain needs that must be met around security too. I don't quite mean safety, but you've got to be secure enough to be vulnerable in order for the creative process and learning to happen. For me, promoting care, and how universities can care as part of supporting a creative process, is about heightening people's awareness of what vulnerability means and what role self-awareness can play.

Sarah D: Vulnerability is interesting. I did some training on nonviolent communication, and we were taught that, if you're in a place where you're going to impose how you are feeling on the conversation, then you need to not have the conversation... You don't meet [another person's] emotions and energies [in order to] put your own stuff on it. You need to meet it from a place of [enquiry]. That is one model. To be there for somebody is *not to be vulnerable* in that way. It's to be ready to hold what comes at you from a place of care and concern.

What you need to care are boundaries. You need to first and foremost care for yourself, and if you're not in that place where you are comfortable and grounded, you need to attend to that first. It's interesting in that sense of professional ethics and professional identity but also work regimes.

Many questions arose; what resources are required to allow for vulnerability to feel safe, and a place of power and growth? When does vulnerability cause further harm to those already exhausted, or depleted in HE? As Alyson Cole (2016) states 'all of us are vulnerable but some of us are more vulnerable than others' (p. 260). Women and racialised communities are more frequently in positions of care, and at the same time Trans and Queer communities are far more vulnerable to harm within our society, due to victimising forms of power (Butler, 2016). So, is it reasonable

to expect people within these identity positions to aspire to further vulnerabilities in educational settings? As Alyson Cole states in ‘amplifying the generative capacity’ of vulnerability, do we simultaneously run the risk of diluting perceptions of inequality? (Cendeac, 2022, pp. 9:21). We also need to be mindful that vulnerability is often associated with weakness from patriarchal positions, therefore could embracing vulnerability also be detrimental to job security, progress, value, respect in an industry that is largely still dominated by men? (Janjuha-Jivraj, 2019).

Care: Comfort and Discomfort

This section draws on our discussion about how discomfort plays out as part of the process of creativity and learning, that discomfort is central to both, and what requirements that makes of *care*. The aim is to identify similarities and differences and also to identify that the focus on care draws attention to the embodied and emotional, and highlights the power relations, complexity, and ambiguity (Mumford et al., 2020) of what is in the room.

Sarah D: I’m concerned that wrapping someone in cotton wool won’t necessarily further their learning, it won’t give them an opportunity to work creatively, that what you need to be creative has an element that can feel uncomfortable. I think it’s ultimately a caring act, if what you want to do is broaden somebody’s horizons. It might not feel that way whilst you’re transitioning through the learning process and having your worldviews shifted. How do we navigate that when the relationship is potentially one of provider [staff] and customer [student]? I feel that a lot of the graft of learning requires that discomfort.

River: Some of the most valuable learning happens from positions of discomfort. In terms of my own creative practice, often it’s my discomfort, it’s the things that I struggle with that end up becoming the fuel or the drive for creative expression.

I’ve come to understand over time that that discomfort is incredibly valuable, whereas many students may be entering the institution and don’t have any kind of value for that, or appreciation for what might come of

being uncomfortable. And, therefore, pushing back immediately to any sense of discomfort within an institution, you know, like *I'm paying for this, and I don't expect to be unhappy or uncomfortable or in this space*. What work is being done to explain the importance of safe discomfort in educational settings?

Sarah C: There are also tensions around it—when do you [invite discomfort]? When don't you do it?

Sarah D: It's a similar balance when you're teaching as well, that people need to be uncomfortable, they need to embrace some level of ambiguity, they need to know that they don't know. You need to take someone to a place where they know that they don't know the answer, for them to want to learn what the answer is, but that's really challenging. Particularly when you've got quite big classes or you're not teaching them for very long, and half the student population are managing mental health issues (Abrams, 2022), it's this really difficult thing to navigate.

Halberstam (2017) discusses the *politics of discomfort* in their article *Trigger Happy*, analysing the current *trigger warning*, and censorship debate within academia. Halberstam (2017) also draws attention to overly *paternalistic* approaches to education that shield students, their ability to critically analyse and attempt to understand their own reactions of shock or discomfort. They poignantly ask what effect this may have when a generation of students would prefer to opt for censorship in favour of safety, when they participate in a world outside of universities—what other liberties would an individual surrender in order to avoid experiences of discomfort?

The distinction between discomfort and harm, and discomfort and safety here is crucial, and the question of care again becomes so pertinent. Care-ful educational environments may provide the social conditions of creative, transformational learning. There is, of course, a responsibility of the institution and the staff to ensure that students are safe and well-resourced enough, to provide certainty of infrastructure, and (ideally) genuine concern for their mental and physical well-being and intellectual development. However, that is not to say that care always feels pleasurable, or the experience will always be comfortable. In fact, it may be that

there is something amiss if the learning experience is without discomfort. As stated by bell hooks, in *Teaching to Transgress*:

In reconceptualising engaged pedagogy I had to realise our purpose here isn't really to feel good. Maybe we will enjoy certain classes, but it will usually be difficult. We have to learn how to appreciate difficulty too, as a take in intellectual development. Or accept that cosy, good, feeling may at times block the possibility of giving students space to feel that there is integrity to be found in grappling with difficult material. Not every moment in the classroom will bring immediate pleasure, but that doesn't preclude the possibility of joy. Nor does it deny the reality that learning can be painful. And sometimes it's necessary to remind students and colleagues that pain and painful situations don't necessarily translate into harm. We make that fundamental mistake all the time. Not all pain is harm, and not all pleasure is good. (hooks, 1992, p. 154)

Care: The Institution, and the Individual

In this final section we return to the positioning of care within the institution. Our discussion centres on whether caring individuals can be enough. We raised the issue of responsibility and duty of care, and what forms it takes between staff, between staff and students, and between staff and the institution. We circled around the question of whether an institution can care. Our conclusions reinforce the framing of care as a political act.

Sarah D: We were talking about co-counselling, and it made me think of the adult-to-adult communication. Universities are traditionally paternalistic organisations. That has changed. It is in tension with needing to sell their services, so it's not moved into an adult-to-adult relationship, because that takes a lot of emotional maturity. It requires a lot of support for educators to communicate in those ways... It requires a real rewriting of the institution. So maybe some of what we're talking about is actually the need for a different kind of conceptualisation of the relationship between universities and students.

Can you have adult-to-adult relationships between educators and students if you don't have an adult-to-adult relationship between an educator and their head of department, or an educator and their vice-chancellor? Do we just need a real shift? Do you think the problem is that universities are individualising the idea of care when it can't be? Or is that a distraction?

Sarah C: When thinking about that responsibility of care, the climate crisis comes to mind. If that's pushed down to an individual level, and it's [about] your recycling, then it removes the responsibility for big business and government and regulation to make the changes. There's something about, *you're responsible for your own welfare. You need to find the hotline and do some yoga on the weekend, and then your unbearable workload will be fine.* If there's a problem around care, does it require an individualised response, which is *get counselling*, or does it need a collective response? Maybe there's something wrong with how it's being run?

River: I would agree with what you've said. My thinking was that individualising care just seems like an implausible option to me. It's putting not just caring on the shoulders of individual students... but also putting the responsibility on the personal/tutor relationship, where it feels like another kind of individual burden of responsibility of care. I would worry about that outcome.

It makes me feel like these are responses to the aftermath of systemic problems, [triggering] the need for care and providing for someone when they're in a state of distress, rather than creating the conditions under which the distress is less likely to occur. So, in that sense, I feel like it's returning [the responsibility] too much to the individual, rather than the structure.

There must be a way of creating an educational system where you don't leave people feeling so depleted or dispossessed or isolated. It is the model that creates it. There are very caring people within academia, there are incredibly caring people. And the issue isn't with those people... I feel like the environment, the conditions, are such that they are not cultivating care, or a feeling of value.

When you were talking about individualising care, it made me think about decentralising care and [moving away from] the expectations of either a family unit, or just a single student-staff dynamic as provider of support.

Donna Haraway said, 'make kin not babies', and Sophie Lewis wrote about the abolition of the family unit. These things are not destructive acts

towards our current relationships... but expectations of care exponentially extended. Inversely, that actually means that your personal sense of responsibility towards care, to any given person, is actually diminished ... It's also something I think about because as a Queer person, I don't have expectations of a family unit in my life. I don't have that expectation to biologically reproduce. If I was to be a parent, it's likely in the context of being a foster parent. It means that my whole life... where I find that intimacy, or that tenderness, or that expectation that someone will care for me, is not formed through the idea of the family unit. It's always been a much wider sense of community, and I've always been very focussed on friendship, and really tried to maintain my friendships. As I get older, my friends are going to be sustaining me.

Our discussion about care and community-building in the university also incorporated the importance of *holding space* for creativity. Sarah C and Sarah D spoke about their roles as providers of care and how their programmes support others in their own creativity.

Sarah C: I was also thinking about Tronto (1993) [writing about] being responsive to care, 'care-receiving' (p. 107), and that can be incredibly difficult. It's not reciprocity, it's not about *you've done this for me, so I'll do this for you*. It's just taking it, just receiving care. Through [programmes like] the Exeter Education Incubator, and what we try to do with Arts and Culture, these are spaces where you are receiving care. Somebody cares, someone's listening, someone's paying attention, someone values what you need. We're creating space for that, and—to my mind—that can be very restorative.

Sarah D: Being part of the CF process has reinforced some of my own sense of what care can look like in an organisation. It includes things like smooth admin processes. It sounds stupid, but I think it's so powerful, having a thought-through, smooth process where it's like, *I've been on this journey before with others. This is a guide. It might be different, it might not look like this for you, but here are some things to help you in this process*.

This applies to teaching too. We want educators to be resourced enough to be able to create this creative education experience for students, and to be resourced enough to be responsive to students. So, they're there, they're holding space, but they're also responding to that actual person going through that actual discomfort in its particularity at that time.

But then you want that care and creativity—connected again, through that educator—being resourced. I guess I see care as a resource, [so that] those educators are resourced enough to have bandwidth to be able to creatively respond to changes, to be future making in their educational practice. So, they're not just *doing more, doing it faster*, that's where the complete exhaustion comes from. The article on 'pedagogic frailty' (Kinchin et al., 2016) was written nearly ten years ago. They were saying there's such pedagogic frailty in universities; it's such a stressed system that any small thing is going to see it fall apart. Well, Covid was not a small thing, and for the most part, education didn't fall apart. But it didn't fall apart because of all of that effort and energy and adrenaline that everybody gave it. But we're now at this point, *where do we go?* because people don't have any more to give. Now what do we do?

Joan Tronto (2010) has written that for an institution to care there must be a focus on politics—dialogue about relations of power; particularity and plurality—an attentiveness to human activity as particular and an openness to other possible ways of doing things; and finally, purpose—awareness and discussion of the end of care. This framework provides us with possible points of leverage for change in the face of the tensions we discuss. Institutions don't—can't, perhaps—care, but we can create and maintain institutions with systems, roles, and relationships which address these elements. As we acknowledged in our discussions this would create ruptures in the current institution (Fig. 11.1).

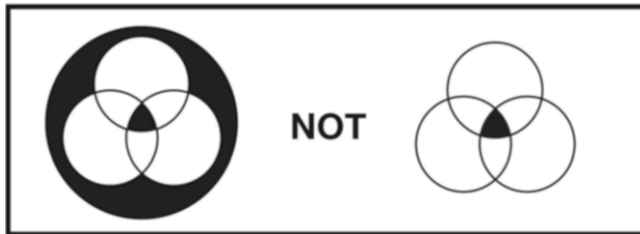


Fig. 11.1 Image credit: River Jean Nash, 2022. 'Bumper Sticker'. Funded by Arts & Culture, Exeter University

Conclusion

In our discussions we have reflected on the forms of resistance that are both inevitably a creative as well as a caring act, the types of caring that in their non-traditional trajectory are creative and resistant, and how creativity and the arts are able to contribute toward ruptions in educational practice as proponents of risk, failure, unknowing, and discomfort.

If the desire is to build care-ful, ethical education futures, there must be institutional recognition that the foundations are collective and collaborative. As we have discussed, institutional barriers are built on individualised, anodyne, and marginalised framings of care, and an expectation of gratis goodwill on the part of those providing informal care for their colleagues and students. In addition, teaching risks becoming toothless as discomfort and vulnerability are viewed as undesirables, and the edges of the learning process are smoothed away to generate a frictionless consumer experience. In this space, care becomes a political act through the resistance and challenge it presents to the status quo.

Our discussions led us to conclude that care has both an incremental and radical capacity for ruptures. Care as radical is an idea that originates in the feminist Black rights movement, as Audre Lorde declared in *A Burst of Light*, 'caring for myself is not self-indulgence. It is self-preservation, and that is an act of political warfare' (2017, p. 95). In economic and political systems that centre human dynamics in relation to free market economics, therefore, values of accumulation and productivity over personal and collective well-being, we see care, when centred in the dynamics of existence, as *always* the radical alternative. A fundamental change can occur within any individual educator or student when they choose to morally and ethically centre care. Incrementally, care can cause a radical effect in exactly the same way the neo-liberalist policy changes have transformed education. Care, decolonial thinking, and posthuman thought has the potential to make future educational environments as unrecognisable to the academics of tomorrow, as neoliberalism has made the educational environment unrecognisable to the academics of today.

Care, learning, and creativity are not synonymous. For us though, in undertaking this CF, working through their symbiosis has been incredibly productive and indeed nourishing. The time we made, despite our busy working lives, during the CF for open-ended conversations itself felt like an enactment of the themes we were exploring. Our discussions have drawn our attention to learning as embodied, relational, and always political. Discussing labour, exploitation, and organisations as part of these same conversations proved a really important context for exploring hopes and strategies for how we work to bring about a better future.

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12

Steps Toward a Decolonial Feminist Ecology

Katie Natanel
with Hamza Albakri, Asha Ali, and Arthur Dart

Introduction



View from Stoke Hill Farm, Exeter (UK); 11 September 2021

K. Natanel (✉)

Institute of Arab and Islamic Studies, University of Exeter, Exeter, UK

e-mail: K.Natanel@exeter.ac.uk

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This chapter is as much an imagining of *what we might do, who we might be* and *where we will have gone* as it is a story of *what we have done*. It is a tale of aspiration and interruption, of deliberate design and letting go, of walking and wondering.

We invite you to walk with us—to meet students and storytellers, organisers and educators, dreamers, activists and cherished friends. The pages before you recount a journey with creative pedagogies, where ruptures make possible emergent educational futures—new ways of teaching and learning, connecting to each other and the land, and working toward material and epistemic decolonisation. We begin with a module designed to centre project-based learning, whose intended trajectory was upended by a period of industrial action. While strikes seemingly threatened to limit our experience of the course, we became open to meaningful spaces of education that enable us to reach toward an ecological politics and practice. By taking a broader view of our roots and routes, we understand this rupture to be an important step toward developing a decolonial feminist ecology, grown locally in the wild/er spaces just beyond our door. The story in this chapter tentatively conceptualises our practice, though it can only be an attempt to trace the contours of something not yet fully formed.

As the principal author, I (Katie) write from the position of having structured our teaching and learning, as well as possessing embodied knowledge of the wooded trails that became spaces of education and community. I know the paths, trees, plants and hillsides not through reading or research, but from regularly moving upon and within the landscape. With each step and season I have gained an understanding of this natural world—I know which creek beds hold the most delicate wild garlic, just as I know where to find the wood anemone that sparkle like starlight in the dusk of early spring. I learned this through sense and feeling, by opening to wonder and discovery through touch, sight, smell, sound and taste. By being on and of the land. Yet I also write as a student in the space/time of a collective pedagogical and activist practice. Throughout this chapter the narrative voice moves between ‘I’ and ‘we’, reflecting a shared journey. With Asha, Arthur, Hamza and others,

I am becoming attuned to how sharing paths, stories, practices and knowledge in less structured and more unpredictable ways opens us to educational futures that nourish political organising. These activities feed and sustain resistance, while offering moments of rest, joy and solace.

In the pages that follow, we build on a practice begun in the spring of 2022 with students on the course ‘Gender, Sexuality and Violence in Palestine/Israel’ at the Institute of Arab and Islamic Studies, University of Exeter. We glean lessons from a single springtime walk, introduced as a break from the difficulty and weight of study—a rupture in classroom-based teaching and learning—that unexpectedly drew us deeper into grappling with the meaning and materiality of colonialism. By taking steps beyond the classroom, we are compelled to consider how our feet fall upon land marked by colonial violence and to ask what decolonisation means in a context where coloniality is obscured.

Through bodies and minds in motion, colonialism, decolonisation and anticolonial struggle emerge as terms within a lexicon of transformation—grounded in land-based praxis and connective modes of study. By colonialism we mean a history of interaction and model of political organisation characterised by practices of invasion, settlement, extraction, exploitation, domination and elimination of territory and indigenous populations (Young, 2001; Wolfe, 2006; Mignolo, 2007). We understand Israel to be a contemporary settler colonial regime that violently exerts power over historic Palestine and Palestinians, just as we acknowledge and experience Britain as a state of ongoing coloniality. British colonialism cannot be relegated to a historical past limited to the sixteenth–nineteenth centuries. Rather, the structures and privileges of colonialism endure through present-day politico-territorial control (e.g., over the north of Ireland), as well as through narratives of Western modernity and nostalgia for empire (Mignolo, 2017). Decolonisation responds by recognising and taking action to redress the powerful ways that colonialism shapes the past and present through territorial, political, social, economic and cultural conquest. At the same time, this practice and knowledge project entails a commitment

to new futures—decolonisation refuses colonial structures and logics to build anew based on principles of justice and self-determination (Lugones, 2010; Mignolo, 2017; Vergès, 2021). The work of anticolonial struggle is a shaking off of domination: ‘[...] rebuilding and re-existing under new conditions and modes of existences that are your own’ (Mignolo, 2017, p. 44).

Stepping forward, this chapter first follows the imprints of those who have gone before us, whether in redefining study or engaging with the natural world as a space of learning, community and resistance. We (readers and writers, together) will walk with scholars, activists and organisers whose work increases access to the land and raises questions of power, privilege and violence. Following these guides, the chapter then traces *landlines* across the space/time of teaching and learning as an embodied relational practice. Here we meet students whose paths cross continents and communities, converging momentarily in Devon. By moving together through local woods, lanes and fields, we begin connecting the (present-day) coloniality of Britain with legacies and trajectories of colonialism in other contexts—in ways that insist on accountability and action.

Rather than arriving at a destination, the chapter closes mid-journey to reflect on how these imprints and landlines might lead us toward a politics and practice of decolonial feminist ecology. Drawing from their work on ‘planetary humanism’ and ‘planetary’, we turn to walk with Paul Gilroy (2000, 2004) and Gayatri Chakravorty Spivak (2013, 2015), who suggest that our relationship to the environment and the more-than-human necessarily connects us to each another. With them, we consider how *ecology* is not purely the management of systems—in which humans are embedded—with the aim of creating and sustaining balance, but the practice of cultivating and nourishing relationships. Moving, breathing and sensing open us to new forms of encounter and collectivity, which ground us in a broader ethic of care and sense of shared struggle.

Imprints and Footsteps



Walking tomorrow!

by Katie Natanel - Thursday, 3 March 2022, 11:54 AM

Dear all,

Just a quick note to say that the forecast looks good for our walk tomorrow! For those who wish to stroll the lanes behind campus, let's meet in the IAIS atrium just after 11:30 - I'll be coming straight from teaching another class, so may need a few minutes to put on my boots! 😊

The plan is to walk and be together, in conversation or silence - however the day takes us. I'll bring along some poetry and we will start with breathwork, but apart from that I want to leave the time largely unstructured. Please feel free to bring writing, songs, images, objects... anything that you may want to share or feels restorative. I can't emphasise enough how important it is to slow down, to rest and to recover (somewhat!) from the intensity of the academic term.

Please wear suitable footwear (boots, trainers) as no doubt we will encounter mud! Dress in layers and grab a waterproof or water resistant jacket if you can. But really we won't venture miles away - so come as you are. Do bring a bottle of water and a snack or sandwich, as we will be walking over the lunch period. And you know I can't go without food...

See you soon! Looking forward to this.

All the best,

Katie

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Message posted to our virtual learning environment in preparation for a 'rest and restoration' session

I did not know what to expect as I laced up my boots, but really that was partly the point. A reminder sent to the class the day before our planned walk revealed both my excitement and my determination to let things unfold—to see where the path would take us, literally and metaphorically. In previous writing (Chappell et al., 2021; Natanel et al., 2023), I detail how the course 'Gender, Sexuality and Violence in Palestine/Israel' was meticulously re-designed in 2018 with a colleague from the UoE School of Education, Professor Kerry Chappell. During the first year of teaching in 2017, I had the almost painful sense that a lecture-style format failed to do justice to the complexities of violence, resistance and

everyday life in Palestine/Israel, no matter how committed we might be to dialogue following the taught portion of a given week. A radical redesign pivoted the course to emphasise project-based learning, shifting students' creative work from a form of assessment to the driver for study.

In the years since our redesign, I have grown to understand *study* in the sense proposed by Stefano Harney and Fred Moten (2013, p. 110):

...[S]tudy is what you do with other people. It's talking and walking around with other people, working, dancing, suffering, some irreducible convergence of all three, held under the name of speculative practice. The notion of a rehearsal – being in a kind of workshop, playing in a band, in a jam session, or old men sitting on a porch, or people working together in a factory – there are these various modes of activity. The point of calling it 'study' is to mark that the incessant and irreversible intellectuality of these activities is already present. These activities aren't ennobled by the fact that we now say, "oh, if you did these things in a certain way, you could be said to have been studying." To do these things is to be involved in a kind of common intellectual practice. What's important is to recognize that that has been the case – because that recognition allows you to access a whole, varied, alternative history of thought.

Harney and Moten alert us to the creativity, playfulness and relationality that underpin knowledge as an already living practice—it ceases to be a static object that can be held or attained. Instead, knowledge is *what we do* and *who we become* with one another. It is active, unfolding and unfinished. It exceeds and even refuses the confines of an institution, becoming more than the structure can hope to capture and deliver.

Yet at this point in my journey as an educator, organiser and researcher, it is the final sentence of this passage that strikes me most. If we approach study in the manner suggested by Harney and Moten, we become sensitive to a history of thought previously denied recognition as *knowledge*. Those who guard the gates of theory and epistemology (see Million, 2009) are knocked off balance, ambushed by a cadre of dreamers, workers, musicians, healers, artists and organisers whose ways of knowing *have always been here*. In a (re)new(ed) practice of study, we are opened to being, sensing, feeling, moving and doing as inherently intellectual

activities—parts of a larger and longer story made un-known and unknowable through the institutionalisation of heteropatriarchal white supremacy (Smith, 2020).

This story reveals that there is nothing radically new about the realisation that a walk in the woods might usher in a deeper, more meaningful mode of study. The notion that our class could break from the active—and difficult—work of learning only makes sense if education is framed as something to be done in specific times and places, for particular reasons. This assumes that teaching and learning are practices that we can turn on and off at will. Instead, if study is a speculative practice that we undertake in pursuit of understanding, growth, pleasure and community, then walking must surely be a conduit to new meanings and modes of action.

A Braided Path

On that bright March day, we followed the footsteps of those who studied and walked before us—not only in Devon and the UK, but also in Palestine and beyond. Our journey intertwines with paths traced across distant places and struggles, honouring how ways of knowing, being and doing might meet and be woven together in a ‘braid of stories’ that enables us to imagine different relationships with each other and the world (Kimmerer, 2020, p. x).

I felt my way with the session in its first incarnation, attending to intuition and responding to my own need for breath, space, reflection and motion. At the same time, I drew upon existing actions and initiatives—lived experiences and collective imaginings—that reassured me of the value in taking our class out of its institutional setting. I reached not for peer-reviewed articles or monographs published by university presses, but to memories, conversations and my own practices of movement in my effort to follow an active ‘alternative history of thought’ (Harney & Moten, 2013, p. 110). This history is largely absent from scholarship on project-based learning, though the intersection of walking with decolonial pedagogies is an area of increasing academic exploration (see, e.g., Wane et al., 2004; Butterwick & Selman, 2012; Batacharya & Wong,

2018; and WalkingLab, 2019). We must search elsewhere, whether due to epistemic omission or the deliberate design of practitioners who exercise their ‘right to opacity’ (Glissant, 1990/1997, pp. 189–194)—the right to not be grasped.

Our path leads immediately to Palestine—the focus of our course and the primary inspiration for moving our bodies toward the land. Years before designing the module and just prior to fieldwork for my doctoral research, I learned about the work of Raja Shehadeh, a Palestinian lawyer, human rights activist and writer who published *Palestinian Walks: Notes on a Vanishing Landscape*. I eagerly read his account of walks that took place between 1978 and 2007 (Shehadeh, 2008, p. xii), seeing through his eyes how the landscape has been altered by politics and violence. Here I mean expulsion from villages; annexation of territory; construction of settlements; destruction of homes; devastation of arable land and crops; killing of livestock; prohibition of harvesting wild plants; and control of water. Yet Shehadeh (2008, p. 206) also shows readers the beauty of Palestine and Palestinian land, richly layering his stories of legal, territorial and material harm. For example, he writes of walking with a friend (Louisa) who had recently moved from Edinburgh:

We arrived at the spring of A'yn El Lwza (Spring of the Almond Tree), the abandoned *qasr* a little distance away. Across from us was the beautiful rock that early in the year is studded with cyclamens. The spring itself still provided much-needed water for the flocks of goats and sheep that grazed in these hills. The water had made a small, murky-green pond in which we heard frogs and saw thick growths of spearmint and the common reed. But the meandering path nearby was almost totally obliterated, blocked by the large boulders that had fallen from the terrace when this illegal road had been built in 1992. A beautiful spot that had remained unchanged for centuries had been destroyed with no one raising a storm. I sat down on the dislocated rocks, trying to recall how it used to be, silently lamenting the destruction of our once-beautiful valley. I wondered how it must all seem to a newcomer like Louisa, who had not known this valley before its ruin.

Shehadeh insists that we see, hear and feel the spring, the rocks, the plants and the animals—that we begin to understand the delicate relationships

that connect them and the world they sustain. That we understand what has been lost and what is at stake.

During fieldwork in 2010–2011, I was based not in the occupied West Bank where Shehadeh's feet meet the trail, but in Tel Aviv and West Jerusalem where my Jewish Israeli research participants resided. I felt myself very much inside Israel, though I know it to be historic Palestine. A quality or texture emerged through language, social interaction and relationship to the land that confirmed my location *elsewhere* (if the abundant Israeli flags were not enough to tell me so). Yet on occasion, I would feel myself in Palestine. This was not always a matter of crossing material borders, though indeed checkpoints, barriers and soldiers marked division in political, social, economic and spatial terms. Rather, the feeling of *being in Palestine* materialised through language, symbols, cuisine, behaviour, architecture and landscape (Natanel, 2016). Palestine was always already present, despite the concerted efforts of the Israeli state and society to demolish, erase, obscure and assimilate. Within the borders of Israel and its largest cities, I increasingly found that I could move through an alternative or parallel geography once attuned to people, places, encounters and sensations.

This ability to travel—to exercise my right to movement—enabled me to join a walking excursion near Ramallah after giving a talk at Birzeit University in the occupied West Bank. We gathered at the trailhead just after dawn with rucksacks, boots and sustenance, listening to the volunteer leaders as they described our route. Once walking, it came as a surprise to me that our pace was unhurried—due in part to the children among us, but also openly declared as an intention. Our aim was not to clock miles, but *to be on the land* in the fullest sense. We were encouraged to share stories, to stop frequently for plants and flowers, to help each other pass more difficult sections of terrain. In this way, I learned about wild herbs, terraced farming, signs of passing seasons, ephemeral sources of water and the stunning scale of abundance. So too I remained aware of how settler colonial violence marks land and lives, as if journeying again with Raja Shehadeh. Walkers' stories revealed different degrees of constrained mobility, with some able to cross (with permits) between Jerusalem and the West Bank, while others were confined to the immediate locality. I was gently asked not to photograph the Israeli settlements

that appeared on distant hilltops in blocky formation, oozing across the landscape in a way that underlined their permanence. If someone were monitoring us from a distance—settler or soldier—the act of photography could have serious repercussions.

Thus, while our walk was certainly for pleasure, health and community, it was also an insistence on presence: “*We are here, together.*” Moving through the land was a means of teaching, learning, being and doing—study—rendered necessarily political given the struggle for liberation from settler colonisation. However, we did not need to name or mark our walk as *political* for it to already hold this ‘incessant and irreversible’ quality (Harney & Moten, 2013, p. 110). We could rest and share sage tea under the cover of olive trees, knowing that the nourishment sustained much more than contented, weary walkers.

* * *

Stepping onto the wooded path in Devon with students years later, I brought this embodied knowledge of Palestine with me. We carried it, together, as we walked. Yet we also found inspiration in other initiatives, experiences and imaginings, braiding these modes of activity together with each footfall on the dampened earth. When first designing the session, I drew on the wisdom and vision shared by Sabah Choudrey, a UK-based trans youth worker and psychotherapist whose love of walking and wild spaces I first encountered on Instagram. Sabah visited Exeter in January 2022 to launch their book *Supporting Trans People of Colour: How to Make Your Practice Inclusive* (2022) and generously agreed to facilitate a day-long workshop for LGBTQ+ young people (Exeter City of Literature, 2022). Based on their experiences of building and supporting community in part through nature, Sabah designed a day of activity encapsulated by words such as ‘opening’, ‘walking’, ‘exploring’, ‘documenting’ and ‘sharing’. They attended to differing degrees and modes of mobility as best they could given the terrain, plotting routes that provided access to wild spaces on foot and by wheelchair. For all, the day’s practice included breathwork, writing, reading, feeling, sensing, moving, eating and drinking—studying and nourishing. I watched as young people arrived with nervous excitement, just as I registered their reluctance to leave at the end of the day with windswept hair and muddied boots or

wheels. I heard participants describe what they had found on the path: greenery, community and new horizons of possibility.

This experience of land-based praxis—communal, intellectual and political—became woven with the vision of other organisers and initiatives whose work is made knowable through social media. Self-expression and representation on platforms like Instagram enabled us to learn from groups such as Land in Our Names (LION), a grassroots collective that pursues reparations for Black people and people of colour in Britain. LION connects racial justice with food, land and climate justice, confronting colonialism through increasing access to the land and challenging its concentration—as property—within the hands of the privileged (white) few. As a collective they build capacity and networks among growers, developing ‘ecologies of care’ that enable healing and promote land stewardship (Land in our Names, 2023). LION are clear that their work is *by* and *for* Black land workers and land workers of colour—like the space held for queer youth by Sabah Choudrey, these initiatives are not about integration within existing structures of privilege and violence. As Sara Ahmed (2012) and Sarah Keenan (2013) remind us, representation and participation do not mean radical transformation. Instead, LION and Choudrey insist on access to rights, knowledge, community, security, justice and land—existence—on their own terms. Shared by other UK-based groups such as Gendered Intelligence, Queer Botany and Sole Sisters, this work demands that we pay attention to the histories, conditions and trajectories of heteropatriarchal coloniality, and at the same time refuse them as totalising.

To our dissent line (Smith, 2012, p. 13) we also added the visions and actions of organisers based in the United States, taking inspiration from Rising Hearts, Pattie Gonia, Brave Trails, The Black Foxes, Brooklyn Bell and Alison Mariella Désir. These athletes, artists, activists and community organisers differently confront the logics and effects of American settler colonialism, particularly in shaping access to the outdoors and wild spaces. The colonial past and present are often engaged directly but sometimes obliquely, signalling the development of a politics-in-becoming. As dialogue within and across these groups makes clear, resistance is imperfect—it is a process of striving, responding to criticism, confronting limitations, adapting, renewing and resurging. The work of

these organisers was again made knowable through social media, where following an account on Instagram or Twitter/X revealed a universe of aligned activities and imaginations of the future. Whether under the name of an individual or grounded in a collective, these initiatives point toward an intersectional politics capable of transforming social norms, political policy and even global circuits of power.

This critical labour demonstrates how racial, gender and environmental justice are inextricably entwined—one piece cannot move without the others. Yet so too this is collective work of joy and pleasure, from the feeling of recognition and community that comes with staging a Pride March in Yosemite National Park to the healing that might emerge when we ask “Whose woods *are* these?” and move through them together. It is strengthened through rest and recovery, as much as through activity. Here we take lessons from The Nap Ministry, whose mantra ‘Rest is Resistance’ initially gave us permission to pause—to breathe and to be, to step back from institutionalised teaching and learning (Hersey, 2022a). To reach for something deeper, something more. As Tricia Hersey (2022b), founder of The Nap Ministry, reminds us:

This is about more than naps. It is not about fluffy pillows, expensive sheets, silk sleep masks or any other external, frivolous, consumerist gimmick. It is about a deep unraveling from white supremacy and capitalism. These two systems are violent and evil. History tells us this and our present living shows this. Rest pushes back and disrupts a system that views human bodies as a tool for production and labor. It is a counter narrative. We know that we are not machines. We are divine.

Then we come full circle in our story, following braided paths that reveal study to be a layered practice of *doing*—where we meet despite structures that seek to divide and exploit, where time is recursive, folded and poly-rhythmic rather than linear (Rifkin, 2017; Allan, 2018). From this place we position walking as an invitation to teach and learn in decolonial ways, where an ecology emerges that connects us to each other, to the land and to a shared struggle for justice.

Landlines



Stag sculpture at Stoke Hill Farm; 4 March 2022

“I want you to close your eyes. Feel the ground beneath your feet, the air moving softly across your face. Listen to the sounds around us – what do you hear? Register all of this. Hold it gently and let it go.

We will breathe together, present with each other and on this hillside. Three times, in and out.

Breathe in one ... and out one.

Breathe in two ... and out two.

Breathe in three ... and out three.

Be still. Feel. Open your eyes when you are ready.

We are here.”

To begin the walk I led our class in grounding, an exercise that would be integrated within all teaching sessions the following year. In March 2022 breathwork enabled us to become present in our journey, to register our intention and to feel ourselves in place—on the land within a wild/er space just beyond the university campus. It enabled us to let go and take up the invitation that walking extends: to think, move and be differently. Grounding set the tone for sensation and intimacy to be the basis of our experience, rather than ways of knowing whose epistemic value must be fiercely fought for within academia and Higher Education. For two hours, embodied and felt knowledge could be the centre.

Arriving later to the metal stag at Stoke Hill Farm, we were flush with energy, stories and ideas—new knowledge that emerged as we marvelled at the diversity of green and growing things, laughing at our failed attempts to avoid the deep, sticky mud. As we walked, we talked across Devon, Cornwall, London, Palestine, Kashmir, Dubai, Germany, Wisconsin and Colorado, connecting our lives and learning through the ground beneath our feet. Landlines appeared with each step and word, materialising in my mind's eye as shimmering, silvery threads that spread behind and before us—a snail's trail of memory and imagination. These lines followed the contours of our stories and the topography of the land, creating a new kind of map that we sensed might be ephemeral but hoped would be lasting.

The activity of drawing landlines made us breathless and happy, even as it opened uncertainties and old hurts—such is the promise of study, as Harney and Moten (2013) propose it. The substance of our exchanges and observations was not written down that day; we did not record it as 'data' to be kept for analysis. Instead, our teaching and learning was stored within hearts, leaving us with a feeling of what had transpired. An imprint lovingly placed alongside those shared above.

As we paused beneath an oak tree to listen to poetry, I understood that walking was much more than the break that I had planned for our class. It was an opportunity to rest and restore, but it was also a means to resist and connect. We resisted the neoliberal capitalist drive for

individualised productivity by insisting that pleasure had a place within our module, that a week framed by an invitation to wear suitable shoes and pack refreshments was as valuable as assigned readings or an assessment deadline. Following the route along lanes, through woods and across fields as a nascent public, we accessed land in ways that defied notions of private property and ownership. We resisted heteropatriarchal white supremacy by tracing landlines that made us aware of how race, gender, class, ability, generation, religion and location shape our everyday lives and experiences of nature. By sharing stories and poetry as we moved through the countryside, we named the forces that constrain opportunities and foreclose futures. Walking was an exercise of mobility that provided a language to describe often violent inequalities; at the same, it became a practice of equity as we claimed the right for all to roam.

On that day, we planted the seeds of a decolonial feminist ecology—a way of relating to each other and the land that attends to power and violence, but at the same time enables us to rehearse *the world that might be*. The promise of *what we might do* and *who we might be* shone brightly on the horizon, casting a golden glow on the rolling green hillsides that filled our field of view. Our study was diagnostic and world-making. Knowing was doing and being, together.

Ruptures

Yet as the introduction to this chapter foreshadows, ours is a story of interruption—of hopes upended and beginnings unfinished. We could not know it then, but these tentative steps toward a decolonial feminist ecology would meet obstacles that meant suspending our practice in the spring of 2023. Intrigued—and admittedly awed—by the lines that had unexpectedly emerged, I intended to deepen and extend our walking sessions with a new cohort of students. This time, our module would include a week on *land* that was taught not in a university classroom, but in the wild/er spaces previously explored. We would

explicitly ask what connects coloniality in Palestine with other contexts, struggles and communities in hopes that our landlines would gain thickness and permanence. This experience would come early in the course, enabling us to regularly return to walking as a lens to engage and understand subsequent topics, from embodiment and control to emotion and futurity. Our presence on, in and with the land would not be a break but the driver of our study—the centre to and from which all landlines flowed.

This imagining of *what we might do* was ruptured by a period of industrial action that lasted the duration of our academic term. Instead of exploring and connecting in expansive new ways, we focused on consolidating—making the most of the limited time in which we could meet for teaching and learning. My energy went toward recuperating rather than speculating, trying to enable the module to do the powerful work that I knew it capable of. Gone was the session on land and with it the invitation to develop walking as a means of exploring a decolonial feminist ecology. We grieved these changes to structure and content, just as we mourned lost opportunities to simply think and be together. We focused on *what we could do*, given the conditions and the stakes.

But still something powerful happened in those weeks, a kind of teaching and learning that attuned us more sharply to the work of decolonisation and its relation to ecology. Despite the cancellation of classes, students continued to show up—on picket lines and in teach outs, rather than university classrooms. We danced *dabkeh* joyously on the campus boundary, following the careful steps and tuition of Hamza Albakri. A doctoral researcher, musician and theatre practitioner from Al-Khalil (Hebron) Palestine, Hamza taught us how to place our feet and find rhythm through the knowledge that *dabkeh* mimics the act of planting on Palestinian land. A hand extends downward to release a seed, a jump moves us forward to repeat and create a row—a field is sown through collectivity and care, through cultivating and sharing knowledge. Our synchronised steps momentarily connected lands and peoples, dissolving the distinctions between here and there, memory

and futurity, even as more immediately they brought us pleasure and release. Days later, Arthur Dart and Asha Ali invited us to walk from that same site—our picket line dance floor—into the wooded valley below. They led us over a turnstile and down a thin, muddy path to reach the narrow brook that runs the length of Hoopern Valley, a wild/er space previously unknown to me despite six years of residing in the city. With the university campus barely visible through dense tangles of branches, Arthur and Asha told the valley's story as a place of community and refuge—for students and for travellers. Traces of the previous summer's encampment could be seen nestled among the wild garlic: the stream had been widened and deepened to provide a basin for washing; a pallet reading "Want change, not change" spoke to a sense of politics; the stump of a felled tree bore signs of use for cutting and cooking. Our guides—walkers, researchers, organisers and teachers from Devon and Somalia—encouraged us to imagine and claim this land as 'the commons': a resource belonging to all (see Right to Roam, [n.d.](#)). And for which we all must care.

Through an experience of rupture we continued to move toward something, tracing new lines that radiated not from the limits of the university or its classrooms but from the land itself. Thick, silvery threads extended from our relationship/s to the natural world and to each other. These landlines did not draw us back to institutionalised teaching and learning; they were not the product of redesigning course content to better capture a feeling that threatened to slip away. Rather, these were lines of resistance, connection, rest, care, pleasure and transformation *in action*—meaningful and powerful in their/our defiance of structures, boundaries and categorisation. Landlines mapped a mode of study that grew in the following months to include foraging, cooking, singing, playing and giving; so too these lines were drawn through grieving, supporting and healing. Our 'various modes of activity' enabled us to rehearse the world that we might build together, 'walking around with other people, working, dancing, suffering' (Harney & Moten, 2013, p. 110)—while refusing to be contained.

Whose Woods Are These?



Stoke Hill Farm, 15 October 2022

A strip of eucalyptus bark. Tangled hair. Flushed cheeks. Steady heartbeat. Calm.

I opened the door to my office after our walk in March 2022 unable to take in all of what we had experienced, but sure of its significance. Something had happened—we had been somewhere, done something. We had moved and been moved. We returned changed.

Our landlines shimmered in the woods, lanes and fields where feet and words had taken us. They called us back, up and out of the university, with the promise of new knowledge—of breath, adventure, storytelling and connection. Yet they also traced through our campus, spilling from the ridge into land cultivated as *property*. Distant views and wooden gates disappeared at the university fence line, where a sign claimed private ownership and warned against trespass. And still our lines glimmered—down paved paths, beneath towering buildings and past tags naming trees by

genus and species. It was here that I stooped to pick up the rough piece of eucalyptus now held in my hand. For some reason, I opted not to bring back a sign of the wild/er spaces in which we had journeyed. Instead, I collected this shaggy remnant—an indicator of campus biodiversity curated in the ‘excellent mix ... of original exotic [tree] species introduced in the middle of the 19th Century’ (University of Exeter, n.d.). Native to Australia, growing in Devon and gathered during a course on Palestine, the eucalyptus conveyed a storied life—it spoke of colonialism layered across space and time. But it also told of study, walking, rest and resistance.

Perhaps this is the point to which we arrive: returning mid-journey to the places from which we departed, changed. Our landlines draw us out and in, gently insisting that we stop, listen, ask, share and feel. That we learn deeply of our connections to each other and the land/s we are not *on*, but *of*. This strikes me as an emergent kind of ecology, one potentially aligned with the ways of thinking and being made knowable by scholars like Paul Gilroy (2000, 2004) and Gayatri Chakravorty Spivak (2013, 2015) who argue that our fields of view, care and action must broaden in pursuit of the just world/s we might build. ‘Planetary humanism’ (Gilroy 2000, 2004) and ‘planetarity’ (Spivak 2013, 2015) alert us to the scale of our work, marking ‘the limit to what we do’ (Spivak 2013, p. 2). These frames suggest a kind of non-imperialising universalism that makes space for ‘the geographical imaginations we bring to the planet become the very fabric, possibility and potential for progressive and humane (co)habitations of modernity’ (Jazeel, 2011, pp. 83–84). Our landlines are world-making.

At the same time, a planetary awareness and imagination raises questions of alterity, attending to how otherness and abjection are produced, sustained and justified. We are urged to be wary of ‘one-worldism’ and its capacity for violence (Jazeel, 2011, pp. 87–88), not least in determining who is known, who is know-ing and who is know-er (Kilomba, 2016)—what is thinkable, writeable, readable, sayable and doable. In becoming hegemonic or claiming the universal these frames threaten to erase and eliminate, aligning with the colonial knowledge whose logics we confront and refuse.

Our grounding and connectedness bring us back from this edge. Concerned with the effects of ‘belonging and its multiple ecologies’ on political communities and solidarities (Gilroy, 2000, pp. 2–3, 328), planetary humanism envisions a future in which ‘race-thinking’—manifest in

borders, identities and national cultures—is supplanted by deeper ethical and political bonds. If the planet is our horizon of possibility, humanism reminds us of the routes we walk and the stories we share. Our paths and histories are not universal; rather, they momentarily converge, brushing and overlapping in ways that permit experiences, sensations, memories, struggles, communities and visions to meet. In the space of a classroom, on a picket line, beside a brook, atop a hill—our landlines will lead us there.

A decolonial feminist ecology emerges from this confluence of energies. In developing this chapter, I began to doubt whether it needed to be written and, if so, whether I am the person to record it. It seems to me that a decolonial feminist ecology is a matter of *doing*—being, becoming, resisting and connecting in ways that will always be unfinished. A tension or ambivalence accompanies my attempt to capture it (imperfectly), as we sow our first seeds in Devon. And yet, Paul Gilroy (2000, p. 335) reminds us as a matter of urgency: ‘We need to look toward the future and to find political languages in which it can be discussed.’

Then the steps traced here are indeed a rehearsal—study as a speculative practice that yields a grammar for the future. A decolonial feminist ecology is our way of talking about how our entanglement—the state and knowledge of being braided together—might move us toward a future in which care and justice underpin social organisation, political practice and economic policy. It begins to give breath and word to a way of life that does not seek balance, but acknowledges connection, flow, interdependency and mutual constitution. It is a language that attempts to describe how my future cannot be separated from yours or ours, and what is at stake in that relation. In ‘Violence, Mourning, Politics’ Judith Butler (2004, p. 22) writes,

When we lose some of these ties by which we are constituted, we do not know who we are or what to do. On one level, I think I have lost “you” only to discover that “I” have gone missing as well. At another level, perhaps what I have lost “in” you, that for which I have no ready vocabulary, is a relationality that is composed neither exclusively of myself nor you, but is to be conceived as *the tie* by which those terms are differentiated and related.

A decolonial feminist ecology gently steps toward creating that vocabulary, recognising how our bonds extend to the land, the plants, the

animals, the rocks and the spring of A'yn El Lwza—the world/s that together we sustain.

Our landlines reveal *what we might do* and *who we might be*, as much as a story of *what we have done* and *where we have gone*. But perhaps more importantly, they make clear *that which will have had to happen* for a decolonial feminist ecology to grow—a performance of the future that hasn't yet happened but must' (Campt, 2017, p. 17). This is our emergent educational future. Through ruptions and resistance, a decolonial feminist ecology becomes '[...] a creative, peopled re-creation' that requires us to ask 'How do we learn about each other? How do we do it with without harming each other...? How do we cross without taking over? With whom do we do this work?' (Lugones, 2010, pp. 754–755)—and to answer with reference to a planetary horizon. Walking and dancing, we move toward a practice and politics rooted in shared struggle and an ethics of care; in pleasure and community; in accountability to each other and to the land that holds us.

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Part IV

Changing Education



13

Inhabiting the Cracks: Accumulating Creative Ruptions to Change Education

Kerry Chappell, Chris Turner, and Heather Wren
with Sharon Witt, and Helen Clarke

In Chap. 1, Chappell, with Turner and Wren, made a number of claims: that authors would show how ethical, care-ful educational futures might emerge through creative ruptions; that we would provide hope and show how to do education differently; that we would provide direct educational responses as examples and tools; and that we would show how different authors create productive ruptions. Across Chaps. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, to 12 we offer all these elements, but as an authoring team, we have walked a fine line between staying true to the implied practices of emergentist philosophies and post-qualitative methods, and the desire inherent in neo-liberally influenced educational systems to provide an answer and to demonstrate efficacy and impact. By their very nature, posthuman, new materialist, decolonial and feminist thinking will not provide textbooks and guides on how to do education differently, nor will they offer visions of future education models. As exemplified in

K. Chappell (✉) • C. Turner • H. Wren
School of Education, University of Exeter, Exeter, UK
e-mail: k.a.chappell@exeter.ac.uk; c.turner5@exeter.ac.uk; hw474@exeter.ac.uk

this book, they will create new kinds of space and do so ethically; they will acknowledge the entanglements of researcher-teacher-learner-environment; they will offer provocations and enact new ways of doing; and they will indicate likely trajectories. For some readers this may be frustrating, but engaging in these ideas and practices requires a fundamental change of approach to teaching, learning, research and relationships, and to the forms of quality judgement that we use in relation to these entangled elements. These shifts in thinking and practice can make it more complicated to put new ideas and practices into conversation with existing theories, policies and pedagogies but nonetheless, we argue that these actions need to be taken to gain the most from the new ideas.

To open the doors on these conversations from our editorial team's point of view, next we offer a short reminder of the different approaches taken across the chapters. Whilst we know that the book can be read sequentially, journeying through ideas and practices which show how to create spaces for ruptions, to then offer dialogues within these spaces and finally to set a more activist tone through resistings, we will not here offer thematic insights from each of the three sections. We choose instead to deal with bigger questions regarding what we have learned about how we handle creative ruptions and what they in themselves 'do'. We go on to demonstrate how the creative ruptions in this book respond to various wicked problems, and then end by offering ways of thinking-being-doing to push matters forward. This includes considering how we can expand our emotional repertoires from anxiety to also include hope and courage, positioning the contribution of this book in relation with colleagues working in decolonisation and possibilities studies. As ever, these are the throughlines that have emerged for us, undoubtedly multi-dimensional, but there are many other ways that you can travel through this book and enter into new trajectories from it.

So, on to a brief reminder of the different approaches taken across the book. In Chap. 1, we introduced the key ideas of posthumanism, new materialism, decolonialism and feminism. We took a critical stance towards liberal humanism (Bozalek & Zembylas, 2016) and positioned posthumanism in education as entailing the fundamental de-centring of the human as the educational driver and the removal of the false binary between human and other-than-human¹ (e.g., Braidotti, 2013). And,

with this, we argued, comes consequences that shift us to an ‘ethics of transformation’ which entails enacting power and relationships differently. We argued for New Materialism as offering a renewed focus on the dynamics of materialisation involving corporeal life and material phenomena (Sencindiver, 2019); and also fore-fronted Barad’s (2003) notion of ‘intra-action’ to offer new considerations of the intertwined agencies of all kinds of others through an ethico-onto-epistemological positioning. We also opened up framings through decolonising theories and practices (e.g., Andreotti, 2011; Mignolo, 2007), which reveal colonialism, colonisation and coloniality (Pirbhai-Illich et al., 2022) in order to decolonise minds and bodies away from colonial ways of being, doing, knowing and valuing. In part, authors also draw in decolonial feminist ideas and practices which recognise how colonialism, heteropatriarchy, capitalism and racism interlock to produce and sustain violence and domination, and therefore refuse these structures and logics and commit to differently structured futures (Lugones, 2010; Vergès, 2021/2019).

Bearing these in mind, we now go on to consider the six ways in which the editorial team have learned how to work with creative ruptions and what it is they do.

Working with Creative Ruptions

How do the 11 chapters help us explain creative ruptions further? In Chap. 1, we laid the ground for authors to create these meaningful and productive creative ruptions—disturbances or commotions. We saw ruptions as a breaking or bursting open, a breach or rupture, importantly with more change to follow, rather than just an interruption. In terms of understanding the creative nature of these ruptions, the chapters reinforce and support the idea that creativity is both a powerful learning tool within education and also a means to change education from within. Creativity is understood as dispersed and dialogic (Chappell, Chap. 2), with diverse materials recognised as agentic (Crickmay and Welsh, Chap. 7), with a focus on questioning how creativity occurs rather than who owns it (Witt and Clarke, Chap. 6) and as grounded in relationality and connectivity (Katingima-Day, Chap. 9). Ben-Horin (Chap. 8) discusses

the tensions of managing a portfolio of creative research and development projects while ensuring that ethical futures emerge responsively through the generative potential of creativity. Campbell, Dyer and Nash (Chap. 11) also alert us that marginality is a strong vantage point from which to critique the status quo and to drive change.

Many of the authors write from positions of marginalisation and we aim to find strength in this for creative change. Through our readings of the chapters, we have gleaned six crucial insights into how we might work with creative ruptions in a way that balances care and risk (Fig. 13.1).

Firstly, we are strengthened by repeated examples of how to live with unpredictability and discomfort. Crickmay and Welsh (Chap. 7) show us how to pay attention to unforeseen possibilities in their posthuman reading of a co-creative music education practice, providing improvisation as a dialogic process through which to experience bodies, sounds and other materialities as generative of new teachings and learnings. Chave (Chap. 4) urges us to be ready for unexpected and unforeseen ways to address the ecological and climate threats through educational practice that pushes back against the colonizing constraints of the present by focusing on bewilderment; the very act of which generates the unknown. This idea and its practice are intensified eloquently by Campbell, Dyer and Nash (Chap. 11) who charge us not to let our teaching become 'toothless' in service of a neo-liberal transmission of knowledge to student-as-consumer; they ask us to take risks with feelings of discomfort and uncertainty. Ghemmour (Chap. 10) equally shows how decolonising approaches can encourage uncomfortable but purposeful self-questioning to challenge the educational status quo. And Natanel (Chap. 12) shows how to use

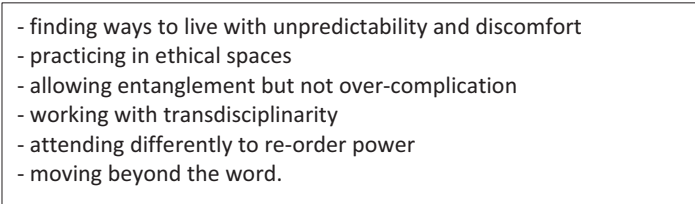
- 
- finding ways to live with unpredictability and discomfort
 - practicing in ethical spaces
 - allowing entanglement but not over-complication
 - working with transdisciplinarity
 - attending differently to re-order power
 - moving beyond the word.

Fig. 13.1 Working with creative ruptions to balance care and risk

walking and sensing to break from the difficulty and weight of normative study and to extend the space for learning.

Secondly, we can see that practicing in ethical spaces plays an essential part in our collective handling of creative ruptions. Activism based on an ethics of care enshrines what Walker (2007) describes as an expressive-collaborative ethics in which negotiation, collaboration, expression and agreement are foregrounded and highlight power relationships as a political concern in pedagogical contexts. Consequently, as Bozalek and Zembylas (2016), point out, it is impossible to separate theories of epistemology (of knowing), from ontology (being) and from ethics. This is illustrated well by Crickmay and Welsh (Chap. 7); they describe their work with music and those with dementia in which people with dementia are valued for their different and creative ways of being and knowing; Turner (Chap. 3), discusses his theory of aesthoecology, emphasising the symbiotic, ethically bonded relationship between aesthetics (the affective) and ecology (the connected); and, Witt and Clarke (Chap. 6) talk of pedagogies of attention that exhibit ethico-onto-epistemological practices that appreciate the entanglement of caring, doing and knowing. As editors, we can see spaces are created to provide for alternative futures to emerge ethically. Spaces represent opportunity and potential—a dynamic liminality from which the new arises spontaneously and can be valued for its own expression of uniqueness—with the possibility to counter injustice and marginalisation. Being equipped to engage multiple perspectives allows for meaningful dialogue in ethical spaces of engagement (Ermine, 2007). A clear example of this is apparent in Chave's Chap. 4 which examines the notion of *aporia*—literally lacking a path—she considers how spaces which are creative, invite doubt and are uncertain so that new understandings become possible, which re-centre more-than-human voices and allow transitional and marginal perspectives to be asserted more strongly.

Thirdly, our co-authors show us how to live and work with entanglements without becoming lost in over-complicated relationships. We can then understand their power in relation to fast-moving challenges, by their embedding in kinship and community. Chappell's (Chap. 2) own writing sets the tone for this at the outset, when considering embodiment and materiality through touch and time. She demonstrates how working

with multi-epistemic literacy (and, in so doing, honouring Indigenous and arts-based epistemologies, too), and attending to what might be understood as simple everyday practices such as walking and touching can open us up to entanglements with other ways of being and becoming. She argues that this fine-tuned attention to relations can equip us with the ability to quickly morph our responses to fast-changing wicked problems. Witt and Clarke (Chap. 6) similarly cultivate relations through what they call kin-centric pedagogies which emphasise collective co-creation with spaces and places. Importantly they stress that these relational pedagogies do not end when we leave a place; they continue in dialoguing, making, new thinking and transformations. Here they show the continuous and collective nature of how pedagogies might be. Katingima-Day (Chap. 9) explores the intricate links between aesthetics and our experiences of life through the African concept of Utu, to articulate how we experience an aesthetics of life. This offers insight into how, by prioritising relationality and connectivity, Western hegemonic approaches can be decolonised. She leads us away from mechanistic frameworks to a more dispersed aesthetics which acknowledges the belongingness of varied entities. Katingima explains Utu as describing the essence of being and becoming human by participating in life, and in so doing demonstrates humans' entanglements with other entities and the value of thinking about education as a creative and dynamic process, woven into the living fabric of the people and generated within communities. Furthermore, Natanel (Chap. 12) articulates how walking in local landscapes can help to reflect on the lives of settler colonialism in Palestine/Israel, leading to imaginations of 'who we might be, what we might do and where we will have gone'. By doing this, Natanel shows how understanding lives as entangled with the environment across continents can lead to decolonial thinking.

Fourthly, we see authors working with transdisciplinarity as a means to handle creative ruptions. Their work is transcending the boundaries of a range of disciplines to use a variety of perspectives to address complex issues (Benatar, 2000) and in so doing pushes back against normative education. Wren's consideration of empathy (Chap. 5) and Witt and Clarke's (Chap. 6) exploration of sympoiesis through field visiting are actively working across boundaries of the arts, poetry, psychology, social

welfare, creative writing, philosophy and education. Henriksen et al. (2015) and Kligyte et al. (2019) argue that when embodied thinking is seen as part of the transdisciplinary process, it becomes a creative liminal space where the tensions within unknown possibilities can be held in an exploratory place. Hence, when Witt and Clarke are collage making to explore new possibilities for transdisciplinary learning, they are affectively exploring the liminal spaces through creative embodiment from which ruptions arise through participation. Campbell, Dyer and Nash's work (Chap. 11) is transdisciplinary in nature as it seeks to invite reflective conversations between HE leaders and educators from various disciplines alongside others from outside the university. In this way, by reflecting on the process of transdisciplinary practice and the conversations that arise from it, reflexivity can lead to an understanding of different social phenomena which can alter prior assumptions (Von Seggern et al., 2023), providing broader perspectives on challenges and issues. Ben-Horin (Chap. 8) discusses a case study that explores the role of leadership in higher education to ensure that ethical educational futures emerge responsively through creativity to facilitate integration of research, development and innovation in educational programmes. To this end, the chapters in this book are an attempt to kickstart careful communication through the emergence of provocative and ethical methodologies that create conversations which can involve pluralistic possibilities for educational futures. With embodied processes also being a key part of crossing boundaries, this book offers a way for educators to understand how to approach transdisciplinary learning through creativities that can lead to (ruptive) democratic educational futures (Burnard et al., 2022).

Fifthly, we see how attending differently can re-order power and bring through what has previously been denied or hidden. Turner (Chap. 3) opens us up to this way of working initially through his discussion of aesthoecology as a specific way of identifying thinking about education. He argues that the melding of aesthetics and ecology, which both inherently attend differently to affect, offers a pivotal (political) balance between forms of perception, thought, production and action. He takes this political imperative as a driver for dissensus (Ranciere, 2010), or conflict, identifying the opportunity to disrupt the status quo and to creatively re-order power relationships. Chave (Chap. 4) attends to the

intense notion of love, grounded in affection and seeing it as a source for social change, with the potential for solidarity which can generate ethico-political pedagogies that have the potential to address injustices and suffering. Later in the book, authors draw these threads of re-balancing power by asking us again to attend differently. For example, Wren's (Chap. 5) work on affective, embodied empathy forefronts a thoroughly sensorial engagement with environment which brings through messages and understandings which had previously been hidden because of a dominant focus on the intellect. Ghemmour (Chap. 10) identifies reflexive decolonising practices as a means to include into HE the valuable yet neglected knowledge of Global Majority students' experiences, identities and cultural heritages, and thus re-order power. Similar approaches are advocated by Campbell, Dyer and Nash (Chap. 11) in their work with care as radical resistance and indeed as an act of political educational warfare (Lorde, 1998).

Sixthly and finally, we note our authors going beyond the word when working with creative ruptions. Chappell (Chap. 2) shines a direct spotlight on the importance of going beyond the word through film, technologies such as AR and VR, choreographic scores, martial arts, and indigenous and posthuman walking practices. She highlights the mind body split as a particularly Western problem that we in the West need to overcome (Fullagar & Zhao, 2018). She encourages a practice of cumulative ongoing rupturing as educational responses to both the climate crisis and the neoliberalisation of education. If, as a reader/engager, you have read the book sequentially you might well then experience a powerful accumulation of these ideas and practices throughout the chapters. For example, Turner (Chap. 3) picks up the flow and continues to go beyond the word through exploration of the sensory and affective, symbiotically entwined with the aesthetic and environmental within aesthoecology. Wren (Chap. 5) joins the flow, offering a detailed journey through her embodied musings to understand affective environmental empathy through photographs, Padlets, swimmings, poems, videos and sound recordings whilst also encouraging us as readers/engagers to try all of these practices ourselves. Crickmay and Welsh also draw us beyond the word sometimes asking us to listen—and I repeat their request here. As

you read this final paragraph in this section, I ask you, to listen to Chap. 7's Crickmay and Welsh's Audio: Poised on the Edge.



QR Code 16 Audio X: Poised on the edge—[Bass note D](#)

In this final chapter, we are indeed poised on the edge. So far, we have considered how we can work with creative ruptions. Understanding these six ways of working, we are at the precipice, ready to consider the book's creative ruptions and their productivity. Carrying us over that edge, Crickmay and Welsh (Chap. 7) and Katingima-Day (Chap. 9) go beyond the word through the inclusion and discussion of voices, images, sounds and instruments. In Chap. 7, they encourage us to think of music making as a fundamentally embodied experience, entangled with the instruments and the world; so that those living with dementia can teach us to focus on learning as a response-able encounter that is emerging towards unforeseeable futures. Katingima-Day eloquently supports us to positively step from the edge into the unknown of the 'not yet' through the experience of Utu, a Kiswahili concept regarding the essence of being and becoming human by participating in life. Here she argues that affect is an active, non-material and metaphysical *participant* in music and music making, life and therefore learning. She is clear that this awareness of affect opens new creative possibilities and, we would argue, the potential for ruptions both in music making encounters and wider educational systems. If you have listened to Crickmay and Welsh's *Poised on the Edge*, depending on your reading speed, this should have come to an end in your ears right about now, as we leap off that edge to dive into the book's ruptions.

What Do Creative Ruptions Do?

So, our readings show us, the editorial team, that to work with creative ruptions, often from a place of marginalisation, we need to find ways to live with unpredictability and discomfort; practice in ethical spaces; allow entanglement but not over-complication; work with transdisciplinarity; attend differently to re-order power; and move beyond the word. Handled in this way, then, what work do ruptions do?

Learning from the snowballing messages of the chapters, as editors we are clear that creative ruptions are radical, that is they affect the fundamental nature of things, and that they are irreversible. In conversation we have compared our experiences of feeling that whilst the past remains with us, there is 'no going back' once we have engaged with posthumanism, new materialism, decolonialism and feminism. They are all powerful tools which allow us to think, make and do the educational world differently. We understand that these creative ruptions will not in themselves solve the wicked and Anthropocentric problems that the authors have in their sights. By definition these problems are complex and weblike, requiring approaches from multiple vantage points. The strength of the creative ruptions, and their underpinning theories and practices, though lies in their own complexity and weblike dispersal. If, for example, we take the Baradian notion of intra-action as articulated by Chappell (Chap. 2), Barad (2007) conceives of agency as a relational performance enacted within an entangled assemblage of material and embodied humans and other-than-humans where ideas and phenomenon emerge through the intra-action. This immediately constitutes us all as mutually dependent. With agency complexly dispersed in this way, creative ruptions have reach into the weblike roots of wicked problems; and if such ruptions accumulate they have the potential to intensify their power for change through the layering of their fissures and cracks.

This articulation of creative ruptions also requires of us a different understanding of change and progress. In Chap. 1 we have already pushed back against a linear, logical view of progress towards an envisioned future, by applying Osberg's (2017) ideas of symbiotic anticipation (proactively exploring in an open-ended way beyond the human) and Amsler

and Facer's (2017) call to have the courage to critically anticipate futures which are currently unknowable. This push back is also reinforced in disciplines such as psychology where, for example, Ross (2023) challenges a traditional cognitive view of progress as a linear trajectory from ignorance to knowledge, arguing that creative cognition involves an extended and dynamic system of non-linear possibility generation. These stances are important as, whilst a creative rupture may be generated by our interventions with multiple others, equally we may find ourselves more in the role of recipients, when ruptions such as the Covid-19 pandemic or the rollout of artificial intelligence overtake us, and we need to respond via symbiotic and critical anticipation.

Thus, change via creative ruptions is radical and irreversible and can be unexpected. We cannot tell therefore when smaller ruptions such as the ones detailed in these book chapters will either individually or collectively reach—what we are choosing to call—an 'accumulation threshold' (Zhang et al., 2021), and spill into irreversible change with significant momentum and beneficial spread. We find this notion gives us courage when the enormity of the problems we face can feel overwhelming. This book is already an example of positive spread, operating perhaps like a rhizome (Deleuze & Guattari, 2013), rehabilitating thought as a creative and dynamic enterprise, across the lifetime of the Creativity and Emergent Educational Futures Network at the University of Exeter. Set up in 2018, ideas instigated and spread by Anna Craft, Deborah Osberg, Fran Martin and Kerry Chappell have been taken up, chewed on, adapted and reinvigorated in new contexts by the authors in this book and beyond. And we aim that through your reading and engaging with the book, this beneficial spread of ideas and practices will spread further in a rollout of creative ruptions. We know that these sometimes seemingly small instances of spread can have big effects. Each author or authorial team already has broad impact with their ideas whether at professorial or PhD level, or in between. For example, Natanel's (Chap. 12) focus on decolonialist feminist ecologies has developed from her interest in doing things differently in education to think about women, sexuality and violence in new ways. This has led to her enacting radical feminist pedagogies with teachers and students in her HE classrooms, where she explores and develops decolonial and anticolonial orientations. Turner's educational

ideas (for which he received an OBE) were played out in a large community college in England where he worked collaboratively with colleagues and others to centre a gallery at the heart of a new college building. These actions were informed by early-stage thinking about aesthoecology, and continue to have ramifications for the education of thousands of young people and their families.

As a collective, contextualised within the wider group of researchers, practitioners and scholars who have taken up posthuman, new materialist, decolonial and feminist ideas, we have not yet experienced our 'accumulation threshold', but we are ready for it. In the section that follows next, from the point of view of this book, the editorial team considers how the chapter ruptions are contributing to wicked problems, thus potentially building to an accumulation threshold that will see these practices spill over in an irreversible way.

How Are We Responding to Wicked Problems?

So, how do these creative ruptions respond to wicked problems? Wicked problems are not just difficult, they possess a complexity that involves multiple possible causes and outcomes and internal dynamics that are far from linear (Peters, 2017). For a problem to be wicked, in addition to being complex it is also multicausal, multiscalar and interconnected.

Consequently, wicked problems can never be completely solved, they are interdisciplinary and multiple stakeholders may have conflicting agendas (Rittel & Webber, 1973). They are very similar to hyperobjects (Morton, 2013) which are problems that, as opposed to being linear and rational, implicate all actants as being part of a web or net and, therefore, difficult to disentangle. As Morton puts it, 'The more I struggle to understand hyperobjects, the more I discover I am stuck to them.' (p. 28). Witt and Clarke (Chap. 6) refer to this as multiple engagements in a mesh of intra-action. Wicked problems challenge society, policy makers and institutions and include issues such as climate change, refugees, terrorism, digital warfare and loss of biodiversity (Termeer et al., 2019). They are part of all of us and as such are part of the politics of discomfort (Campbell et al., Chap. 11). To take the climate crisis as an example, it is far greater

than that induced by anthropogenic activity, important and worrying as that is—it is the immense and ramifying complexity of the issues that define it as a wicked problem.

The climate crisis will be the harbinger of many other wicked problems which will beset the planet and its inhabitants, human and other-than-human alike. For example, changes in climate are likely to lead to catastrophic weather events which will displace very large numbers of people from their homelands. The United Nations (Human Rights) claimed that of 59.1 million people internally displaced in 2021 across the world, most were displaced by climate-related disasters, much higher than displacement due to armed conflict (United Nations, 2022). The overall effect on more-than-human populations is, of course, incalculable but hugely significant. The depletion of the rainforests and the damage to coral reefs are but two examples. McKinnon (2022), for example, points to the climate crisis as being not just due to greenhouse gas emissions but also to ‘a product of historical injustices, current inequalities, institutional inadequacies and the abuse of power’ (McKinnon, 2022, p. 2). She goes on to say that these issues challenge our most fundamental convictions of what makes for flourishing societies and meaningful individual lives—surely also our aim as educators. Climate change and its emergent consequences, therefore, is something that must be at the core of education and futures thinking. This book illustrates how radical, ruptive and creative approaches contribute to that alternative educational mode of thinking and being, not to *solve* wicked problems, but to perceive them in a new light—prisms which diffract the light and, through ruptions, break the status quo and allow a different way of being, knowing and valuing.

For example, Chappell (Chap. 2) refers to this as a multi-epistemic literacy and Chave (Chap. 4) suggests that this requires a letting go of certainty and an acceptance of ambiguity. Many of the authors in this book approach these problems through a posthumanist and new materialist lens. Wren (Chap. 5), invites the reader to creatively think-with-the-environment, and Witt and Clarke (Chap. 6) expand notions of dialoguing with the world in a collaborative and collective ma(kin)g. Wren refers to the increasing stresses put onto the planet due to climate change (Chap. 5), and Chave (Chap. 4) refers to the climate and

ecological emergency as a space for bewildering questions, where no-one yet knows the answer. Turner (Chap. 3) refers to catastrophic events which will become more frequent and unpredictable, in which climate change plays a major role, but, more generally, points to the idea that this spills over dramatically into massive geopolitical uncertainty. How does society and, more particularly, education deal with these unknowns? Leadership in higher education can play a significant part in this and Ben-Horin (Chap. 8) draws attention to how this might be achieved in risky and improvisational ways through seeing students and teachers as co-creators of emergent content drawing on the disciplines of both art and science. Overall, this book cannot give definitive answers to all the questions posed by wicked problems but it can promote different understandings and eco-philosophies of our inter-connected relations with the world, seeking the ethical spaces and opportunities for creative ruptions and emergent solutions.

Accordingly, we are now talking about climate justice, as well as climate change, incorporating the web of wicked problems, which will arise. This is captured well in Sect. 3 of the book (Resistings) in which, for example, Natanel (Chap. 12) draws attention to the wider ramifications of connecting racial justice with food, land and climate justice. Flexible awareness of the impact of these problems, alongside potential educational pedagogies and emergent solutions, sews the golden threads of creative ruptions throughout the book and seeks, if not demands, radical change to our education systems accordingly.

However, we also argue that to change the core of education to tackle the climate crisis, a challenge to neoliberalism is also needed. Neoliberalism is a political approach that favours free-market capitalism, deregulation, and reduction in government spending. What arises from this viewpoint in education is an accumulation of wicked problems to overcome which directly affect the identity, relationships and subjectivity of educators as they try to keep up with unreasonable requests of accountability to meet performative goals (Ball, 2016). This is because neoliberalism centres the human in the world and thus it is by that that all things are measured (Snaza & Weaver, 2015). This ultimately creates a hierarchical structure where any perspective beyond the human is dismissed as less valuable. When education is unwilling to accept that the world is more than

human it ignores the possibilities that once humans cease to exist on this planet, other species will still go on to survive (Wallin, 2017). This book is an attempt to create ruptions in a neoliberalist-dominated agenda in education from posthuman and decolonial viewpoints. For example, by taking a new materialist approach, Wren has highlighted the interconnectedness and blurring of boundaries between entities through creating a space of co-creation between the human and more-than-human. Furthermore, Witt and Clarke alert us to a *posthuman fusion* by exploring sympoietic relations through making kin to celebrate collective co-creation of learning spaces for more-than-human flourishing. Both chapters advocate for collective, posthumanism which are necessary for destabilising individualism and the pursuit of self-interest in neoliberal education so that a more cooperative understanding of education emerges (Kretz, 2014). In addition, the growth of ecology was imbued with colonialism and all too often scientific global discoveries configured the world from a Western and anthropocentric perspective. These colonial stances were used to justify social and environmental control to the detriment of existing knowledge systems in order to develop global economic systems largely based on despoilation and extraction (Trisos et al., 2021). We argue that it is necessary to disrupt the neoliberalist machine through decolonial and posthuman approaches. The wider culture that neoliberalism has created, in which progress is measured by universalised human knowledge rather than seeing humans as materially connected to their environment (Lerch et al., 2022), is one of the challenges that the ideas of creative rupture seek to address.

Therefore, to rethink individualised human knowledge production, Chappell's exploration of touch and time sees knowledge as emerging through multi-epistemic literacies and by slowing down. This, she argues, causes ruptions in neoliberalist education as it moves away from seeing learning as a commodity for market-driven outcomes which do not allow for hesitation, non-linear and multiple ways of thinking (Chappell et al., 2021). Furthermore, Campbell et al.'s chapter challenges the notion that neoliberalism focuses on professionalised knowledge which does not allow for alternative forms of thinking (Lerch et al., 2022). They use collective forms of reflection to resist measurable, quantifiable education models in favour of a non-linear, non-logic-based approach that allows

for non-productive moments to be fore-fronted. These authors argue that non-productive moments are an essential part of the learning journey which allow for agency, an essential part of wellbeing and thriving (Patrick, 2013). Conversely, our push against neoliberalist education extends beyond the learner as we also see in Chappell's chapter when she explores transdisciplinary practice. In a number of projects, she shows how educators have been encouraged to foster adaptability and resilience to give them the capacity to navigate uncertainty in a rapidly changing world. This can also be seen as a crucial part of the educational experience as identified in the 2018 Organisation for Economic Co-operation and Development report (Schleicher, 2018).

Finally, by taking a decolonial viewpoint, Katingima-Day (Chap. 9) and Ghemmour (Chap. 10) challenge Western dominated hierarchies by problematising inclusivity, diversity and equity. Through the resisting of these structures, they call for a critical examination of power dynamics within educational institutions and encourage the recognition of marginalised voices and perspectives from the edges of neoliberal education systems.

Although, in this section, we have only taken two specific wicked problems as examples it is quite clear that the link between the two renders them even more difficult to tackle because of the entangled, net like nature within which they exist. The Roosevelt Institute (2019), for example, in its report *Transcending Neoliberalism: How the Free-Market Myth Has Prevented Climate Action*, points to the 'role of ideology in creating our climate crisis' (p. 4), and we contend that neoliberal ideology has also infected the UK education establishment in a negative way. The authors in our book, therefore, look to create cracks and fissures in the system through creative ruptions, to challenge and subvert, the normative stance of anthropocentric educational practice. Only in this way might we provide the skills and opportunities for the next generation of practitioners and students to face the big challenges of the century.

Although authors in this book have not directly addressed artificial intelligence (AI), we feel that it is worth at least a brief discussion as a currently emerging global challenge, the impacts of which are rapid, pervasive and unpredictable in terms of ethics and care. In particular, we note the fear of AI's growth in relation to education where there are

anxieties about these technologies replacing teachers (Gocen & Aydemir, 2020); creating poverty, disrupting data security, changing human behaviours (Huang et al., 2021); and misplacing autonomy and agency (Khosravi et al., 2022). There is also a concern that AI is being used by 'big tech' as a neoliberal tool for the concentration of power (Verdegem, 2022) which replicates existing social injustices based around race, gender, sexuality, disability and more.

Despite these fears, there is also a feeling that AI will not be able to replicate certain human qualities such as intuition (Herman, 2021); emotion (Schiff, 2021); creativity, empathy and critical thinking (Kissinger et al., 2021). So, there are calls for finding ways for humans to live alongside and embrace AI, so as to take advantage of AI's positive capabilities (Herman, 2021). To put this into action, recent research has proposed that we understand the machine/human relationship as relationally produced (Perucica & Andjelkovic, 2022); as creative (Author Unknown, 2023); and as a spur to move away from dualistic thinking (Dahlin, 2023). We would argue that the ideas and practices within this book have the ability to create ruptions which can respond in this way to AI as a new, emergent wicked problem. This is because many of these approaches promote relational and pluralist thinking through creativity.

Also, as Luckin (2023) and Luckin et al. (2022) argue, we need to make sure that moving forward in relationship with AI, we understand that it has the capacity to fundamentally disrupt education, and that we positively work with this. They urge us to use AI for its data processing capacities, and to see humans as the creative and critical thinkers. The approaches in this book suggest a more entangled, less centrally human controlled stance to this relationship, but we are certainly in agreement with Luckin and her team that we need to be alert to the ethical harm of the profit-driven imperatives of big tech AI. Drawing again on Osberg (2017), we argue that it is through symbiotically anticipatory AI-human relationships that this impending wicked problem can be responded to without knowing what is coming, but in a way which actively takes long-term ethical responsibility for the future. As Luckin emphasises, failure to change is not an option.

Thinking-Being-Doing to Push Matters Forward

So far in this chapter, we have articulated strands and threads that have resonated for us as an editorial team. We were interested to see, in the spirit of post-qualitative research, what would emerge if we offered another way to actively assemble these threads together. In this spirit, we asked two authors from the book, Sharon Witt and Helen Clarke, to predominantly work with the images in the book to create an assembled collage as an alternative leaping off point for you as readers/engagers.

In the spirit of post-qualitative research (Maclure, 2013), they have created a lively collage as a provocative call to action (Fig. 13.2).

Here, collaging is an expansive act, where imagery, words, phrases, diffraction, paper sculpture, theory, chapter snippets, figures and materials are enmeshed and put to work with all the creators can ‘muster’ (St. Pierre, 2011, p. 622). Collage is generated and generative to produce ‘new connections’ (Maclure, 2013, p. 229) (Fig. 13.3).

During co-construction, themes, comments, and questions of thinking, making and doing education differently emerge—repeating, spiraling, folding/unfolding, turning back, moving forward, tracing and retracing. Collage weaves a web of bold ideas in a mesh of strands and threads creating a ‘way of relational knowing ... which involves multisensory responses in a particular moment.... produced in collaborations’ (Somerville, 2008, p. 212). Like Holbrook and Pourchier (2014, p.760) Sharon and Helen do not ‘seek complete or final works or concrete answers ... the collages are constituted as contemplative spaces’ that are partial, constantly changing, dynamically (in)forming and deliberately inciting further encounters.

Together with Sharon and Helen, we invite readers to explore the collage (Fig. 13.4).

Please consider: Which ideas have resonance for you? What feelings are stirred up within you? What is activated within your practice? What can you do differently? Where do you stand? How does this connect and enliven what you have engaged with in the book’s chapters?



Fig. 13.2 The collage hanging

If you have accessed the threads of the collage above, you will by now be on your own journey, possibly a diffractive one (Barad, 2007). Your ideas and doings may be spreading out in multiple directions, cutting together apart with theories that you are interested in, practices with which you are familiar, bending and diverting trajectories to take you in your own new directions from the provocations to produce your own teachings, activisms and learnings. In parallel, and perhaps still interacting with those trajectories, we also now offer our editorial team's departure points. We entered this space with a quote from Facer (2019, p. 12):



Fig. 13.3 An excerpt from the collage



Fig. 13.4 Screenshot of collage film and QR code

it is possible to begin to create educational spaces in which the surplus potential of the past, present and future are visible, in which new ideas are generated, in which the experience of living in complex material and planetary systems that decentre the human can be acknowledged.

This book has created intersecting educational spaces which tap that surplus potential, which generate new alternative educational futures, whilst honouring the need for emergence. Chapters have acknowledged complexity and have worked to de-signify and de-centre humans, and within human interrelations have worked to de-centre dominant Western narratives and practices. Surplus potential is frequently a phrase associated with economic growth but the interpretation in this book is far more complex and exciting than that. What has been written by the authors has exceeded the expectation that any of us might have envisaged. In extensive dialogue about the chapters, we have been engaged in the witnessing of emergent knowledge and understanding that has been transformational; we hope you have found this to be the case too.

As we move forward, we are alert to accumulation thresholds which may be reached and which could cause large-scale ruptions that we can contribute to and build upon. Given where we are at the time of writing, it is hard to predict if, for example, AI will trigger this kind of change. It is almost certain that there will be an accumulation of climate-related factors that coalesce to further negatively and irreversibly damage the planet. Other, as yet, unpredictable and emergent phenomena are likely to create future ruptions. Perversely, perhaps, we need not to be surprised by this. As the first of the learnings regarding how to deal with creative ruptions suggests, we need to know how to live with unpredictability in education. There is the very real potential for some kind of current systems collapse or upheaval; acknowledging this removes a false sense of security that we as humans are in control, and being acquainted with these kinds of ideas will allow us to deal with them better.

Furthermore, futures anxiety, or perhaps more precisely eco-anxiety, is seen as an inevitable consequence of continuous change and sometimes rapid and unforeseen emergent events. The balance is set between an acute awareness of the earth crisis whilst simultaneously maintaining hope and determination that positive action can and will make a difference to the future. This requires a radical change in thinking and doing. Eco-anxiety arises not only from ‘a poverty of imagination’ but also a ‘poverty of hope’ (Damhof & Gulmans, 2023, p. 51). They suggest that poverty and hope are intimately connected—imagining the impossible turns out to become a necessity—a radical act of hope (*ibid.*). However,

to act on the hope also requires courage in the face of difficulty and an ethical sense of making differences to any possible future. Futures Literacy (Miller, 2018) is the skill to imagine the future in different ways and in different contexts which might elicit a new way of thinking and a sense of agency through perceiving and embracing emergence when it occurs. Miller (2018) suggests that when we imagine more, and when we explore multiple futures, we perceive more in the present, which is all we have to act upon. Seeking and seeing creative ruptions provides an attitude of hope and agency for the future, thus addressing perceived feelings of futures anxiety. Further, Freeman (2023, p. 73) suggests that to ‘succumb to despair is not only fatalistic but “problematically” safe’ and that, although difficult, it is imperative to hold on to hope in order to sustain a sense of the possible.

As part of quelling futures anxiety and turning to hope, courage and determination, despite a dominant neoliberal narrative that aims to hoodwink us into believing that we must continue with the Western rationalised status quo, as a collective of *Creative Ruptions* authors, we are not alone. And neither are you as readers/engagers. Decolonial colleagues are taking the courageous and necessary steps to call for a deconstruction of the Western project that is modernity, but to do this with care and humility. In *Hospicing Modernity*, De Oliveira (2021) has drawn together a powerful call to arms to face our crises with maturity and integrity. She is clear, as we are, that there is no quick fix and that in her words we need to ‘interrupt’ the patterns that are destroying our communities and our planet. She offers thought experiments to reimagine how we can respond to crises, to expand our capacity to hold space for pain and grief, to interrupt our satisfaction with neoliberal and colonial habits and create space for change. There are others tackling similar issues at different levels. For example, Pirbhaj-Illich et al. (2024) offer practical approaches to decolonising educational relationships in higher education. With a core focus on relationships they offer caring, accessible and critically honed insights into process, grounded in extensive experience and practical exercises. They show how to decentre from dominant Euro-centric models through an actionable de/colonial imaginary, to contribute to the wider project of working for a more just world. The work of our *Resistings* authors especially can be entangled with these approaches and provide an opening to

begin thinking about how these approaches can be actioned in any given situation especially through the process of critical reflection, so that ruptions begin to spread across a wide range of different educational contexts. Colleagues in Possibility Studies are coalescing around similarly activist thinking and practice too. Drawing on Osberg (2017) and Amsler and Facer (2017), we are putting forward an argument here for critical, symbiotic anticipatory approaches to educational futures which gel with those in Possibility Studies. Together all our work can contribute to the spread of ideas that is necessary for accumulation thresholds to be reached. Resonating with Chappell's chapter in this book, Facer (2023) calls for the cultivation of the temporal imagination to use as a critical resource for futures thinking. Grounded in theorists such as Greene (2011), she proposes that using our temporal imaginations can allow us to see our own understanding and practice of time as just one possible timeframe. Facilitated to see this from the outside we can then become aware of other timescapes and to engage in dialogue with others through and within these. As Chappell argues, a focus on understanding time differently and as Facer argues, imaginatively, is a strong tool for creating space for new futures which challenge dominant narratives and look to respond to the wicked problems we face.

We also take heart from Escobar (2023), who pushes beyond questioning our conceptions of time, to challenge our understanding of reality *per se*. Our work in this book completely resonates with this call. Escobar encourages us all to explore the complex cultural political work of imagining the future and begins by highlighting how deeply shaped this process is by current Western centric notions of modernity. As we have done in this book, he asks us to disrupt the onto-epistemic foundations. We clearly respond to his call here by employing posthuman, new materialist, decolonial and feminist theories and practices; we are, however, not in the business of imagining new futures and telling readers/engagers how to achieve them, but in providing the theories, tools, provocations and examples that allow readers/engagers to create space for the kinds of ruptions that can contribute to responding to wicked, Anthropocentric problems in a flexible and responsive way. And we need to respond bravely. As Bayo Akomolafe (2023) states:

When a crack appears in the mighty wall, the only thing scarier than letting it grow unbridled, the only thing more worrisome than allowing it breath, is sealing it up—for the thesis of the crack is to call into question the form we've assumed, the nobilities we cherish, the stories we assume to be true. The crack is the monster's gift—a reminder that the fixity of the postures we take on often prove more dangerous than the threats we presume to withstand....

...we must now inhabit the cracks...

Note

1. Please note you will find a range of terms including other-than-human, more-than-human and non-human across the book, and use is dependent on author preference.

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