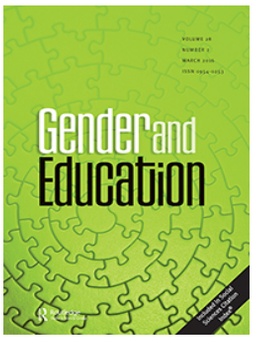

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Diffractive pedagogies: dancing across new materialist imaginaries

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ABSTRACT

We theorise an interdisciplinary arts practice university course and consider the forms of educational imaginary challenged by our curriculum. We argue for the disruptive and generative potential of what we call diffractive pedagogy as an example of the type of learning that can take place when materiality and entanglement are considered as vital constituents. Through self-expression and interweaving across disciplinary boundaries, the potential to produce, embody and theorise simultaneously can be realised. Student bodies do not exist in isolation from one another, or from the environment. It is indeed impossible to separate the dancer from the dance, the teacher from the student, and the bodies from the environments and objects to which they relate. This being true, our student body reproduced our teaching bodies as abject, as messy and peripheral to their imaginings of university education. Materially, student bodies remade the limits to which their consciousness was imaginatively drawn. Through our embodied work, unconscious change began the processes of affecting students' imaginaries of university education.

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> Women, as a class, have provided thought for far too long with images or metaphors for whatever vice or virtue. (Gatens 1996, 135)
> Ontological indeterminacy, a radical openness, an infinity of possibilities, is at the core of mattering. (Barad 2012a, 2012b, 16)

These quotes identify two issues that are central to our approach to bodies: art and pedagogy. Firstly: that what is uncomfortable, unthought, indeterminate, is unconsciously feminised. Secondly: that this process of feminising the new puts finite boundaries on what might be made to matter. In this paper, we reflect conceptually and philosophically on the kinds of political and pedagogical problems that may arise when university curricula are opened up to arts practice-based learning. We consider the ways in which the bodies involved in such generative processes of mattering can become controlled by fear such that what is made to matter can become (self-)policing. But we also argue that embodied creative processes employed in pedagogical contexts can challenge and extend those engaged in learning, allowing them to find modalities and forms of

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expression other than those that reproduce stereotypical constructions of their identity or dominant tropes of representation. We are thus concerned both with the preconceptions and the complexities of representation that can arise in arts-based educational programmes, and with the potential of *non*-representationalist, 'diffractive' thinking (on which we will expand later) for approaching the materiality of making and learning through art.

To address these joint concerns, we consider the ways in which movement, form, materiality and gesture might be reimagined through dance and film, constructing and performing identities in relation to, for instance, urban landscapes, gendered bodies or unequal power relations. For example, rigid ideas and preconceptions of British Muslim femininity, which operates as a particularly powerful trope and image at these times, can be undone by critical, aesthetic engagements with lived contexts and the power relationships embedded in everyday life, challenging social perceptions of the silenced or subservient woman. While anxieties may sometimes arise about whether or not contemporary movement practices, such as those found in dance and film, are entirely congruent with a religious identity, such practices can also offer a different lens on femininity, providing a means of critically reflecting on and even developing religious identities. As we discuss further below, experimental practices mean embracing the unknown and sitting with the discomfort that the unknown can bring.

Creative practices allow for the remaking of reductive and historically determined images, figures or metaphors that are routinely assigned to differently gendered, differently abled, and diversely classed and raced bodies. Building on a feminist investment in the agency of materiality, we think through the problem of the body as a site of learning, raising questions about how diverse bodies might fit in those environments that have traditionally suspended the body altogether, such as the university. As Probyn writes in her article 'Teaching Bodies',

> We may often teach potentially 'messy' topics like embodiment or sexual identity. At the same time the zone of contact between student and teacher is heavily policed by ourselves and our institutions. So while we offer material that potentially sets off lines of flight, we then have to continually re-territorialize the very bodies that have been set in motion through our teaching. It's a situation that is bound to veer towards abstraction, and at times a lifeless rendition of hot subjects. (2004, 35)

Learning in higher education is popularly thought to pertain to the transfer of abstract historical and theoretical knowledge (Coffey 2013), and this process typically occurs in ways that largely ignore the physicality of learning. Attempting to change this in a student ('consumer')-driven higher education climate can be extremely difficult, in ways that seem to relate to an imagining of 'legitimate' education as pertaining solely to the transfer of abstract, historically reified thought. The body, coded as feminine, or the material, remains relegated to the abject (Kristeva 1984a, 1984b).

Conversely, arts-based curricula call on students to rethink, re-feel and remake their understandings of their bodies, together with their imaginings of *what a learning body might be*, by working practically and inventively through movement and gesture. This process of invention can be facilitated through movement practices undertaken individually, in pairs, or in small class groups. For example, to explore the theme of freedom and control, students might be asked to create a freedom image and a control image, with

these images becoming a score for two movements, a freedom movement and a control movement. Students can be supported by staff to adapt or rework these movements across scales (giant and tiny freedom and control movements) and levels (low, medium and high freedom and control movements). Through choreographic scaffolds, students might be encouraged to devise a solo freedom and control dance, teaching these to a partner in order to build a freedom and control duet. Each duet might have to include certain elements such as a run, a roll, a reach or a weight share, as well as both students' freedom and control dances. The pairs could then be asked to put themselves together in groups of four to make a longer dance, building on the visual and choreographic material they have collectively generated.

Across such series of embodied creative processes, students might also be asked to create images and dances that are subsequently filmed and/or to develop original soundscapes, built on recording the sounds of their bodies moving in space. An approach such as this, involving a series of creative productions and translations, may be met with reluctance by some, in particular when faced with the task of using their bodies to explore the broad directives of freedom and control. A pedagogical system that presents repeated structures and patterns of abstract discourse is often more familiar to students, and when asked to improvise within a choreographic structure, they can sometimes fail to see the logic of this, feeling that they are not learning anything of value, or at least unsure as to the value of the process with which they are being asked to engage. Working in small groups is often challenging for students across a range of disciplines, but in arts-based education in particular, this can cause a number of logistical and perceptual problems as they navigate the encounters of their bodies, their movement through space, and their relationships to their own bodies and those of others in both movement and stillness. Students are of course constructed at least in part by the system in which they have been educated, and in western educational settings, they are typically taught to work towards their own learning goals individually. Some may feel anxieties about the openness of a practice-based task, while others will be excited to have creative space to play.

Student apprehensions in relation to their own learning often point towards preconceptions about how university teachers should teach, as well as the kinds of knowledges that universities should impart. But this can shift through practices that change imaginings of what legitimate knowledge looks (and feels) like. Vehicles for learning that involve experimentation and creation, underpinned by those feminist philosophical imaginaries that see matter as generative, can be received with mistrust at first. Through no fault of their own, students often value preconceived and representational models of thought and expression. We feel that such a disembodied, *re*productive, rather than productive, philosophical imaginary requires reconfiguring. There must be ways to allow for embodied and creative learning processes that are open-ended, nomadic (Braidotti 1996; Roy 2003) and affirmative. Yet the difficulty of this task leads us to reflect more deeply on why experimentation, and the inclusion of the body in the curriculum, matter.

Mattering

The turn to matter within feminist thought has foregrounded the generative qualities of materiality and of working with the body. Feminist and new materialist scholarship together demonstrate the co-implication of bodies and subjectivities within the process

of moving and making. It is important to note this co-implicated and relational nature of the 'matter' of the new materialisms, as well as the fact that this field embodies a profound movement beyond a Cartesian mind–body dualism. Both conceptual shifts are pedagogically significant in that bodies are endowed with agency and complexity, and resist being posited as inferior to language or discourse. Barad's neologism *intra-activity* allows us to see this:

> The notion of *intra-action* (in contrast to the usual 'interaction,' which presumes the prior existence of independent entities/relate) represents a profound conceptual shift. It is through specific agential intra-actions that the boundaries and properties of the 'components' of phenomena become determinate and that particular embodied concepts become meaningful. (2003, 815)

Intra-activity is a concept grounded in philosophies of immanence. There is no 'beyond' the body; rather, the focus shifts to a 'between' located *in*, *with*, and *through* the body. As enacted 'material-discursive phenomena' (Barad 2003, 821), bodies are inseparable from discursive practices. Colebrook's position, whilst different to Barad's in significant respects, nevertheless highlights the way that the body produces itself through matter, and is useful in conjunction with Barad's theory of intra-action in terms of the infusion of concepts with material meaning. Colebrook advocates a feminist 'critical vitalism' (2005, 53), which refuses the idea that matter requires thought to grant it meaning. She reminds us of the link between the modern notion of dynamism and the Greek *dynamis* or potentiality, which was always on its way to actualisation or *energia* (58). 'Bodies matter, not because they cause our being, but because the living of them *as material* – as is the very nature that is our own – is made possible only through regarding ourselves as subjects, as beings who have some recognizable, repeatable, and accountable identity' (68). Here we see a dual understanding of the verb 'to matter', which has become an important facet of new materialist thought. Bodies matter *as matter*; they matter because they are important but they exist through their material *mattering*. Bodies therefore *are* discursive practices themselves, and they are inseparable from the environments in which they move, shape and express themselves. A dance move performed by a body is a meaningful, particular and embodied concept. It is a discursive practice that can be read as we read a text, and does not need to become text in order for this to happen. As Minh-ha (1989) points out below, becoming does not require transitivity. This does not mean that it expresses nothing; rather, the language it uses does not require translation to be understood.

There is evidence from multiple disciplinary sources that embodied, aesthetic experience can produce subjectivities in very direct ways. Diverse artistic practices can demonstrate this. For example, Coleman (2009) writes about the becoming of female bodies through their experiences of media images. Coleman argues that subjectivities are not merely affected but rather produced through girls' relationships with such images. Minh-ha, on the other hand, writes about the 'intransitive' nature of writing as becoming:

> To write is to become. Not to become a writer (or a poet) but to become, intransitively. Not when writing adopts keynotes or policy, but when it traces for itself lines of evasion. (1989, 18)

In a similar vein, non-representationalist or 'diffractive' forms of writing and reading have been championed as specifically feminist tools through van der Tuin's work – see for

example her reading of Chantal Chawaf (van der Tuin 2014). As this work shows, diffraction has been taken up and developed by feminist scholars who have transformed it from a scientific model into an analytic tool and then, further, a methodology for dismantling patriarchal structures. Haraway (1997) and Barad (2007) both discuss diffraction as a dynamic, non-linear method of reading and writing in which stable epistemological categories are challenged, temporalities are disrupted and disciplines are complexified. More specifically, Barad develops Haraway's use of diffraction as a metaphor for rethinking the geometry and optics of relationality into a 'mutated critical tool of analysis' (2003, 802 n.3).

Diffractive analysis, then, can operate as an alternative method of analysis that pays attention to both relationality and material agency. Taguchi details what she terms a diffractive analysis in terms of a 'transcorporeal process of becoming-minoritarian with the data', where 'the researcher is attentive to those bodymind faculties that register smell, touch, level, temperature, pressure, tension and force in the interconnections emerging in between different matter, matter and discourse, in the event of engagement with data' (2012, 267). This 'data' might be quantitative, or equally it could be a text or a dancing body. A diffractive reading, then, resists the hierarchisation of one type of meaning over another. As van der Tuin (2014) explains, diffractive methodologies can aid feminism because the modes of perception and creation are shifted and women's bodies and subjectivities are no longer produced by or for men.

Such feminist potential need not only be perceived in the diffractive acts of writing and reading. We argue that dance is an analogous process that may also be read diffractively. Elsewhere Hickey-Moody (2009a, 2009b, 2009c, 2013) has written about young people's individual and group subjectivities *becoming* through dance practices. Extending Minh-ha's statement above, we recognise that to dance is also to become. Not to become 'a dancer', but to become, intransitively. This happens because dancing allows pasts to fold back into presents in unexpected ways, bodies are pushed to become other than who they have been, and corporeal forms are changed physically and emotionally. Movement practices can remind us that: 'Bodies, ultimately the instruments that write dance, are living testimonies to the fact that all texts are a composition of different times' (Hickey-Moody, 2009a, 2009b, 2009c, 62). As non-representational, non-linear, spatiotemporally complex practices, the link between dancing and writing has been made across multiple disciplines and times. A famous example of such a trans-disciplinary link is Valéry's (1958) alignment of prose with walking, poetry and dancing, which demonstrates the self-styling, self-making and self-creating aspect of dance.

Bringing theoretical perspectives together through arts practices informed by feminist approaches to materiality on the one hand, and ideas of the body-becoming popularised through the work of Deleuze and Guattari (1987) on the other, can generate frames for thinking about the body as productive of subjectivity. Producing and experiencing images and moving the body changes how people feel about, and see, their bodies (Featherstone 2010). This focus on the embodied, experiential production of subjectivity is not new. The work of generations of feminist theorists is particularly valuable in this respect. This includes, but is not limited to, Blackman (2008a, 2008b, 2012), Gallop (1988), Grosz (1994), Gatens (1996) and Barad (2012a, 2012b). However, in spite of substantive literature accounting for the fact that bodies are produced, with the notable exceptions of Gallop (1988) and Ellsworth (1997), bodies in higher education tend to be thought about as being governed (Gilmour 1991) rather than being remade or

regenerated. This pervasive discourse on governance needs to be countered. Taking into account the level of embodied confidence required for students to give their body license to co-create their own movements, phrases and creative concepts, and consequently the difficulties many of them face in meeting this challenge, movement-as-learning is a central empirical focus for contemporary feminist-materialist pedagogy.

Nowhere in the creative process do students more directly embody the entanglement of matter and meaning (Barad 2007) than when they use their bodies to generate expressive movement, and nowhere do they struggle more in permitting themselves to produce their own subjectivities than through a creative act. Many young people in Britain are negotiating complex self-constructions of multi-faceted identities, sometimes navigating a path between family tradition and contemporary urban life. Those who are British-born and come from migrant families, for example, are often very aware of their 'journeys from invisibility to visibility and from the periphery to the core of social life' (Hoque 2015, back cover). Students in general often need to experience a sense of belonging, to be and feel visible and to 'own' their learning pathways. However, students in higher education often arrive at their institutionalised learning experience wanting, or at least expecting, to be governed or well-schooled in modes of disembodied learning that are based on a disavowal or suppressing of the body. This is learned through a pre-university education system that is purported to 'spoon feed' students so that they can pass exams (Smith 2008; Samah, Jusoff, and Silong 2009). The proposition of unlearning this attitude to knowledge acquisition can be embedded in the use of dance as a methodology for teaching and learning creative processes in higher education. This is highly challenging for some students, as they are asked to engage with significant processes of *un*learning in order to participate. An educational and social imaginary that produces students who are so uncomfortable with using their bodies to learn in the classroom needs to be redressed.

In *Material Thinking*, Carter (2004) explains that 'the language of creative research is related to the goal of material thinking, and both look beyond the making process to the local reinvention of social relations' (10). Building on the change that Carter advocates through creative processes of *Material Thinking*, Barrett (2007) proposes that 'artistic practice be viewed as the production of knowledge or philosophy in action' and specifically suggests that '[t]he emergence of the discipline of practice-led research highlights the crucial interrelationship that exists between theory and practice and the relevance of theoretical and philosophical paradigms for the contemporary arts practitioner' (1). 'Making' produces new thought, but such thought is often disavowed and devalued through processes of feminisation and abjection. The reluctance to learn through dance can demonstrate some of these processes, in particular for young people who understand dance as always sexualised. For example, expressive movement performed by a female dancer is often seen in the first instance as inextricably linked to sexualisation and provocation, which is problematic for those young women whose commitment to a religious identity mitigates precisely against such sexualisation or objectification. Substantive pedagogical work needs to be undertaken with all students to explain that moving the body might not be explicitly sexual or necessarily provocative. It might, like walking or sitting, be very pedestrian.

New materialist thought enables us to build on some of the now established debates around creative practice as research, and to question the lived limits of educational imaginaries in university classrooms. The inseparability of theory and practice, and indeed of theory and matter, is a clear example. New materialism posits matter as indeterminate,

constantly forming and re-forming in unexpected ways (Coole and Frost 2010), and thus abandons any idea of matter as inert and subject to predictable forces. Matter is agentive and is always becoming. Matter 'feels, converses, suffers, desires, yearns and remembers' and, since 'feeling, desiring and experiencing are not singular characteristics or capacities of human consciousness' (Dolphin and van der Tuin 2012, 16), new materialism offers a re-definition of animacy or live-ness as well as of human-non-human relations. The implications of such a revisioning are that knowledge is immanent, contingent and produced through human-matter intra-actions. Barad explains that

> … what is needed is a robust account of the materialization of *all* bodies – 'human' and 'non-human' – including agential contributions of all material forces (both 'social' and 'natural'). This will require an understanding of the nature of the relationship between discursive practices and material phenomena; an accounting of 'nonhuman' as well as 'human' forms of agency; and an understanding of the precise causal nature of productive practices that take account of the fullness of matter's implication in its ongoing historicity. (2012a, 2012b 66)

Bodies and things are not separate, and their inter-(and intra-)relationships are vital both to how we come to know ourselves as human and to how we interact with our environments. The ways in which students can be called upon relate to each other and themselves in our arts practice classrooms can draw upon memory, culture, religion, and politics via methods that may be radically different from those through which students are typically invited to see themselves and relate to others in theory based learning environments.

Barad's theories of entanglement demonstrate that we only exist in relation to our own environment; that 'the very ontology of the entities [that is, the objects under investigation, the inquiring scientist and the apparatus] emerges *through* relationality: the entities do not preexist their involvement' (Kirby 2011, 76). Barad's agential realism is both an epistemological and an ontological practice, incorporating both the human and the non-human and transcending the opposition of realism and social constructivism. In order to demonstrate how matter comes to matter in specific circumstances or practices, we must ask what possibilities exist for agency within material-discursive phenomena. For Barad (2003, 825), agential separability is a welcome alternative to the unsatisfactory differentiation between the geometries of absolute exteriority on the one hand (determinism), and absolute interiority (or free will) on the other. Matter is dynamic and active in its own iterability; the result is an 'ongoing topological dynamics of enfolding whereby the spacetimematter manifold is enfolded into itself (Barad 2007, 177; Deleuze 1993). Despite the supposed implications of the term 'separability', on Barad's account there is in fact no separation between the measuring and the measured, the observer and the observed. Following Barad, but also drawing on Deleuze and Guattari, Taguchi posits a 'collective-body-assemblage researcher subjectivity' which produces 'a different kind of knowing produced in a co-constitutive relation between matter and discourse where it is impossible to pull apart the knower from the known' (2013, 715).

In a pedagogical space, then, the distinction between the teacher and the taught can be equally problematised. We understand the 'taught' here to be both the teaching 'material' (the curriculum; the course content; reading matter; theory) and the learning subjects. All are mutually implicated and embodied. Barad draws attention to scientific apparatus as phenomena *itself* and 'not preformed interchangeable objects that sit atop a shelf waiting to serve a particular purpose' (2003, 816). Neither are teachers or teaching

materials simply preformed; teachers, students, objects and spaces are equally material phenomena and similarly entwined with one another. The movements made by students engaged in arts practice learning might involve extant or emergent material interventions such as taped lines across the floors and walls, strokes made by paintbrushes, lines of musical notation, or soundwaves. The material-discursive entanglements or intra-actions that are the condition under which agential separability emerges allow for a future which is 'radically open at every turn' (826). This radical openness is precisely what students can feel as a challenge. Indeed, this is why it is often more generative to give a brief to students that is deliberately open, consisting only of the requirements to express freedom and control, for example, whilst including a number of particular bodily movements.

As a way of exploring this entanglement and co-constitution of matter and subjectivity, new materialism has emerged as a methodology, a theoretical framework and a political positioning and emphasises the complex materiality of bodies immersed in social relations of power (Dolphin and van der Tuin 2012). Inventive methods (Lury and Wakeford 2012), including arts-based (Jagodzinski and Wallin 2013) and visual methods (Pink 2007; Rose 2012), are increasingly being mobilised to explore the agency of matter and advance vitalist frameworks. Drawing on such approaches, practice-based creative arts curricula, in particular, are able to mobilise the intra-actions of theory with practice so as to develop new approaches to materialist pedagogy and research. Here the agency of matter is positioned as both pedagogical and resistant. Matter teaches us through resisting dominant discourses and showing new ways of being. Bodies resist dominant modes of positioning, political actions defy government rule, sexuality exceeds legal frameworks – resistant matter shows us the limits of the world as we know it, and prompts us to shift these limits.

Re-making bodies

Creativity, in relation to learning, is understood by us as that activity that produces something new, such as an idea or a tangible output. This is most likely to occur when courses are transdisciplinary and pedagogically multi-modal, offering a means to engage with and give voice to a multiplicity of learner subjectivities. Combining theory with practice can shift the focus onto students' experience of creative practice across a range of contexts (Dewey 1934; Greenland 2000; Craft, Jeffrey, and Leibling 2001; Burnard 2012). In this way, students can be invited to work, think and make within and across a range of spaces such as the art studio, computer lab and performing arts spaces. Introductory sessions can be used to encourage students to identify and reflect on the nature of creativity and creative learning through analysis of their biographical experiences. This can then be built upon through engagement in subsequent course activities, lectures and workshop discussions, and focused reading. The translation of abstract, textual knowledge into creative experimentation in turn needs to be modelled in taught sessions. Nevertheless, it can be understandably difficult for students – particularly those who are unfamiliar with creative processes – to trust themselves to new learning environments that involve developing experimental practices. Issues of confidence and ownership of their own creative practice/body/action can plague the student experience, even though those teaching and working with them may offer enthusiastic encouragement. Specific strategies need to be developed so as to counter this lack of confidence, such as the use of tape, as mentioned

above, to allow students to record a trace of their movements through a space, helping them produce a drawing of their actions. This kind of activity gives tangible purpose to movement, and can help to build confidence, not least when the activity requires a student to share their movement with others (such as a partner who records the direction of travel with the tape).

In our view, it is also important to involve students in researching the very notion of creativity and to introduce them to key theoretical concepts that explore different aspects of creativity. This needs to be complemented with practical elements to allow students to explore creative production progressively and through a range of different methodologies, including, for example, visual, audio, film, and performance-based media. In this way, students can make links between processes in different fields and expand their own conceptual and procedural understanding of creative learning and practice. Again, guidance through a series of exercises in which different forms of movement are explored can support the emergence of such understanding. As indicated above, providing parameters through a theme can better afford creative and experimental responses to delimited tasks: thus, the contrasting ideas of freedom and control can provide a focus for several weeks of work using paint, movement, and drawing as exploratory media. Mobilising this transdisciplinary approach invites a range of aesthetic explorations that extends beyond one particular artistic form. One experimental methodology and line of enquiry might begin with creating a visual object to demonstrate the meanings that students attribute to key words or concepts. From this starting point, movement phrases can be devised during sessions in which that visual object is used as a catalyst. A lengthy warm up can encourage the use of the body as an expressive tool while certain group 'rules' can be set to counteract feelings of self-conscious exposure, which are almost inevitable in work of this kind (such rules might, for example, state that no one is to look at another during the exercise; that everyone should concentrate on their own movements; and that there should be no talking and no laughing at anyone else). In this way, students can learn through their subjective experience to push themselves beyond the immediate discomfort of something new and challenging, but not to be objectified by it. From such a starting point, movements might be developed over several weeks and eventually filmed (by the students) and set to sound compositions.

Developing student understanding using this kind of approach can be difficult, as students often prefer to be led or guided rather than to work with, and develop, their own ideas. As they engage more fully in this process, however, certain factors will begin to influence their decision-making when engaging in an activity such as filming. Some students might choose a narrative sequence in which the identity of performers is revealed, for example, while others might use techniques of abstraction in order to conceal the identity of the dancers. Preserving the freedom to make such decisions is important as this enables students to explore their movements in ways that can sit comfortably with their developing identity constructions, thus avoiding situations in which the curriculum and expected outcomes determine a particular approach that could be uncomfortable or counter-productive for some.

This kind of curriculum is about creativity in the context of learning. It involves developing a theoretical understanding alongside engaging with the processes of creativity through action. Often teachers at university level face mixed cohorts, in terms of prior experience, so that the questions of what to teach, and what level to teach to, are ever

present. In the case of education students in particular, it is questionable how useful it would be for them to acquire specific or traditional art-making techniques such as learning to paint, work with clay or produce digital imaging. A broad understanding of what creativity is and does is of more use. It is to this end that we suggest that arts-based curricula (particularly when deployed in education departments) ought to employ a combination of media such as the moving image, sound, movement and conceptual thinking, even if such progressive strategies can be alienating for those who expect a traditional curriculum. In our view, the difficulty with conservative or 'traditional' fine art curricula is that they do not sufficiently allow either the traditional student or the student new to art to become distinctive. A curriculum that focuses on an embodied understanding of creativity seems to be the most productive way forward in terms of developing students' sense of singularisation, expression and becoming. As Dewey (1934) argues, aesthetic experience develops imagination that allows us to challenge old perceptions with new ones. By creating aesthetic experiences of their own, students become better equipped to imagine new possibilities for creativity and learning.

While it can certainly be more straightforward to create learning experiences in the arts and education that offer students discrete instruction in, say, film, music, dance or the visual arts, we suggest that a sustained creative experience across the four art forms is more valuable. Such an integrated approach fosters a better understanding of the ways in which creative processes inform one another, rather than separating these domains of thought and practice into discrete methodological bubbles. The teaching of creativity also needs to exceed its own boundaries and to 'leak across' and inform other aspects of students' learning experience. This can be difficult to achieve given the constraints of timetabling, room booking, staff availability and the more general structures that force education to be contained into individualised pockets of time, though one can usually find ways of working within even severely constrained environments. The materiality of those less-than-ideal spaces will itself inflect practice and work made. Adopting a transdisciplinary process, one can set specific yet flexible goals for students, such as making one artefact together using four different media, which in turn might serve as a prompt for a movement scenario developed in dance workshops, which might subsequently be filmed and overlaid with a soundtrack. In turn, this might become the basis and inspiration for a piece of textual interpretation that is written up and subsequently performed.

Rather than following traditional lecture or seminar formats, embodied practices such as dance classes need to be active, participatory and collective experiences in which everyone present is expected to take part. This format means that no one is allowed to 'sleep at the back'. Rooms of an adequate size and comfort are required for any performance-based sessions, but due to limits on space and complexities of timetabling, this is sometimes impossible; so one has to adapt to the limitations of spaces available. Practical and circumstantial environmental issues of architecture, heat, space and materiality (sometimes all too concrete) profoundly affect the ways in which students engage with learning, particularly when that learning is challenging and both physically and conceptually outside of their comfort zone. The materiality of learning matters and comes to make matter. It is the very materiality of experience here that tends to affect the students' abilities, willingness and motivation to respond openly and creatively to tasks set. The negotiation of challenge and reward is an important aspect of the creative process (Csikszentmihalyi 2009). It can be a struggle to devise a curriculum that contains enough challenge to be engaging

but not so much as to be alienating. Students can also be uncomfortable with the requirement that everyone should join in, and one has to explore ways of teaching movement that can be achieved in ordinary classrooms, for example, keeping off the floor if it is a cold concrete surface. Rather than the room or the learner being at fault, a pedagogy that fails to adapt to the space and the learner requires further attention; all learning is material, after all.

When the environment is cold and uncomfortable, the body makes decisions. That decision can be to stop attending class, to leave or to refuse to engage. In an efficiency-driven machine such as a contemporary university, insisting upon a suitable room as an essential component of teaching can be seen as non-essential. We want to insist that taking matter seriously and attending to the corporeal in order to make learning effective is an important issue; where the environment is difficult or inadequate, it requires pedagogical solutions to mitigate against the negative effect of discomfort. The physicality of creative learning in higher education has thrown up urgent issues concerning students' and teachers' material existence and the environments in which we work and interact. On the approach we propose here, creative practices are themselves conceived as modes of understanding, in which students negotiate the physical aspects of making alongside what they want to express or represent. At the same time, this dimension of learning and teaching is conjoined with a textual and theoretical understanding of the role of creativity within the processes of learning.

In developing our approach, we have had to take into account the way that students themselves often expect to receive institutionalised learning experiences that are governed, structured and didactic. This seems to be especially the case for those who have not had a particularly creative education and who are used to teaching styles that rely on a directive approach to knowledge 'transfer'. Students who lack the confidence to work creatively tend to seek greater clarification and confirmation that they are doing it 'right', not doing it 'wrong'. When asked to choreograph their own movements, students may find it hard to begin, shooting furtive glances across the room, waiting, looking around, until some of the more confident members of the group start moving, in a sense modeling a response to the instruction to create a movement. Supported by their peers' involvement, most students in a group will in the end join in, working on their own separate actions, but some will continue to remain at the edge of the room: 'Miss, I don't know what to do.' Encouragement, ideas, scaffolding from staff slowly bring such students in, and eventually tentative steps and a physical, action-based response will follow.

To learn creatively, students have to unlearn their drive to find the *right* answer, as this suppresses their own ideas and the alternative possibilities that they might come up with. Any teacher wants students to establish connections and divergences in thinking and doing, generating what Braidotti would call 'materially embedded cartographies' (2013, 13). Through these cartographies, they may come to challenge the domination of conscious rationality. This requires in-depth transformations of students-as-subjects in terms of their processes of becoming, processes that are themselves differentiated by factors such as gender, race and sex. Insofar as it involves negotiating social subjectivities, students' work can take on a socio-cultural dimension in its production of collaborative creations that become, to use Braidotti's (2013) words, 'politically informed cartographies of the present' (12). To elaborate, if we take the example of young women who may be

used to operating on the periphery of society, where conscious rationality has placed them, this kind of learning experience can enable them to re-imagine their subjectivity. More specifically, it can offer them a positive vision of the subject as an affective and dynamic individual while simultaneously allowing them to create affinities both with each other and with the material processes of dance, film, painting and sound, as well as with the textual and theoretical materials through which they are encouraged to come to a better understanding of the role of creativity in learning. Such an approach means supporting students in sustaining inter-connectedness as social subjects who are self-reflexive and 'not parasitic on the process of metaphorization of "others"' (12). This can be difficult, especially if students are unaccustomed to generating work other than on the basis of direct instruction from their teachers. Students need to 'own' their work before they can become active learning subjects; thus teachers need to find more effective ways to provide students with a language through which they can speak and express themselves. Only then will they be able to take on this ownership and develop the confidence to express themselves. Embodied creative practices are therefore usually slow to develop and some students will hesitate in constructing their own discourses and/or occupying more self-reflexive positions.

In thinking about these processes of teaching through arts-based curricula, the philosophical concept of 'difference' (Irigaray 1993; Braidotti 2002, 2012) is particularly useful because it helps interrogate the conceptual formations or roots of identity and power – not so much in terms of difference *between* cultures, as in terms of differences *within* the 'same' culture. An arts-based curriculum can serve to challenge pre-existing ideas of what constitutes the self, especially in relation to ethnicity and religion, through its attempts to construct 'an embedded and embodied form of enfleshed materialism' (Braidotti 2013, 13). Such an enfleshed materialism arguably transcends or at least cuts across the particularities of religion or culture. This kind of thinking about and through the materiality of curricula might raise questions such as: *how can creativity operate trans-culturally in a pluri-ethnic society at a time of increasing racism and xenophobia?* This is a question, it seems, without an easy answer. It is a question to which we still work to respond.

In researching arts-based teaching through our own teaching practice, we have been very aware that it is important that practice *as* research is democratic, inclusive and that everyone has the opportunity to participate. Ethical questions can be raised about curricular practices that make some students uncomfortable, for example, in the case of those students who are unaccustomed to dance in an academic context and who are uneasy about taking part because of their preconceptions of what dance involves. Teaching those who are not specialists or experts in given disciplines requires a different way of imagining one's teaching and curricula in order to generate alternative thinking around the form of delivery, content, pace, scaffolding and environment so as to ensure that students feel able to participate. Here we might draw on helpful examples of dance projects in community settings where embodied learning is achieved by equipping people with movement so that they can feel confident in their work. Innovative pedagogies that take account of the participant/learner and how they engage with the arts are being developed by About Face Theatre Company, Frontlinedance and Infuse Dance in the UK, by Restless Dance Theatre in Australia, and by The Olimpias in America.

The use of movement in the context of educational studies, rather than more established dance environments, often exposes misunderstandings about what constitutes

'dance' and teachers may be called upon to refute stereotypes of 'pop' dancing which are highly gender specific and sexualised. Contemporary movement practices that constitute performance curricula require students to move in space, but these practices are very different from popular methods for moving the body commonly referred to as 'dance', in that they are far less stylised. For such work to be effective, it is essential to dismantle some of the preconceptions of dance, in particular for students who are critical, for whatever reason, of those forms of dance that constitute the body as sexual object and agent. By returning to the ideas of space, movement and gesture, this resistance can be worked with and productively overcome. For example, the 'dance' at a folk dance festival or in a popular film clip will typically feature specific, often complex movements that are often passed down from generation to generation, or taught by a choreographer, an 'expert'. In similar ways, students in educational studies programmes can be asked to develop their own movements and to teach these movements to each other. Through the process of engagement with dance movement that is not necessarily historically determined and not explicitly sexualised, new and meaningful knowledges can be produced. After all, all bodies move.

This kind of creative practice allows students to explore ways of mapping routes through space and to create collaborative cartographies of bodies. At its most generative it becomes a practice of live theorisation: the thinking in action that takes place as students come to understand concepts about which they have read and then formulate (or materialise) their own. An understanding of the concepts of freedom and control, for example, will be produced and processed very differently when mapped through movement, painting, music and filming as compared with only reading a theoretical chapter in a sedentary position. A text set as a preliminary reading can be difficult to decipher, but through creative practice and some discussion students can come to understand their own creative processes and in turn make sense of theoretical writing *about* creativity. Students will typically oscillate between thinking and materiality as they theorise through practice.

Finally, the fact that many students in education departments are female is a significant factor in the particular case of learning through dance. McRobbie (1991, 192) highlights the affirmative role which dance can play for girls: 'Its art lies in its ability to create a fantasy of change, escape, and of achievement for girls and young women who are otherwise surrounded by much more mundane and limiting leisure opportunities.' McRobbie's presentation of dance as an emancipatory outlet for working class girls leads us to question why dance as an expressive practice in the pedagogical sphere is sometimes met with difficulty and reluctance. Of course, the different cultural backgrounds of students will lead to different answers to this question. The movement practices that we tend to teach do not subscribe to a popular kind of feminine embodiment. Dancing, for us, is not like becoming-Madonna; rather it is a process and practice of exploring one's own body in simple and not explicitly gendered ways. For female students of varying social, cultural and religious backgrounds who may never have visited nightclubs and for whom dancing in public is inextricably linked to the provocative, sexualised type of dancing mentioned above, any emancipatory or even purely expressive function of dance can be obscured. In order to allow for a different type of expression or communication through dance, it is necessary to try to develop a trans-cultural sensitivity and demonstrate that the movement of a body or a limb need not translate as sexualised or as asking to be

seen, but rather, can be simply expressive. Through gesture, concepts can be materially embodied, without recourse to a linguistic medium, and with minimal reference to any frameworks of preconceived cultural assumptions.

Educational imaginaries and diffractive pedagogy

In *The Philosophical Imaginary*, Le Doeuff (1980, 114) maps the binary distinction between masculine and feminine onto the oppositions of externality and internality. This opposition, as well as a disassociation or disconnection between the materiality of a woman's body and the objects of the external world, can be seen in the perceived inhibitions of at least some female students, whose learning experiences have been a central focus of this discussion. Young women who are invited to move in classroom contexts may well be reluctant to express themselves through external bodily movement or to enter into a relation with external spatiotemporal materiality. In ways that complicate and contest the historical binary between modes of spatiality (external, rational, male) and temporality (internal, subjective, female), this discussion has sought to rethink the materiality of the body as an 'active, sometimes recalcitrant, force' (Alaimo and Hekman 2008, 5), such that the female gesture is felt only *through* and *with* other objects and beings (Irigaray 1989, 134).

> Bodies in social groups are not just bodies. They require an identity to make sense of their lives and to operate as human beings in a social setting. Human bodies in social groups require viable identities, but they can only obtain those identities from the social script extant in the society in which they live. (Hekman 2005, 113)

As researchers and as teachers, we are implicated in the enmeshing of bodies and environments, creation and thought, scripts and identities. In the reflections that we have presented here, drawn from our diverse experiences as practitioners and teachers, we have thought about feminist practices, arts-based teaching, and arts practice as research in terms of material-discursive entanglement (Barad 2007; Taguchi 2012; Childers 2013). Feminist theory matters and has an affective relationship with the bodies of researchers and practitioners. Rather than viewing theory as something to be read or applied, we suggest that theory is better approached as intra-agential matter: 'feminist research is a material-discursive becoming, a knowing through being, an ontology of methodology' (Childers 2013, 605). Building on this methodological proposition, we see our students as creating, producing and theorising through the production of movement.

In this paper, our goal has been to move towards a new materialist feminist arts pedagogy that opens up new educational imaginaries. We hope to have shown some of the disruptive and generative potential of diffractive pedagogy as an example of the type of learning that can take place when materiality and entanglement are considered as vital constituents. Through uncharted, embodied self-expression and interweaving across multiple media and boundaries, the potential to create, produce, embody and theorise simultaneously can be realised. Student bodies, however, do not exist in isolation from one another, or from their environments. The inseparability of self from environment is what Alaimo and Hekman (2008) calls trans-corporeality (238). Our aim here has been to demonstrate that the diffractive pedagogical practice of teaching and learning through dance embodies precisely this trans-corporeal subjectivity. It is indeed impossible to

separate the dancer from the dance, the teacher from the student, and the bodies from the environments and objects to which they relate. This being true, a student body can reproduce our teaching bodies as abject: as messy and peripheral to their imaginings of university education. But at the same time, student bodies can materially remake the limits to which their consciousnesses were initially drawn. Through embodied work, unconscious change through corporeal practice can begin the process of affecting students' imaginaries of university education.

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