

Diffractive pedagogies: dancing across new materialist imaginaries

Anna Hickey-Moody, Helen Palmer, Esther Sayers.

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, 2012: 16)

These quotes identify two issues central to our argument. Firstly: that what is uncomfortable, unthought, indeterminate, is unconsciously feminized. Secondly: this process of *feminizing the new*, puts finite boundaries on what might be made to matter. We reflect on our experiences of some of the political and pedagogical problems encountered when the university curriculum is opened up to arts practice based learning. We consider ways that bodies involved in such generative processes of mattering can become controlled by fear and what is made to matter is thus policed. Drawing on the design and delivery of a university level practice based arts subject, we argue that embodied creative processes employed in pedagogical contexts can challenge and extend those who learn from reproducing stereotypical constructions of their identity, or being reproduced in line with dominant tropes of representation. For example, many of our students are Muslim women. These students made dance films in which their identities were constructed and performed in relation to landscape ('Urban Dreams') or power relationships ('Puppet Dance'). The presentations of British Islamic femininity these dance films offer are critical, aesthetic engagements with lived contexts and the power relationships embedded in everyday life. Both stand against the perception of the silenced or subservient woman, and were produced after initial anxiety about whether or not contemporary movement practice could be seen as congruent with a religious identity. Not only did the contemporary movement practice end up sitting with our students' articulations of femininity, it provided a means of critically reflecting on, and developing religious identity. Yet in order to arrive at this point, the students had to embrace the unknown and sit with the discomfort that the unknown can bring.

We write with the conviction that creative practices can remake reductive, historically determined and governed images, figures or metaphors assigned to differently gendered, differently abled, 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 in the university. As Elspeth 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. (Probyn 2004: 35)

Learning in higher education is popularly thought as pertaining to the transfer of abstract historical and theoretical knowledge, 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 incredibly difficult and this seems 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 object (Kristeva, 1984).

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Our curriculum¹ called our students to rethink, re-feel, remake their understandings of their body and their imaginings of *what a learning body might be*, working practically and inventively, through movement. This process of invention was facilitated through movement practices, undertaken in class groups, individually, in pairs and groups of four. For example, exploring the theme of freedom and control, students were asked to create a freedom image and a control image. These images became a score for two movements, a freedom movement and a control movement. We worked with the students to adapt or rework these movements across scales (giant and tiny freedom and control movements), and across levels (low, medium and high freedom and control movements). Through these choreographic scaffolds the students devised a solo freedom and control dance, which they were then asked to teach to a partner in order to build a freedom and control duet. The duets needed to include a run, a roll, a reach, a weight share and both dancers' freedom and control dances. This process created forty five original duets. The pairs were then asked to put themselves together in groups of four to make a longer dance film about freedom and control, building on the visual and choreographic material they had generated.

Across this series of embodied creative processes, the students' created images and dances that were filmed and for which they developed original soundscapes, which were built on recording the sounds of their bodies moving in space. This series of creative productions and translations was met with the most reluctance by the students 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 was desired by our students, but once asked to improvise within a choreographic structure, some students seemed to feel they were not learning anything of value, or were unsure as to the value of the process with which they were being asked to engage. For example, working in groups was challenging for students and caused a number of logistical and perceptual problems. Students are constructed by the system in which they have been educated, they are taught to work towards their own learning goals individually. One student stated that they did not come to university "to do group work". Others expressed a range of different anxieties about the openness of the task. Alternatively, some were excited to have creative space to play.

We felt that student apprehensions pointed towards an imagining of how university teachers *should* teach, and what kind of knowledges university should teach. Interestingly, this initial imagining contrasts with the way these students spoke publicly about their collaborative work during the final presentation on film screening night. Here, at the completion of the coursework, we saw a shift in student attitude, a strong display of pride in the group dance film, a demonstration of perseverance and engagement by the students to move from the awkward process of engaging in group work, disliking movement and articulating that this was not 'what you come to university to do', to proudly reading the concept statement and rationale for their group work. This was arguably a process of changing imaginings of what legitimate knowledge looks (and feels) like. Nonetheless, in the module evaluation, when

¹ For the purposes of the paper we write as a team, as the theoretical contributions of this chapter have been developed in dialogue with *****'s research interest in feminist materialisms. The subject that formed the empirical aspect of our research was coordinated by ***** and designed by ***** and ***** in collaboration with other members of the teaching team. ***** and ***** taught the subject together and, as our analysis suggests, ***** ***** taught the movement component of the course. Mikey Kirkpatrick and Natacha Kennedy also taught on this course.

asked ‘what have you learned from this module’ most students listed practical skills in the use of software for film editing and sound composition. Comments that suggested they had learned to ‘think outside the box’ or to ‘get out of their comfort zones’ were also included, but less frequently. Vehicles for learning that involved experimentation and creation, underpinned by our feminist philosophical imaginary, which sees matter as generative, can often be treated with mistrust at first. Through no fault of their own, students often value preconceived, 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 which are open-ended, nomadic (Braidotti 1996, Roy 2003) and affirmative. Yet the difficulty of this task for some has led to our project of thinking through why experimentation, and the inclusion of the body in the curriculum, matters.

Why bodies matter

The turn to matter within feminist thought has foregrounded the generative nature of materiality and working with the body. We draw together feminist and new materialist scholarship to demonstrate the co-implication of bodies and subjectivities within the process of moving and making. It is important to note the co-implicated and relational nature of the matter in new materialism, as well as the fact that this field of knowledge expresses a profound movement beyond a Cartesian mind-body dualism. Both conceptual shifts are pedagogically significant in the respect that bodies are endowed with agency and complexity, as well as resisting 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. (Barad, 2003: 815)

Intra-activity is a concept grounded in philosophies of immanence. There is no ‘beyond’ the body; rather, the focus shifts on a ‘between’ located *in*, *with* and *through* the body. As enacted “material-discursive phenomena” (Barad, 2003: 821). Bodies are therefore inseparable to discursive practices. Colebrook’s position, whilst significantly different to Barad’s in its focus on identity, nevertheless highlights the way 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. Colebrook reminds us of the link between the modern notion of dynamism, the Greek *dynamis* or potentiality which was always on its way to actualization 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.” (Colebrook, 2005, 68). Here we see a dual understanding of the verb ‘to matter’ which has become an important fact 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

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(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, and diverse artistic practices can demonstrate this. For example, Coleman (2009) writes about female bodies becoming through their experiences of media images. Coleman argues that subjectivities are not merely affected but are rather produced through girls' relationships with media 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. (Minh-ha, 1989: 18)

Non-representationalist forms of writing and reading have been championed as specifically feminist tools through van der Tuin's reading of Chantal Chawaf's work (2014). As a methodology, diffraction has been taken up and developed by feminist scholars from a scientific model into an analytic tool and then, further, as a methodology for dismantling patriarchal structures. Haraway (1997) and Barad (2007) have both discussed 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. 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, 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" (Taguchi, 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 here that dance is an analogous process that may be read diffractively. Elsewhere Hickey-Moody (2009, 2013) has written about young people's individual and group subjectivities becoming through dance practices.

Extending Minh-ha's statement above, we recognize that to dance is also to become. Not to become 'a dancer', but to become, intransitively. Not when dancing adopts ritual or routine, but when it allows pasts to fold back into presents in unexpected ways, when bodies are pushed to become other than who they have been, when 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, 2009: 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 Paul Valéry's alignment of prose with walking, poetry and dancing (1958), which demonstrates the self-styling, self-making, self-creating aspect of dance.

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We bring these theoretical perspectives together through arts practices informed by feminist approaches to materiality and ideas of the body-becoming popularized through the work of Deleuze and Guattari (1987) and feminist theorists such as Coleman (2009), Colebrook (2005) and Hickey-Moody (2009, 2012) amongst others as 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. We particularly value the work of generations of feminist theorists, including, but not limited to, Blackman (2012, 2008), Gallop (1988), Grosz (1994), Gatens (1996) and Barad (2012). 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 (Gilmore, 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, we consider movement-as-learning as our central empirical focus.

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 through a creative act. Many young people in Britain are negotiating complex self-constructions of their multi-faceted identities, sometimes navigating a path between family tradition and contemporary urban life. Those who are British-born third generation migrants 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). We want our students to experience a sense of belonging, to be and feel visible and to own their learning pathways. However, students in higher education largely arrive to their institutionalized learning experience wanting 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); (Siti Akmar Abu Samah *et al.*, 2009). The proposition of unlearning this attitude to knowledge acquisition is 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 unlearning in order to participate. An imaginary that produces students who are so uncomfortable using their bodies to learn in the classroom needs to be redressed.

In *Material Thinking* (2004) Carter 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 this change 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: “[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 disavowed and devalued through processes of feminization and abjection. The reluctance to learn through dance demonstrates some of these processes; expressive movement performed by a female was often seen in the first instance as inextricably linked to sexualisation and provocation. Substantive pedagogical work has to be

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undertaken 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 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 reforming 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” (Dolphijn and van der Tuin, 2012: 16), new materialism offers a re-definition of liveness and human-non-human relations. The implications of such a revisioning are that knowledge is immanent, contingent and is produced through human-matter interactions. Barad explains that

... what is needed is a robust account of the materialization of *all* bodies – “human” and “nonhuman” –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 (2012: 66).

Bodies and things are not separate, and their inter-relationship is vital to how we come to know ourselves as human and interact with our environments. The ways our students were called to relate to each other and themselves in our arts practice classroom drew on memory, culture, religion, and politics via methods that were radically different from ways students were called 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 [in Barad’s example, the entities are object 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 and free will on the other (free will). Matter is dynamic and active in its own iterability; the result is an ‘ongoing topological dynamics of enfolding whereby the spacetime-matter manifold is enfolded into itself (Barad, 2007: 177). Despite the supposed implications of the term ‘separability’, 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” (Taguchi, 2013: 715).

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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; teachers, students, objects and spaces are equally material phenomena and similarly entwined with one another. The movements made by the students became taped lines across the floors and walls; strokes made by paintbrushes; lines of musical notation; soundwaves. The space occupied by agential separability therefore allows for a future which is “radically open at every turn” (Barad, 2003: 826). This radical openness is precisely what our students felt as a challenge. The brief we gave our students was deliberately open, consisting only of the requirements to express freedom and control whilst including a number of particular movements with their bodies.

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 that emphasizes 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 mobilized to explore the agency of matter and advance vitalist frameworks. Drawing on such approaches, our practice based creative arts curriculum mobilizes the intra-actions of theory with practice to develop new approaches to materialist pedagogy and research. We were interested in positioning the agency of matter as 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.

Moving Bodies, Re-Making Bodies

The subject we developed as an embodiment of such creative philosophy is an 18-week course for Year 1 students engaged in a BA in Education, Culture and Society. The course, offered in 2014-15, was a new iteration of an existing and ongoing module that focuses on an introductory exploration of the key concepts of creativity and its function in education, society and the arts. Creativity, in relation to learning, is understood here as activity that produces something new, an idea or a tangible output. The course has been run annually since 2007 and since 2014 has aimed to be particularly interdisciplinary and pedagogically multi-modal as a means to engage with and give voice to a multiplicity of learner subjectivities. The course combines theory with practice where the focus is on students’ experience of creative practice in a range of contexts (Burnard 2012; Craft 2001; Sannino and Ellis 2014; Greenland 2000, Dewey 1934). These include the art studio, computer lab, and performing arts spaces. Introductory sessions encourage students to identify and reflect on the nature of creativity and creative learning through analysis of their biographical experiences. They build on this with engagement in the course activities, lectures and workshop discussions and focused reading. As this is repeated annually as a year 1 module, the translation of abstract, textual knowledge into creative experimentation is modelled in the taught sessions. Nevertheless it remains difficult for students, particularly those who are unfamiliar with creative processes, to trust themselves to this new learning environment. Issues of confidence and ownership of their own creative practice/body/action plague the student experience, despite enthusiastic encouragement from staff. To counter this lack of confidence around

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students' own bodies and action, we adopted, in 2014, strategies by which students used tape to record a trace of their movements through the space, literally a drawing of their actions. This gave tangible purpose to their moving which appeared to lead to greater confidence through the ability to share the movement with a partner who was recording their direction of travel with the tape.

Students were involved in researching the notion of creativity and were introduced to key theoretical concepts that explore aspects of creativity. This was followed by practical elements, which progressively allowed students to explore creative production; through visual, audio, film and performance based methodologies. Students were encouraged to make links between the processes in the different fields and expand their own conceptual and procedural understanding of creative learning and practice. They were guided through a series of exercises in which different forms of movement were explored. Students were presented with the theme introduced above: to explore contrasting ideas of freedom and control and spend several weeks using paint and drawing to do this. They created their own visual object to demonstrate the meanings that they attributed to the words. This became a starting point from which movement phrases were devised during sessions in which the visual object they had made was used as a catalyst for movement. A lengthy warm up encouraged the use of the body as an expressive tool, certain group 'rules' were set to counteract feelings of self conscious exposure, which is inevitable in work of this kind. For example, no one was to look at one another during the exercise, everyone should concentrate on their own movements, no talking and no laughing at anyone else. Students were encouraged to 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 this starting point, the movements were developed over several weeks and eventually filmed (by the students) and set to sound compositions. Developing their own understanding was difficult, and students largely wanted to be led or guided rather than work with, and develop, their own their ideas. However certain factors did influence their decision making when filming, some made a narrative sequence in which the identity of performers was revealed and others used techniques of abstraction to conceal the identity of the dancers. The freedom to make such decisions was important as it enabled students to explore their movements in ways that sat comfortably with their developing identity constructions. It avoided a situation in which the curriculum and expected outcomes determined a particular approach that could be uncomfortable for some.

In developing content and structure for the learning, we were mindful of the various contexts from which students come; whilst some were art specialists the majority had very limited experience of art after the age of about 13 years. This curriculum is about creativity in the context of learning. It involves developing a theoretical understanding alongside engaging with the processes of creativity through action. With such a mixed cohort, in terms of prior experience, the questions of what to teach, and what level to teach to, are ever present. It is questionable how useful it would be for this cohort of students to acquire specific or traditional art making techniques such as learning to paint, work with clay or digital imaging, a broad understanding of what creativity is and does is of more use. It is to this end we employ a combination of media: moving image, sound, movement and conceptual thinking. However, such progressive strategies can be alienating for those who expect a traditional curriculum. Yet such conservative or 'traditional' fine art curriculum does not allow the traditional student or the student new to art to become distinctive. A curriculum that focuses on an embodied understanding of creativity theory seemed to be the most useful way forward. As Dewey (1934) argues, aesthetic experience develops imagination that allows us

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to challenge old perceptions with new ones. Students on this course create aesthetic experiences of their own through which they are better equipped to imagine new possibilities for creativity and learning.

The course is taught by four staff members who each have specific experience of an arts process or discipline. Broadly, these are: film, music, dance and the visual arts. Previously, from 2007-2013, the four key areas were split into separate blocks of study. This made it difficult for students to experience creative processes that were connected to one another and to experiment with interdisciplinarity. As a staff team, we were keen to offer something new in 2014-15 and create a learning experience that offered students a sustained creative experience across the four art forms, in order for students to better understand the ways creative processes inform one another and do not exist in discrete methodological bubbles. The teaching of creativity needed to exceed its own boundaries and to 'leak across' and inform other aspects of students' learning experience. This was difficult to achieve given the constraints of timetabling, room booking, staff availability and the more general structures that force education to be contained into individualized pockets of time. There was great complexity in getting the ideal plan to actually fit into the staff timetables, given everyone's commitments to teaching on other courses. However, in the academic year 2014-15 a new module structure was developed, predicated by the strength of the teaching team's desire to make the course more holistic. The goal for students was to make one artefact using the four different media. This would be developed cumulatively during the module and would be likely to involve a movement scenario developed in dance workshops, which would be filmed, a soundtrack overlaid and a piece of textual interpretation written and subsequently performed².

All tutors planned and presented an introductory lecture and a plenary lecture together, in this way forming more of a teaching team rather than individual contributors. A reordered schedule of sessions was devised to enable the interdisciplinary kinds of work-flow for students that had been generated by the new curriculum design. To accommodate different learning styles and strengths, we decided that students would work collectively in groups of four on the practical task and individually on the creative journal and critical essay. The main question in changing the module was one of structure: how would we (staff) work collaboratively to enable students to build a single piece of work? This way of working with other staff is unusual in this context. During the dance sessions we were co-creators, working on our own movement phrases alongside the students. This was risky, as it disrupted the usual dynamic of 'expert' and 'novice' as we all created new work together. The challenge to the usual knowledge hierarchies was particularly sharp for staff who were non-dance practitioners who were learning alongside their students, an activity which is entirely outside the usual model of university education.

Rather than following a lecture format or seminar discussion, the dance classes were active and participatory, collective experiences in which everyone present was expected to take part. This format meant that no one was allowed to 'sleep at the back'. Rooms of an adequate size

² To enable this some adjustments to the core module descriptor had to be made and agreed by the examinations office. The assessment structure had to change so that one practical submission, worth 40% of the mark were made along with one written component (40%) and the addition of a concept journal (20%) to be compiled throughout the course and handed in at the end. In the concept journal students are learning research skills and they show evidence of their thinking process, which is archived/catalogued in their journal.

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and comfort were required for performance based sessions but due to the complexities of timetabling this was not possible and a room that was small, with no central heating and a cold concrete floor was all that was available. It is precisely these kinds of practical and circumstantial environmental issues which profoundly affect the ways 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 affected the student's ability, willingness, motivation to respond openly and creatively to the tasks that were set. It was no surprise that some students complained about the challenging nature of the work that was being asked of them. The negotiation of challenge and reward is an important aspect of the creative process (Csikszentmihalyi, 2009) and the teaching team were conscious that whilst universities in the UK become increasingly customer focused, student unrest is to be avoided. In this instance we struggled to devise a curriculum that contained enough challenge to be engaging but not so much as to be alienating. Reflecting on our perceived failures, in which students became uncomfortable with the requirement that everyone should join in, we realized that we needed to work 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 floor. Rather than the room or the learner being at fault, a pedagogy that fails to adapt to the space and the learner requires attention, all learning is material after all. Their (and our) reward was tangible in the final screening of their films, which were of astounding quality both visually and conceptually. The students' pride at their achievements during the screening event was, in part, a result of the difficulties they experienced early on. Attempting to balance hard work with reward, demarcates a site in which we learn about the limits of possibility in contemporary higher education and come to understand student imaginaries, and the pragmatic need to respond to, if not acquiesce, to such imaginaries precisely in order to engage and be able to challenge, mobilize and unsettle.

Sayers (2014) spent 20 years working in art galleries, developing public facing programmes in which the challenging nature of learning has to be carefully negotiated in order to retain audiences. As students at university have signed up for a course of study, not simply "popped in for a bit of learning on a Sunday afternoon", we anticipated a greater propensity for challenging learning. However, when the environment is cold and uncomfortable, the body makes decisions. That decision can be to stop attending class, to leave or to refuse. In an efficiency driven machine such as a contemporary university, insisting upon a suitable room as an essential component of the module teaching can be seen as non-essential. Taking matter seriously and attending to the corporeal in order to make learning effective is an important issue and where the environment is difficult it requires pedagogic solutions to mitigate against the negative effect of discomfort. The physicality of creative learning in higher education has thrown up urgent issues concerned with our own, and our students, material existence and the environment in which we work and interact. This course conceives creative practices as a mode of understanding, where students negotiate the physical aspects of making alongside what they want to express or represent. This is conjoined to a textual understanding of the role of creativity within the processes of learning.

As first year students, expectations are for an institutionalised learning experience that is governed, structured and didactic. This seems to be especially the case for those who have not had a particularly creative education and 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 many students didn't

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want to begin. Furtive glances shot across the room. They waited, looked around, and then some of the more confident members of the group started moving, in a sense modeling a response to the instruction to create a movement. Supported by their colleagues' involvement, most of the group joined in working on their own separate actions but some remained at the edge of the room: "Miss, I don't know what to do.".... Encouragement, ideas, scaffolding from staff followed and eventually tentative steps and a physical, action-based response followed.

To learn creatively, students have to unlearn the drive to find the *right* answer, as it suppresses their own ideas and the alternative possibilities that they might come up with. The teaching team want students to establish connections and divergences in thinking and doing, what Braidotti would call "materially embedded cartographies" (Braidotti, 2013: 13). Through these cartographies they come to challenge the domination of conscious rationality. This requires in-depth transformations of the subject in terms of their differentiated processes of becoming, processes differentiated by gender and sex. The Year 1 cohort were largely female (88:4) and as they negotiated social subjectivities around the theme of freedom and control whilst working in groups of four, their work took on a socio cultural dimension in its production of collaborative, creative works, which become, to use Rosi Braidotti's words, "politically informed cartographies of the present" (Braidotti, 2013: 12). To elaborate, as young women they are used to operating on the periphery of society, where conscious rationality has placed them. We wanted the learning experience to enable them to re-imagine their subjectivity. We aimed for a positive vision of the subject as an affective and dynamic individual, hoping for students to make affinities with each other, with the material processes of dance, film, painting and sound and with the textual and theoretical materials that they have been offered in order to understand the usages of creativity in learning. The teaching team tried to support students in sustaining inter-connectedness as social subjects who are self-reflexive and "not parasitic on the process of metaphorization of 'others'" (ibid, 12), but we were just not there yet. The work produced was not yet completely theirs; it was a response to an instruction from a course tutor. The students' need to own their work before they can become active learning subjects. We needed to find more effective ways by which we can provide students with a language through which they could speak and express themselves. Only then would they be able to take ownership of their work and have the confidence to express themselves. As such, an embodied creative practice was slow to develop and some students were yet to construct their own discourses and occupy more self-reflexive positions. However, the subsequent screening of their films where students introduced their work to an audience demonstrated that they had taken some ownership of the work and had become the authors of their films.

Through this process, we understand the philosophical concept of 'difference' (Braidotti, 1994, Irigaray, 1993) by tackling the conceptual formations or roots of issues of identity and power. We do not perceive these to be issues of difference between cultures, but within the same culture. This curriculum challenges that which constitutes the self, in particular ethnicity and religion in its attempt to construct "an embedded and embodied form of enfolded materialism" (Braidotti, 2013: 13). This enfolded materialism arguably transcends the particularities of religion or culture; for example, our cohort of predominantly female British Muslim students. The materiality of this module has asked us the question: *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.

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It is important that practice as research is democratic, inclusive and that everyone has the opportunity to participate. Ethical questions have been raised through this course in which students, unaccustomed to dance in an academic context, have been uneasy about taking part. These students are not experienced dancers and so alternative thinking has been required around the form of delivery, content, pace, scaffolding and environment to ensure that they were able to participate, something we would like to develop further in subsequent years through our pedagogic approaches. There are 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 which take account of the participant/learner and how they engage with the arts are being developed in the UK by About Face Theatre Company, Frontlinedance and Infuse Dance, in Australia by Restless Dance Theatre and in America by The Olimpias. Our work, in the context of educational studies rather than a more established dance environment, has exposed misunderstandings about what constitutes 'dance' and teachers have been called to refute stereotypes of pop dancing which is highly gender specific and sexualised. To contextualize this statement, the contemporary movement practices that constitute the performance curriculum require the students to move in space, but these practices are very different from popular methods for moving the body commonly referred to as 'dance' in the respect that they are less stylised. 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'. We asked students to develop their own movements and to teach these movements to each other. Through the process of engagement with dance movement that was not necessarily historically determined and was not explicitly sexualized, new and meaningful knowledges can be produced.

Photograph here B and C

In the images shown students are mapping routes through space and creating collaborative cartographies of bodies in space. What has been extraordinary has been the live theorization; the thinking in action that has taken place as students come to understand concepts about which they have read and then formulate their own. An understanding of the concepts of freedom and control, for example, was produced and processed very differently when mapped through movement, painting, music and filming compared with 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 typically oscillated between thinking and materiality as they theorised through practice.

The fact that most of our students were 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 these students led to different answers to this question. The movement practices we taught did not subscribe to a popular kind of feminine embodiment. Dancing was not like becoming-Madonna; rather it was 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, sexualized type of dancing mentioned above, any emancipatory or even purely expressive function of dance is 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 sexualized or as asking to be seen, but rather, can be simple; 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 diffractional 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 the woman's body and the objects of the external world can be seen in the perceived inhibitions felt today by the young women who are the focus of this discussion. They were invited and yet reluctant to express themselves through external bodily movement and relation with external spatiotemporal materiality. The historically understood binary opposition of the modes of spatiality (external; rational; male) and temporality (internal; subjective; female). The materiality of the body is an "active, sometimes recalcitrant, force" (Alaimo and Hekman, 2008: 5), and 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 environment, creation and thought. As well as in the analysis we have presented here, feminist practices, research and arts practice as research have been articulated 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, theory is 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.

We hope to show some of the disruptive and generative potential of diffractional 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 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 the environment. The inseparability of self from environment is what Alaimo calls trans-corporeality (2008, 238). Our aim here has been to demonstrate that the diffractional 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, our student body reproduced our teaching bodies as abject, as messy and peripheral to their imaginings of university education. Materially, student

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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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