



Re-imagining the university: Vibrant matters and radical research paradigms for the 21st century

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This paper invites a re-imagining and re-envisioning of ‘the university’ in its being and becoming (Barnett, 2011a, 2011b, 2013). The paper explores ‘feasible utopias’ (and dystopias) for the university and moves to provoke and promote ‘radical’ paradigms that are *more inclusive* of everything. The ideal of the ‘ecological university’ (Barnett, 2011a) is used to unfold three ‘radical’ paradigms that embrace object-oriented ontologies (through Actor-Network Theory), affectivity (through Non-Representational Theory) and (im)mobilities (through the new mobilities paradigm). The paradigms are intertwined and illustrated through a selection of e-learning vignettes drawn from a larger Australian university ethnographic study of four fully online postgraduate subjects to show how the various sociomaterial affective networks enact different experiences and perceptions of ‘the university’. This is an invitation to *dream* – that we might imagine enriched accounts of the world that embrace vibrant matter(s) for ‘feasible’ university utopias.

Keywords: University, Spatiality, Material Semiotics, ANT, NRT, Affect, Mobilities, e-learning.

To dream ...

How might a university re-imagine its being and becoming – its possible futures? How might its spirit speak? What might its spaces ‘say’? And what becomes of a university in its (dis)placements across physical and virtual spaces? How might we re-imagine a university’s being and becoming? What paradigm shifts might we consider for the university in the age of ‘supercomplexity’ (Barnett, 1999, 2000)? What wild dreaming might we ponder? The theme of the 2013 ASCILITE conference is ‘Electric Dreams’ to consider higher education’s past, present and future with technologies. This paper then provides a provocation to imagine and dream of an ethics of ‘being’ and ‘becoming’ *with the world* (as distinct from *in the world*) – *with all things* (technologies, spaces, policies, people, software, mobile devices, ...) and provokes the radical question of “do objects dare to dream”, and if they do then how might they ‘speak’? These are vibrant matters of ‘Electric Dreams’ that provoke ontological questions about the status of objects and subjects and their boundaries. I move towards richer and more inclusive worldviews (ontologies) that embrace matter in all its agency and vibrancy through three ‘radical’ relational emergent paradigms (wild dreaming). The first is through the material semiotics lens of ANT – an emergent relational worldview that embraces complexity and hybridity in the symmetrical treatment of humans and things; the second is through the Non-Representational Theory (NRT) lens that highlights the vitalist affective domains too often (dis)missed in academic research; and the third is through the new Mobilities paradigm that explores the (im)mobilities of people and things relationally. The argument made is that we live in a complex world – a *hybrid* emergent world of humans and things – with all sorts of vibrant matter, and so we need to find ways to research ‘subjects’ and ‘objects’ ‘on the move’ beyond their ‘subject’ ‘object’ boundaries and find ways to have objects ‘speak’ in our research. We might then rethink how we might go on differently with the things/objects/materials/spaces of the world – beyond traditional humanist paradigms that privilege humans at the expense of the too often silent, inert, and ‘passive’ objects of our lives – that we might encompass

a human-material embrace where vibrant matter(s) ‘speak’.

This paper explores radical shifts in the ideas and imaginaries of ‘the university’ based on Barnett’s (2011a, 2011b, 2013) evocative and compelling works on “Being a University” and “Imagining the University” in the first part of the paper to unfold a multiplicity of ‘feasible’ utopias and dystopias for the university. I move to consider a productive ecological reading of the university that resonates productively with the radical paradigms proposed. Then in the second part of the paper, the three ‘radical’ (research) paradigms that are more inclusive of complexities, hybridities, mobilities and materialities of the world are outlined. In the last part of the paper, various e-learning vignettes are juxtaposed to show how the materialities, subjectivities and spatialities create ‘the university’ in multiple ways and how it is configured by what *things* can do and ‘dream’ of doing. ‘The university’ then becomes a constellation of vibrant matters that unfold as a network of all sorts of entities (people, spaces and places, policies, objects, labs, technologies and so on).

Re-imagining the university ...

Barnett (2011a) traces the origins and evolution of the western concept of a university from the 12th century to the 21st century based on changes in the ideological and physical conditions of the university. *Being and becoming* a university are inextricably linked in that “Being a university is always a matter of becoming a university. ... being a university is always unfinished business” (Barnett, 2011a, p. 86). (I use the term ‘the/a university’ in the sense of the ideal/idea of being a university – not to imply one singularised idea of the/a university – whilst acknowledging that in practice ‘the/a university’ is multiple enactments.) Barnett’s (2011a; 2011b; 2013) contention is that in the 21st century, we have become “hopelessly” “impoverished” in our conceptions of the university chronologically from its western metaphysical origins in the 12th century to the 19th century, followed by moving to the research/scientific university for a few hundred years, and then to the contemporary entrepreneurial and corporate forms. Universities though existed well before that, “Bait Al-Hikma” (*The Palace of Wisdom*) in 830 AD in Baghdad was the first academy in the Islamic world (Saunders, 2009). Barnett (2011b, pp. 88-89) is concerned that we seem limited to “extending” and “endorsing” “contemporary emerging forms of the university” in entrepreneurial and corporate forms, saying:

The idea of the university has, of course, undergone many shifts and been subject to varying conceptions over time. For some hundreds of years, the idea of the university was – as it might be said – that of the metaphysical university, reflective of an inquiry that enhanced humanity’s connections with God, or the Universe, or Truth or Spirit or even the State. That conception gave way to the research university which in turn is giving way to that of the entrepreneurial university, which is closely allied to the emergence of a tacit idea of the corporate university. What is striking about this conceptual journey that the idea of the university has undergone over nearly one thousand years is that it has gradually shrunk. Whereas the metaphysical university was associated with the largest themes of humanity’s self-understanding and relationships with the world, the idea of the university has increasingly – and now especially in its contemporary entrepreneurial and corporate incarnations – closed in. The entrepreneurial university is expected to fend for itself, and attend to its potential impact on particular segments of the economy, and become distinctive. This university has abandoned any pretence with universal themes.

Barnett (2011b, p. 89) laments the dangers of this closing in, highlighting that:

The idea of the university, therefore, has closed in ideologically, spatially and ethically. Ideologically, it is now intent on pursuing narrow interests, particularly those of money (in the service of a national learning economy); spatially, it is enjoined to engage with its region, especially with industrial and business organisations in its environs; and ethically, it becomes focused on its own interests. It will, as a result, close departments in chemistry, or physics, or modern languages or philosophy because it sees such closures as serving its own (usually financial) interests rather than being placed in a wider set of public interests.

We see much of this happening in our current Australian university contexts. So where is the hope for the possibilities of ‘the university’? I echo Barnett’s quest for a more expanded imagining of the university. “Given this closing in of the idea of the university in the early part of the twenty-first century, a key question becomes this: how might the idea of the university be expanded” to open up imagination and new imaginaries of what might be possible “feasible utopias” for the “efficacious imagining” of what a university might be in its becoming? (Barnett, 2011b, p.90). “Feasible utopias”(Barnett, 2011b, p.90):

seek to imagine, to create, new narratives of the fullest kind that may serve the university and take it forward. This is utopian thinking. And it is an injunction upon the imagination; to strive to form new ideas of the university that could represent the university – now in the twenty-first century – as it might be in the best of all possible worlds. Of course, there is no blue-print available (Jacoby, 2005); there are no ready-to-hand ideals of the university. That is precisely the point; they have to be created anew to suit the circumstances of our age.

Significant in the above is the phrase “to suit the circumstances of our age”. This must surely demand not only conceptual ideations about the purpose and nature of ‘the university’, but is contingent on a whole host of contextual, specific, vibrant matters. The “circumstances of our age” ultimately depend on a host of networks from governments, policies, ministers, spaces, infrastructures, technologies, people, and so on. Vibrant matters (along with ideas) must be considered here as part of the possibilities of re-imagining the university. Barnett (2011b) provides six categorisations for “reading” the university that I summarise in Table 1 (in his 2013 book, he has an extensive listing of further university possibilities beyond this table). Whilst these ‘university readings’/categories may seem bounded, there are overlaps, as no university is ever only one ideation or reading, albeit that it may have a dominant reading.

Table 1: On being a university: chronological and feasible utopias

University ‘Readings’	Being/Becoming
1. The Historic University (Past Being)	‘the metaphysical university’ ‘the civic university’ ‘the liberal university’ ‘the service university’ ‘the research university’
2. The Ideological (Present Being)	‘the entrepreneurial university’ ‘the enterprise university’ ‘the business-facing university’ ‘the European university’ ‘the open university’
3. The Actual (and the Critical)	‘the bureaucratic university’ ‘the corporate university’, ‘the marketised university’ ‘the commodified university’ ‘the capitalist university’ ‘the performative university’ (in the instrumentalist sense)
4. The Emerging University	‘the borderless university (Erdinc, 2002)’ ‘the liquid university (cf Bauman, 2003)’ ‘the supercomplex university (Barnett, 2000)’ ‘the virtual university (Robins & Webster, 2002)’ ‘the networked university (Standaert, 2009)’ ‘the therapeutic university (Ecclestone & Hayes, 2009)’ ‘the edgeless university’
5. The Dystopian University	‘the soulless university’ ‘the subservient university’ ‘the selfish university’ ‘the selfimportant university’
6. The Utopian University	‘the anarchic university’ (or ‘the iconoclastic university’) ‘the authentic university’ ‘the dialogical university’ ‘the ecological university’ ‘the chrestomathic university (Young, 1989)’ ‘the wise university (Maxwell, 2008)’ ‘the virtuous university (Nixon, 2008)’ ‘the theatrical university (Parker, 2005)’ (in the sense of performance, excitement and anticipation)

As Barnett highlights, these chronological and emergent readings in Table 1, far from being singularised categorisations, can and do exist *concomitantly* in our present day universities. For example, the ideals of the university in its historic university origins of the pursuit of ‘truth’ and enlightenment, albeit that these might be supplanted by new ideas and pursuits, can still be seen today. The ideological university might be “ideologically neutral” but can still harbour “large projects for the university, connected with large political and/or commercial interests” (Barnett, 2011b, p. 92). The actual (and critical university) might involve both description and critique. The emerging university is fuelled by the technology-rich universities of the 21st century. The latter two categories of dystopian and utopian readings can be superimposed across any of the university readings of 1-4 in Table 1. In the dystopian views (e.g. Brabazon’s (2002, 2007) “Digital Hemlock” or “The University of Google” respectively), Barnett (2011b, p. 92) sees these as already upon us in the present:

These are literally hopeless visions of the university, for they lack hope, hope that there might either continue to be redeeming features of the university in significant form or that new redeeming features of the university might yet emerge. Such images of the university are unduly limited in another sense for these dystopias have already arrived. They merely pretend to be looking into the future when they are simply offering us insight into the emerging university; and offering us, as stated, unduly limited images of the emerging university at that. These dystopias are already with us; are already present. In virtue of their pessimism, their limited scope and their lack of hope, they should not detain us.

Consequently, Barnett (2011b, p. 92) finds hope in the possible utopian readings where:

... the imagination is heightened (as compared with the previous imaginings of the university). Now, the imagination is beginning to be loosened from the actual and is striving to glimpse future possibilities while being rooted in the present. These imaginings are projections, deriving from a careful reading of the present but striding out, going on, and drawing out a future-possible from the present. These imaginings carry something in them of a yearning for the being of the authentic university.

Barnett (2011b, p. 93) views these utopian possibilities as the not yet “present forms of the university” but that they could be realised. It is Barnett’s contention that each utopian vision, as it ‘leaps ahead’, “never quite severs its links with the present. It opens a gap between the real and the possible but also tacitly promises to close the gap: in the best of all possible worlds, each of these utopias might just be brought fully into the world”. Peters (2007: online) also finds potential hope in possible utopias of the technologically-rich universities of the 21st century (Katz 2008a; 2008b).

Peters (2007) outlines shifts across three traditions of evolution of the western university (encompassed in Barnett’s earlier conceptualisations) of firstly, the Kantian notion of critical reason, rationality and reflection towards a self-critical enlightenment; secondly, the Humboldtian notion based on self-cultivation, cultural self-understandings, and cultural reproduction; and thirdly, the Leavisite notion of *high* culture based on the canons of a national literature. Peters advocates that we need to understand these new “techno-cultures in relation to the university where the radical concordance of image, text, and sound sets up new exigencies and promises for pedagogy” as well as “new dangers”. He suggests that we might be able to have “mass access and democratic participation” in the shift from the cultural elite origins of the university to mass education via these new promises. But what are the criteria of adequacy and what might suit our circumstances of the age in our re-imaginings of the university?

Barnett poses criteria for adequacy based on five dimensions, posing insightful questions that might sustain, propel or destabilise a conception or reading. His (Barnett 2011b, p.93, original bold) five criteria are (in his 2013 book he extends these to six, adding criticality in the sense of standing out against current innovations):

- **Range:** what is the range of the imagining? Does it have theoretical backing? Is it rich in concepts and ideas? Does it lend itself to an array of practices? Does it have large implications for policies?
- **Depth:** what is the epistemological depth of the vision? Does it reflect or identify large structures, or acknowledge forces, that are present and does it address those structures? Does it connect with actors’ experiences? Does it connect with the material world in its complexity?
- **Feasibility:** given the power structures that it has identified, to what extent might the vision be

implemented? How feasible is it? Could it be instantiated by individual universities? Could it even be instantiated by the university system as a whole?

- **Ethics:** To what degree does the vision reflect large ideas as to human and social wellbeing and even flourishing? In what ways could its vision be said to be worthwhile? Does it reflect large human principles such as those of fairness and openness?
- **Emergence:** to what extent does the vision lend itself to continuing further interpretations over time? Could it open itself to yet further ideas and imaginings? Could it continue to unfold over time, and in new ways as new situations arise?

So for example, Barnett (2011a, 2011b, p.93) posits and strongly advocates that the ‘ecological university’ is a strong contender for the five criteria in terms of range as it has “theoretical backing” and is “rich in concepts (‘sustainability’, ‘ecology’, ‘deep ecology’)”. Further, the ecological university whilst it also has depth at a conceptual level, provides meaningful explorations of daily practices and at policy level, as it facilitates explorations within and beyond the university across infinite locales and networks. Its ethical starting point is a “concern with the other” (Barnett, 2011b, p. 94). It also implies “emergent qualities” that are contingent and remade and “imagined anew”. Barnett (2011b, p. 94) sees the idea of the ecological university as “both efficacious and robust”, saying:

The spirit of the ecological university can be cashed out at the level of the 1-1 pedagogical relationship between a tutor and a student, it can be reflected in a department’s or, indeed, a university’s self-understanding and its actions in the community, and it can be witnessed in the ways in which a whole university sector moves and is perceived in society.The idea of the ecological university, in other words, can be seen to be potent at all the ecological registers (cf Guattari, 2005) of persons, of institutions, of communities, of society and even of the world.

A university then becomes an effect of multiple networks – staying with the ecological theme – a rhizome – taking in the multiple, the heterogeneous and the dynamic – taking in an ethics of *the other*. This ecological metaphor takes becoming *in-relation with* seriously – this warrants a relational emergent ontology *par excellence* that embraces *everything*. Consequently, I move towards radical utopian imaginings that have at their heart an ecology of *things* – embracing the vibrant matter of the world. This might well be seen as a “responsible anarchy” (Barnett, 2011a, chapter 7) of an ontological epistemological feasible utopia where objects dare “to dream” (Mitew, 2011) and ‘to speak’. Whilst the above discussion has centred on the abstract ideations of the university, I move next to explore ‘radical’ research paradigms (wild dreams) that might better resonate with an ecological approach.

Wild dreams: voicing radical research paradigms

How is it that so many accounts of the world are devoid of things – the vibrant matter of living? And how is it that so many accounts of technology in education are human-centric where machines are silent and passive objects of the world – “invisible masses” (Latour, 1992, 2005)? We live too often with “the silent fragility of the thing” (Introna, 2009, p.42, original emphasis). The status of objects is too often voiced as ‘reified objects’ (Pels, Hetherington & Venderberghe 2002, p. 3) or “a projection of human agency on passive, dull matter, or dull matter intruding on the subjective realm populated excessively by humans” (Mitew, 2011, p. 3). My radical provocation is to consider the vitality of objects (Knorr-Cetina 1997; Pels, Hetherington & Vandenberghe, 2002; Turkle, 2007, 2008a, 2008b) and their “vibrant materiality” (Bennett, 2010). It is not that humans are set up “in opposition to things” (Dolwick, 2009, p. 35) to act “‘on’ things” (Dolwick, 2009, p. 35, original emphasis), but rather that they act “with, through, or in response” to things (Dolwick, 2009, p. 35). I extend to materials an “*ontological dignity*” (Latour & Venn 2002) in the centred-human *status quo*. This supports Sørensen’s (2009, p. 2) posthumanist stance to “place the human not above materials (as the creator or user) but among materials”. Consequently, we need “methodological frontiers” and “crossing boundaries” (Brownlee & Irwin, 2011; Goodyear, 2011; Markauskaite, 2011) in the challenges facing educational research and design (Markauskaite, Freebody & Irwin, 2011). This requires moving beyond traditional subject object boundaries to consider “ecologies of interweaving physical, digital and human resources” (Goodyear, 2011, p. 258). So how might we consider this? I outline three productive paradigm solutions that resonate with an ecological relational stance.

Object-oriented paradigms (where objects dare to ‘speak’)

There is emerging interest in object-oriented ontologies such as in the work of Harman (2007, 2009), Mitew

(2011) the material feminists (Lenz Taguchi, 2012), as well as interest in the “evocative objects” of daily life (Turkle, 2007, 2008a, 2008b) that configure, mesmerise, proliferate and flourish in the world. Whilst there are various ontological boundary stances here from human and material boundaries being *performed*, there is a more radical stance that shakes up the human-material boundary. This radical stance is pronounced in the transdisciplinary material semiotic lens of Actor-Network Theory (ANT) (Latour, 2005; Law, 2004; Law & Mol, 2002) originating from Science and Technology Studies and gaining prominence across multiple fields, for example, in education (Al-Mahmood, 2006, 2008a, 2008b, 2011, 2012; Fenwick, 2010; Fenwick & Edwards, 2010) amongst many other fields. The basis of ANT’s approach is a *radical symmetrical treatment of human and material agency* – it is a sociology of relations. It is a performative worldview in that the world is *performed into being* and is constantly *becoming* as distinct from a representational stance of a world ‘out there’ waiting to be described. Nothing is *performed* in ANT, but rather everything emerges and is *performed* into being in complex hybrid networks. Hence we might gain a *measured wisdom* in how we might “*renegotiate*” (my emphasis) and “comprehend” technologies in our universities “to recombine learning and life in new ways”, as Agre, 1999: online, original emphasis) reminds us that:

... artifacts do not simply drop from the sky. They come surrounded by cultural meanings (liberatory or oppressive, rational or spiritual, stabilizing or disruptive, traditional or modern, elitist or populist, and the like), and they are knitted into institutional arrangements (access, identity, maintenance, budgeting, space allocation, compatibility, intellectual property, and so on). If we focus only on the artifact, then the cultural meanings and institutional arrangements become invisible. In fact, the relationship among artifacts, meanings, and institutions is complicated and variable.

Any new technology has multiple trajectories with challenges and promises. What a university *is* and *should be* is a result of the intersections and adoption of emerging technologies, which highlight political, moral, and normative questions.

Rip (2009) argues for seeing technology through an ANT lens as it embraces emergence and unpredictably. Further, Lewis, Marginson and Snyder (2005, p. 56) highlight the contingency and complexity of universities and the multitude of technological expressions, emphasising “that network technologies are socially embedded and therefore highly variable in their expression”. Also, Goodyear (2011, p. 263) highlights the value of ANT’s material semiotic approach and the conceptual work ANT has garnered since its inception in the early 1980s, saying: “I am attracted to the insights that flow from thinking about educational systems (a) in terms of relationships that are simultaneously material and semiotic and (b) as depending upon the ongoing ‘performance’ of their constituent elements” (Goodyear, 2011, p. 262, footnote 6). A sociomaterial hybrid (human and material) approach highlights the vibrant matter of the world and the negotiation processes that allow the various *actors* (human and material) to ‘speak’, highlighting the *politics of things* (Fenwick, 2010). An ANT analytic potentially explores the minute negotiations of various actors (human and material). ANT accounts can enrich and contribute to performing *richer and more inclusive* accounts that highlight the vibrant matter of the world. ANT’s sociomaterial approach is valuable in that “it challenges the centering of human processes in learning (often conceived as consciousness, intention, meaning, intersubjectivity and social relations) derived from perspectives associated with phenomenology and social constructivism, and foregrounds the material” (Fenwick, 2010, p. 104). Whilst this paradigm does rich work in redressing the balance of returning the object into the world, in lifting the materialities of practice up to view, I do not want to obscure or lose the *human* endeavour and liveliness between people and objects. I therefore promote a further paradigm that highlights the affective domain next, whilst maintaining the importance of the materiality of the world.

Affective paradigms (where objects dare to ‘affectively charge’)

A paradigm that complements well with ANT is that of Non-Representational Theory (NRT) (Thrift, 2008) given its focus on process, emergence and relationality, but it differs from ANT in that it emphasises human imagination and desiring processes. NRT highlights “affective intensities” and “sensuous dispositions” (Thrift 2004) or the “more-than-representational” (Lorimer, 2005, p. 84) to attempt to grasp the liveliness of practices. NRT is a transdisciplinary approach that draws heavily on vitalist Deleuzian ontologies (Deleuze & Guattari, 1988) amongst others to embrace “an affective realm of ‘wild new imaginaries’, emerging from repertoires of sensation and emotion” (Lorimer, 2005, p. 90). Unlike human-centred psychological explorations of emotion and affect, affectivity here extends beyond purely human subjectivities – embracing energies and sensations that are *discharged through objects and spaces* (Navaro-Yashin, 2009). Through emergent “*affectively charged places of learning*” (Leander, Phillips & Taylor, 2010, p. 336, original emphasis), we might consider how “affectively malleable” the university can become (Leander, Phillips & Taylor, 2010, p. 341) and how desires are (per)formed.

Goodyear (2011, p. 263) echoes the valuable insights and contribution that ANT and NRT can potentially make to “educational research futures”, saying: “... ANT encourages us to open our minds to possible redistribution of work amongst humans, digital and physical actants. Educational researchers will need methods and perspectives that allow them to deal with the complexities of understanding learning in such networks” of the university and beyond. Further, he predicts a move away in educational research from *golden standard* large scale studies and hypothesised studies towards smaller scale design studies (Goodyear, 2011) to inform rich design patterns (Goodyear, 2005; Goodyear & Retalis, 2010) for interpreting and designing learning environments (Goodyear, 2011, p. 260). We need ways then to deal with the fleeting, the sensory, the affective, and the atmosphere of places and spaces to open up spaces for “sensescapes” (Büscher & Urry, 2009) and imagination for the university. This brings with it a need for a turn to an emerging pressing paradigm of the digital age – the mobilities paradigm.

Mobilities paradigms (where objects dare to ‘move’)

The new mobilities paradigm (Sheller & Urry, 2006; Urry, 2007) deals with spatial mobilities of humans and objects made possible by the new connectivities and intensities of the digital age. The mobilities paradigm draws on and advocates transdisciplinary approaches to address sedentary and nomadic aspects of people and objects across various spatiotemporal locales. “Mobilities theory places an unprecedented emphasis on (im)mobility, moorings, dwelling and stillness as much as movement, speed, or liquidity” (Sheller, 2011, p. 2). New ‘mobile methods’ (Büscher et al., 2010) attempt to capture some of the “complex, dynamic processes, including cyber ethnographies, following-the thing, participant-observation on the move such as walk-alongs (Myers, 2011), drive-alongs (Laurier, 2010), being ‘mobile-with’ (Bissell, 2009), mobile video ethnography (Spinney, 2011)”. Mobile methods beyond traditional data capture techniques are needed given the proliferation of mobile digital artefacts and immersive digital environments (Adey, 2009b; Cresswell & Merriman, 2011; Hannam et al., 2006).

We need to improvise methods based on Büscher and Urry’s (2009) insightful paper, *Mobile Methods and the Empirical*, which discusses the new mobilities paradigm calling for methods to deal with physical and digital (im)mobilities across multi-sited ethnographies. We need methods that can deal with this. Various tempos and movements, or “travels” from corporeal, physical, imaginative, virtual, to communicative movements as people, ideas, technologies, and so much more ‘travel’ need to be explored dynamically (Büscher & Urry, 2009, pp.101-102). We need research methods to capture movement, stillness and the liminal across physical and digital environments. Indeed, we need to glean much more from geographical studies of mobility to inform current and future research (Cresswell & Merriman, 2011). The new mobilities paradigm requires that we find ways to capture “archaeological glimpses and complexities” (Büscher & Urry, 2009) via immersive and prolonged engagement methods to keep the world open and ambivalent through novel approaches that “engender” “new research entities” (Büscher & Urry, 2009). Useful ethnographic digital tools might include video diaries, digital recorders, webcams, mobile phones, iphones, video analysis software, video capture, time-space mobile diaries, or voicemail diaries via textual, pictorial or digital, real-time capture. Indeed, we need tools to work with *dynamic* data using digital media and hypermedia to see change over time and to capture richer human and artefact interactions (Markauskaite, 2011, p. 244). Yet, these too can miss something of the sensuous and affective, and all tools and methods have limitations. But digital technologies demand that we rethink the university and its locales and infinite enactments across digital and physical spaces – we need ways to deal with the *new geographies*.

Having briefly outlined how these three productive paradigms might enrich how we view the world, I move next to illustrate these paradigms *at work* through various vignettes to show how ‘the university’ is enacted through vibrant matter to produce various readings of the university.

Enacting the university – what *things* can do and ‘dream’ of doing ...

I illustrate and juxtapose various vignettes intertwining the above paradigms to highlight multiple enactments and readings of ‘the university’. I highlight the various sociomaterial networks to show how subjectivities, spatiality and affectivity unfold and are intertwined. The vignettes are extracts from a larger PhD study (Al-Mahmood, 2011) that involved a multi-sited ethnography (Leander & McKim, 2003; Marcus, 1998) of four fully online postgraduate subjects in an Australian university. Ethnography was chosen to facilitate prolonged and immersive exploration of participant e-learning engagements. Physical ethnography (Marcus, 1998) and virtual ethnography (Hine, 2000, 2005) were used to gather and observe the minutiae of participants’ everyday practices across physical and digital spaces.

Following university ethics approval, participants were invited to participate in the study (face-to-face, online, phone) and methods to deal with physical and digital (im)mobilities were used (Büscher & Urry, 2009; Büscher, Urry & Witchger, 2011; Sheller & Urry, 2006) to capture various actors across physical and digital spaces. These methods included participant interviews (after subject completions), participant observation, photographic data, and participant reflections across physical and digital spaces over a period of 6-10 months, as well as document analyses. Data were collected from 24 participants – 19 online postgraduate learners, and 5 teaching staff (2 females and 3 males) ranging in age and teaching experiences. Daily scheduled observation diaries of the online subject sites were recorded, and participants were invited to record their reflections and provide images of their various learning spaces. A wealth of detailed data were amassed, and whilst the aim was to add to the world through ANT and NRT lenses, glimpses into human, spatial, discursive and artefact interactions were ‘traced’, whilst attempting to ‘capture’ and ‘(re)present’ the sensuous and affective dispositions and spatial ambiances.

In the vignette selections that follow, I juxtapose how “various objects and mundane technologies sensuously extend human capacities into and across the world” (Büscher, Urry & Witchger 2011, p.6), or not, to unfold multiple university enactments and affectivities to highlight what and how vibrant matter ‘acts’. I gather fragments of Natalie’s (a student) interview responses to highlight some of the significant entities (actors) that mobilise her actions of seeking – via artefacts, machines, windows, screens, and so on – that constitute her online identity, for the most part, as a seeker. Natalie is a mature-age learner who runs her own business from home where her expansively spacious study doubles as her office. She came to the postgraduate e-subject through inadvertent faculty mix-ups that enrolled her in the fully online subject rather than its face-to-face version (not on offer during that semester). She pursued the e-subject for its sheer challenge and experience to explore new learning and extend her skills. She ultimately, however, still decided to enrol in the face-to-face intensive equivalent subject to get that “something more” – *in the flesh*. She studies from her aesthetically rich spacious home study/office, which is airy and flooded with natural light through expansive windows that overlook her lush garden surroundings. I provide a snapshot overview of some of the intersections of Natalie’s e-learning practices, identity formation, and spatial configurations of her virtual and physical environments.

A learner seeking ~ Needing lecturers as guides ~ Asking questions online ~ Receiving answers as gifts ~ Patiently seeking mastery ~ A flat 17” computer monitor ~ Access to the world ~ Pursuing virtual libraries of the world ~ Aiming towards mastery the ultimate goal ~ Being patient with myself ~ And developing bloody mindedness ~ e-Learning fosters self-reliance, determination, perseverance ~ Seeking self-mastery ~ Towards a new form of solitude ~ To stay with something ~ A new sense of solitary self-reliance ~ And online learning is like going to a party ~ Such fun ~ Little surprises ~ Little journeys ~ The element of surprise works ~ That you could discover something ~ A digital and physical library ~ Yet instinctively I would want more than online learning could offer ~ So I will attend the face -to-face subject intensive in the break ~ But online taught me so much ~ I jumped into a pond and I had absolutely no consciousness of what it was about ~ It was a total process of destabilisation ~ and then re-establishment of self ...

Natalie sees herself and is configured as a seeker of knowledge, as ‘the novice seeking mastery’, saying:

A seeker. I was a seeker seeking answers, a confused seeker at times ... I would only see myself as a learner ... which would be also the role of a seeker I am the discoverer of the knowledge, within myself, so it’s based on experience but I need a guide. ...

The lecturer as guide is configured through his wording and online presence as Natalie comments about her experience with the online lecturer, Brian. Despite having never met him in person, she has a strong sense of his presence. She perceives him as *caring*, *excellent*, and *encouraging*, commenting:

when someone guides me ... I’m grateful. Incredibly grateful. When someone takes the time, it’s more than giving, it’s guiding... I think that’s an honour. That’s how an academic gains respect. All the lecturers who[m] I’ve had, who[m] I ... knew online had ... the discipline to address their emails, and answered their incoming emails and answered questions, and probably could read what the student was requesting; they all had their moment for me.

She continues, “the tone ... he writes beautifully acceptance...”. Social presence is a significant factor of any e-learning environment (Clark & Kwinn, 2007; Finegold & Cooke, 2006; Garrison & Anderson, 2003; Henriksson, 2006), and significantly lecturer presence. She emphasises the impact of a lecturer’s email on a student, saying, “... one out of every one hundred emails they send will be a life changing experience for

someone, which is I suppose what traditionally we looked at lecturers for when we went to the classroom and got that ... something!". Here we see "the metaphysical university" enacted.

And yet in contrast, different material configurations and affectivities result for Paul (student), a professional with 20-years' experience as an educator, who sees the student-lecturer email interactions as "formulaic", "going through the motions", saying: "It felt very much like a performance that I was involved in"; "... being a novice and being in someone else's territory that wasn't my own.... I felt like I was performing for him and he was doing the teacher role for me ... Occasionally he would write back and say, 'No, this is not, bold in capitals, what the text says'. And I'd just think, 'Stuff it' ... So it felt detached and it felt somewhat authoritarian". For Paul, far from the nuanced sense of care and attention of the email contact with lecturers, disembodiment remains a concern: "I believe the most effective teaching-learning interaction is one that engages the whole person — body, mind and spirit. And I don't know how that gets involved in a virtual process. Maybe it does, but I can't envisage it". Here we see the "soulless university" enacted by virtue of the email medium for Paul. Further, we witness the "commercial" "enterprising" university when Lillian, a softly spoken, poetic Chinese student, who majored in English literature in China, says: "I think that makes it more efficient The teacher can go out and leave and do his own business, but still he can teach and I'm also, I mean, efficient at doing this, and I type out and didn't go to the classroom and sit in [for] three hours. ... But also I think that makes peoples' interaction and communication less and less and so makes you feel other things are more commercial". Further, with increasing conceptualisations of education as a commercial enterprise (Marginson & Considine, 2000) and knowledges as mass commodities, what will it mean to teach in a *borderless* university — at what cost, to whom, and for whom? In the enterprising university, we see students, lecturers, and the academy (by virtue of its buy-in to LMS companies) as consumers, so knowledge readily becomes a commodity. Enterprising in a commercial sense is not always experienced positively, despite the implied e-learning flexibility and access it might imply, because here the pedagogical student-teacher relationship becomes one of facilitator-customer/client. And significantly of concern in digital university spaces, are the longevity and visibility of participant textual contributions — these risky spaces of the LMS are potentially "there forever" (Al-Mahmood, 2012). This leads to censored selves and further self-censoring and extra editing work. The LMS platforms configure the learning spaces as potentially risky, where participants' vulnerabilities are visible when Sandy suggests that one's "stupidity is there for the whole online community" to see. Here we see the 'performative university' in the sense of surveillance and accountability issues being enacted. LMSs support neoliberal agendas that placate critical scholarly debate/resistance by virtue of having 'access' to everything to being a 'consumer' of everything.

Despite the risks, access at our fingertips still tantalises and inspires, so for Natalie her *access to the world* in her connectivity online allows her to access spaces beyond institutional e-subject boundaries. This access to world libraries from the comfort of her study extend her online learning experiences. Here university boundaries become fluid. She highlights her expansive connectivity or seemingly paradoxical *solitary connectivity* to the world, saying, "... in a positive light, you don't actually have to be alone. You don't necessarily have to be bored in this world. There's a world that you can interact with instantly, which is very similar to me for what the library was like: you could grab a book and you could be somewhere or learn something or do something. And I think that's a gift a lot of people ... don't act on". She continues: "... The joy of studying at night, reading at night. ... I enjoy the aloneness, the solitude really." As Arnold (2002, p. 235) so aptly echoes, "When I sit at my computer, log-on and join the Internet, I and the glass screen conspire together to approach the world ... and possibilities and experiences are afforded that would otherwise be denied These are technologies that extend our agency, our way of being in the world". In terms of Natalie's pedagogical learning spatialities, here interview extract is revealing: "Ok, my space would be in relation to an online course, would be in the context of my relationship with an academic, preferably, a text, and also having access to other students, through a relationship on the computer, a computer relationship". Her sense of ambience and location of the virtual learning spaces was created by her. "I created it. That space, that's why I like it when the sun goes down. So the space I create is probably in an Australian sense, hopefully it's a meditative space, a space where I can think and contemplate, and learn and grow". The attenuations of hybrid subjectivity render Natalie as a "troubadour of knowledge"; a Deleuzian "rhizomatic" (Deleuze & Guattari, 1988) knower and a *hybrid cyborg* (Haraway, 1991). Natalie's is an emotional geography (Bondi, 2005; Crouch 2000) of exploring at ease and "traveling-in-dwelling" (Lury, 1997: 83). The world is explored within secure, private, and comfortable enclosures of home and study, though Internet connection is at student expense; we see the well-worn networks of economic and social capital (such as connections, places, resourcefulness) *speak loud*, in this instance. These insights highlight how the 21st century digital universities are experienced and perceived. We have here the 'fluid university'/'the emerging university', 'the metaphysical university' being enacted *par excellence*.

In contrast, in this next vignette, I illustrate global physical mobility and a "dwelling-in-travelling" (Lury, 1997)

as reflected in Jasper's (student) "borderless university" and the digital university's potential for developing countries. Jasper is an Australian international professional, whose working/learning spaces are mobile as she travels to various countries due to her work. She says, "I've lived in France and in Rwanda and Ethiopia and Africa, but I have gone on short assignments to a range of countries in Asia, Central Asia, Russia, and the Pacific ...". She highlights how "fantastic" the Internet is, saying: "I love the Internet so it seemed to me a fantastic use of the technology the resources that are available are absolutely fantastic. I find it just remarkable. ... Particularly ... working in a developing country, the power that it gives to people is just fantastic". She indicates that e-learning is "certainly an effective way of learning in this day and age when people are not necessarily in one place for an academic year", saying:

... I basically was working full-time and I had to finish the last part of the course when ... I was on an assignment there in Sri Lanka, and so basically I was full-time and I had to do that in the evenings and I had to get an assignment in So that was a bit of a challenge but I was able to do it I was further away and it was dreadful ... the hours were different It certainly didn't make any difference in terms of the interaction with the other students because it was still there.

Jasper's is a nomadic practice that extends universities across time and space. She says: "It's been really good. I'm just amazed by it really. ... I told people, 'This is fantastic. It's this new learning'. It means anyone can have access to higher learning. All they need is access to a computer. ... it's just an amazing thing, [for] people who are at home or ... can't get to a university, it just opens up so many possibilities". She narrates an anecdote of Tibetan monks in Mongolia surfing the web in a tiny remote village café, recounting the powers of connectivity.

... I was doing some work in Mongolia ... often [in] developing countries it's really useful for the Internet because there [are] so many Internet cafes because people can't afford computers so there are lots of Internet cafes and the telephone systems weren't too good. So I would go to the Internet cafes for my personal work ... and as I was there a couple of times ... Buddhist monks came in and they were searching on the Internet ... it was just somehow ... the contrast between the Buddhist monks and their robes, their saffron robes ... sitting in an Internet café surfing the Net and making contact with Buddhists and goodness knows what else all over the world, it was remarkable! ... It was just marvellous it seemed to me that connection was a characteristic of the power of the Internet for people.

Throughout these illustrations, we see enactments of the university in its digital manifestations as multiple – we have the metaphysical university where knowledge is sought above all else with and through a master/an expert/a guide – a mastery and seeking of knowledge – and yet self-reliance too. We see the borderless/fluid/networked/virtual university where knowledge, people, and libraries of the world are accessible at one's fingertips. We see dystopian/performative/soulless universities that produce anxious and self-censored participants, and so on. The university is multiple – it can take on "different forms, different performances, different realities, that co-exist in the present" (Mol, 1999, p. 79). Different material, spatial and social configurations lead to different university readings/enactments. Matter is vibrant and active *par excellence*.

To re-envision ... daring to dream of better feasible university utopias ...

My envisioning is that we need radical paradigms to address the complexity and richness of the world and the idea of the university and its process of knowledge-making. "*Practices of knowing are specific material engagements that participate in (re)configuring the world*. Making knowledge is not simply about making facts but about making worlds, or rather it is about making specific worldly configurations" (Barad, 2007, p. 91, original italics). The paradigms proposed for the technology-rich 21st century university impel new approaches to research that bring into question the boundaries of humans and objects and the nature of knowledge-making. Today's technology-rich universities have shaken up the notion of *traditional spaces* of the university – changing knowledge and research boundaries to more "fluid" and "dynamic" possibilities. We need to experiment with how to create sustainable and ecological university learning/knowledge spaces, keeping these issues alive on our research agendas (Ellis & Goodyear, 2010; Riddle & Howell, 2008). We need to *renegotiate* – in all sorts of ways and with all sorts of *things* – how we go about learning, researching and living.

If we have at our base a willingness towards sustainable and ecological imagination then we can find ways to re-imagine 'feasible utopias' for our university. A more encompassing and ecological approach might involve embracing a "learning-centric university mission" (Ellis & Goodyear, 2010, p. 153) to dream and evolve beyond the contemporary entrepreneurial and corporate university towards new imaginaries of the university that have at their heart reclaiming and re-enacting anew 'the spirit' of the university. To consider our possible (e)learning futures, we need to take heed of what Agre (1999, p. 39) says in that "Our choice is not technology versus no

technology, but a wider determination of the concepts and the values that higher education should embody” so that we might become and be an ever imagining university (Barnett, 2013). In our imaginings, however, we must take heed that “in the unfolding of socio-technical networks – our contemporary technically advanced society – things and humans reflect and sustain each other. We co-constitute each other’s possibilities to be – as such, they (we all) matter, both politically as well as ethically” (Introna, 2009, p. 29). We need to move beyond the online/offline divide and the human/material divide to encourage affective and hybrid ways to analyse and interpret e-learning and e-teaching practices. Consequently, emergent university environments of the present and future require new methodological and transdisciplinary approaches to address the complexities of the (im)mobilities of people, material artefacts, spatialities, technologies, affectivities, and sensualities – to highlight richer relational rhizomatic ecologies of and for the university. This is an invitation to dream – that we might imagine different worlds, better and more encompassing worlds towards feasible utopias for our universities that embrace vibrant matters.

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