Assembling Agency – Learning in Liminal Spaces

An Assemblage of Personal Introductions

I have had an interest in spaces and places where art and design can be thought about, created, and exhibited, since I started a post school pre-university art and design Foundation Course, on an aptly named street call Paradise Row. It was at this time a realization that art could be produced in many different ways and located in many different sites, became a driving force in my own art practice.

Using the surrounding old abandoned warehouses where I used to play in and around as a child, I produced designs for an experimental art center next to the Mill Pond in Cambridge. These childhood playgrounds were liminal spaces, hidden places for wandering explorations and became exciting wonderlands. I wanted to propositionally salvage and reclaim these buildings to look and function like of the Centre Georges Pompidou. This was as an antidote to what I saw as the insipidness of the art galleries architecture of the region of the UK I lived in at the time. For the final foundation course exhibition, I produced over 50 various sized sculptures that inhabited the spaces in the cleared-out studios and corridors, that nobody else wanted to use. These were the types of unused and unloved spaces that exited me. The forgotten spaces, the places nobody else thought they would like to be. The nooks and crannies, the in between spaces, the spaces that connected one space to another space.

By assembling ideas of thresholds, verges, brinks, edges, lips, borders, peripheries, these spaces became places of new beginnings and becomings, places of frisson and tension. These assembled sculptures inhabited spaces that then became more dynamic through their interventions, encounters, changes in attitude and revelations. These processes of making site-specific art installation work has spilled over into my teaching

practices over the last 30 years. These processes of reimaging spaces made me curious about how our multiple ways of learning, making and thinking about art and design can be put into practice.

An Assemblage of Introductions to a Research Project.

I believe that in thinking about and the mapping of learning spaces, it is imperative to create a teaching and learning environment that allows for curiosity to flourish (Dillion & Warner 2013). For this to happen it requires critical engagement in concepts that go beyond the usual orthodoxies of space allocation and planning. Effective art and design teaching should allow space and time for experimentation, enquiry and exploration of ways of making and thinking. It should be holistic and enable the student to productively join together all aspects of the curriculum offered by their course. In an art and design context it is especially important that transformative teaching should encourage students to be self-reflective and have an independence of thought.

Agents, Agency, Agencies in Assembling Liminal Learning Spaces is an ongoing London College of Communication (LCC) teaching and learning funded research project that is an investigation into the types of learning landscapes we have at the University of the Arts London (UAL). My proposition is to develop a remodeling of the way we think about how students are taught and learn in the spaces and places that already exist and might exist in the future. It recognizes that the more involved all participants in the hosting, delivery and acquisition of teaching and learning become in this research, the more likely we are to have spaces that deliver even more world class teaching and learning. As Dr Cathy Hall (2013), states, "To create a world-class learning environment for students [it is] by offering opportunities for collaboration, team work, a sense of belonging, a creative culture and opportunities to excel…" (Hall 2013).

This research questions how we can create, physical, virtual and representational learning spaces, that fully allow for 'learning gain'. It aims to question idea that, "…no one knows how to prevent 'learning-loss' when you design a room 'pedagogically', whereas we know lots about designing for minimum 'heat loss." (Heppell 2004:3). Discussed by Stephen Heppell and his colleagues in their research paper *'building learning futures…'* (2004), they argue that, 'Dialogue with architects revealed that whilst they can design with some precision to minimize heat loss from a building, the target of minimizing a loss of potential learning through good design is considerably more elusive.' (Ibid).

At the beginning of this research I asked the question, *"What do we want our learners to become?"* (LCS 2103:4). *The Learning Spaces Collaboratory* (LCS) has given a number of answers to this question, one being that students becoming even more, 'Agents of their own learning' (Ibid). This led to the question, *'What experiences make that becoming happen?* (Narum 2015). These questions helped me to start to critique ideas that are already being considered at LCC/UAL. One example being that further access is created to labs (technical, digital and theory based), hack, maker, and prototyping spaces that help experiment with innovative pedagogies. I continue to consider ideas of temporary mobile, pop-up type spaces, which fill an urgent pedagogical need, but this research fundamentally aims to have a radical look at these and other ideas about what is needed from our future learning spaces.

The outcome of this research aims to become a 'map', a reformation of the territory of learning spaces rather than a copy of what has already been done. As Gilles Deleuze and Felix Guattari explain it their 1980 co-authored book. *A Thousand Plateaus: Capitalism and Schizophrenia,* "A map has multiple entryways, as opposed to the tracing, which always comes back 'to the same.' The map has to do with performance,

whereas the tracing always involves an alleged 'competence.'" (Deleuze & Guattari 2005: 12-13). Using this idea of mapping rather than a tracing learning spaces could then be places of 'becoming', where actions are constructed by all who participate in the practices that take place in these spaces. (Semetsky 2006). They become eventful places, liminal places of critical and open speculative risk-taking. Curiosity enhanced questioning spaces.

An Assemblage of Introductions to Theoretical Frameworks

This ongoing research continues to analyze learning spaces in multiple ways. Using a number of theoretical frameworks to help understand the complexities of creating transformative learning spaces. The research embraces ideas of 'whole systems thinking', as a method to understand how things (elements and systems) are related, and how they influence one another within a whole. (Gordon, Plamping, & Pratt 2010). Often a part of the system is analyzed, the lay out of the classroom for instance, without considering the multiple offer factors that govern a student's learning journey. Deleuze and Guattari's (1980/2005) concept of *assemblage* is an overarching organizational structure for this project. Their key ideas dealing with assemblage help map out and join together the terrains of the investigation. According to Deleuze, …an assemblage is first and foremost what keeps very heterogeneous elements together: e.g. a sound, a gesture, a position, etc., both natural and artificial elements." (Bryant 2009). The idea of research as an assemblage derives from the Deleuzoguattarian view of assemblages as 'machines' that link elements together affectively to do something, to produce something. Applying the conception of a 'machinic assemblage' (Bryant 2011), different stages in the research process such as data collection or analysis, or techniques used, for example, to sample data or increase validity, can be treated as a *machine* that works because of its *affects*. (Deleuze & Guattari 2005).

To help understand how the key concepts of the liminal and liminality can be used constructively in an art and design university context, notions of 'smooth space and striated space' (Lysen & Pisters 2012), (Deleuze & Guattari 1980/2005), (Lorraine 2010), will be mobilized. Dr Maggi Savin-Baden (2007) argues that, "Smooth learning spaces are open, flexible and contested, (…) in which (…) learning and learners are always on the move. Students here would be encouraged to contest knowledge and ideas (…) to create their own stance toward knowledge(s)." (Ibid: 13-14). All the possible relationships between all the spaces and places, physical, virtual and representational, that students occupy during the time they are at university is central to this investigation.

In conjunction with the ideas of smooth and striated spaces, I use *deterritorialization* as another key concept of Deleuze and Guattari's (2005: 10) as a framework to help understand how we can create and use liminal spaces in art and design education contexts. As Savin-Baden (2007) questions, "The pursuit of a line of flight into smooth spaces beyond that of the formal learning space is described as a process of deterritorialization as boundaries are broken down and fluid movement and cultural heterogeneity emerges." This can present a number of issues and she argues that, 'The contrast between smooth and striated learning spaces introduces questions about the role and identity of universities and academics in terms of what counts as a legitimate learning space and who makes such decisions of legitimacy.' (Ibid: 14). Deterritorialization in the context of this research helps us look more holistically at where learning for a student occurs. It helps in thinking beyond the formal class room/library, spaces of an educational institution, to the non-formal, in-formal and liminal spaces students occupy for the majority of the time they are at university.

Moving through deterritorialization, ideas of *Threshold Concepts* (Flanagan 2018) are critiqued in terms of their usefulness in the construction of liminal learning spaces. As Professor Mike Neary (2010*),* and his colleagues argue in their report, *Learning Landscapes in Higher Education,*

"Advocates of 'threshold concepts' refer to 'liminal spaces' as places that students occupy as they move from a confused cognitive state of mind on the way to grasping what 'threshold concepts' mean, but say nothing about the physical spaces where learning occurs." (Ibid: 11).

Therefore, this research interrogates how we can use our physical, virtual, and representational spaces to help the transition through conceptual learning thresholds in liminal spaces and make learning more affective.

Co-joined with *Threshold Concepts,* ideas of *Troublesome Knowledge*, (Hill 2010) are used to enable liminal learning spaces to be thought about, as places where students and staff can safely take risks with encounters that are unfamiliar and strange. As Savin-Baden states, "Disjunction, then, is not only a form of troublesome knowledge but also a 'space' or 'position' reached through the realization that the knowledge is troublesome." (Savin- Baden 2007: 14).

One aim of this research is to examine the variety of spaces and places students inhabit, before, during and after they are at university so we can use their prior knowledge and independent learning time most affectively. It is useful to note that throughout the student's academic life in art and design UK HEIs only approximately 15-20% of their time is spent in 'formal' timetabled teaching experiences and spaces. This research

looks at the remaining 80-85% of their time and how it can be more productively activated.

An Assemblage of Purposes

Using the University of the Arts London, *Strategy 2015-2022* (UAL 2015) as a place of departure, this project places, "…curiosity, making, critical questioning and rigor at the heart of our curriculum and to create the spaces for this to happen." It aims to engage, "…students in developing flexible modes of teaching delivery, considering the particular characteristics of a London-based education and advances in digital technologies." (Ibid). Diversity and inclusivity are at the heart of this research project and are seen as fundamental to the recruitment and education for staff and students, and the access to inclusive spaces and place in paramount, where they feel at home and belong. (Ibid).

This research interrogates ideas of, "Improving student transition, understandings of independent learning & Retention" and the "Innovation of use of physical and digital learning spaces with an emphasis on flexibility and change." (Ibid). In agreement with report *Learning Landscapes in Higher Education* (2010), I see, "The most compelling innovations are spaces that attempt to re-engineer the relationship between teaching and research. Spaces…[that]…link teaching with research activity between undergraduates and postgraduates, and to facilitate collaboration between students and academics." (Neary et al 2010).

My continuing hope for this project are that it becomes a part of helping the critical transformation of learning spaces at LCC, now and in the future. It aims to be a collaborative project between all stakeholders at LCC/UAL. From Pro Vice-Chancellors, Deans to students, estates, to teaching and learning academics, subject specialists to workshop technicians, associate lecturers to quality managers and all

participants in the communities at LCC/UAL. Without all voices being heard and given the chance to help build these new experiences there is a danger that there is just a retrofitting of spaces reactively rather than being proactively creating productive innovative teaching and learning places.

If LCC wants to be for, "...for the curious, the brave and the committed: those who want to transform themselves and the world around them…" (UAL 2015) we then need physical spaces, conceptual spaces, virtual spaces and representational places that foster these aims. I believe we have a chance to do this as we transform and transpose from one location, on the north side of Elephant and Castle (LCC 2018), to cross over to the south side of LCCs present position. I see this research project as an opportunity to evaluate existing infrastructures to model new ways of thinking about our future learning spaces.

An Assemblage of 'Lines of Flight'

This text for *Leap into Action* was one of the precursors and one becoming, of this research project. It acts as a rehearsal for the theoretical frameworks that could be used to critically investigate the past, present and future, learning spaces at LCC/UAL. It concentrates on ideas of liminality in learning and teaching and how physical, virtual, representational, transitory, symbolical, and liminal spaces and places might be utilized and constructed to help students gain their full educational potential.

The four parts to the main body text are made up of a series of 'lines of flight' derived from Deleuze and Guattari's concept as advocated in the opening section of their book, *A Thousand Plateaus, Introduction: Rhizome* (Deleuze & Guattari 2005*)*, they explain that,

'There is a rupture in the rhizome whenever segmentary lines explode into a line of flight, but the line of flight is part of the rhizome. These lines always tie back to one another. That is why one can never posit a dualism or a dichotomy, even in the rudimentary form of the good and the bad. You may make a rupture, draw a line of flight…' (Ibid: 9).

The opening *line of fight* starts by defining some of the significant concepts and terminologies used to conduct this research, including; assemblage, agency, smooth and striated space, and liminality. The next 'line of fight' will be an assemblage of the theories dealing with learning in spaces, that might be used in this research and why they might be useful. Including theories of, *deterritorialization*, *Troublesome Knowledge*, and *Threshold Concepts*. A further 'line of fight' will look at the types of spaces and places that can be used for learning; physical, virtual, representational, symbolic, transitory, and liminal. The concluding 'line of fight' will be a summation of the ways and means this project will be continued as developed in the previous 'lines of flight'.

Lines of Flight: Concepts and Terminologies

For this research the use of assemblage as discussed by Deleuze and Guattari in, *A Thousand Plateaus: Capitalism and Schizophrenia*. (Deleuze & Guattari 2005*)*, has been a very useful way of holding all the parts together. In his disentangling of this concept, Thomas Nail (2017), defines an, '…assemblage [as] not just a mixture of heterogenous elements; this definition is far too simplistic. The definition of the French word *agencement* does not simply entail heterogenous composition, but entails a constructive process that lays out a specific kind of arrangement.' (Nail 2017: 24). He argues that, "…all assemblages are composed of a *basic structure* including a

condition (abstract machine), elements (concrete assemblage), and agents (personae)."
He understands that, "Although the content differs depending on the kind of assemblage
(biological, amorous, aesthetic, and so on), the structural role or function of these three
aspects are shared by all assemblages." (Ibid: 36).

Assemblage is productive for this project as it helps consider the idea of learning and
teaching in a UK HEI as one that is complex. This research stresses the importance that
all elements of the organization are connected and are important to the way students
learn and are taught in the multiple environments they inhabit before, during and after
they are at university. In straightforward terms, I think of Deleuze and Guattari's
'condition' as the terrain where art and design higher educational institutions inhabit in
the UK today. I will use their idea of, 'elements', as the parts that help make these
organizations operate. Including the curriculum, the pedagogies, the administration, the
governance, the maintenance and the estate of UAL. The 'agents' are all the staff and
students who have shared, are sharing and will share the experiences of being at LCC
and UAL.

In an interview with Bryant (2009), Deleuze states that, "…an assemblage is (…) what
keeps very heterogeneous elements together: a sound, a gesture, a position, (…), both
natural and artificial elements. (…). Even among very different things, an *intensive
continuity* can be found." (Ibid).

Another point of departure for this project is that students should have more agency in
their own learning and become agents in all of the learning spaces and place they inhabit
whilst at university. John Cuthell and his colleagues (2011), in their article, *Learning
in Liminal Space*s, argue that key to informal learning is agency and "…This could be
in a group, without a tutor being aware of such activity; it could be (…) intentional or

tacit learning, (…), could be what they term 'serendipitous', without the learner (…) being aware of what is being learnt." (Ibid: 15).

The Deleuzoguattarian idea of the 'Smooth and the Striated' is a vital concept for this research. Developed by Siân Bayne (2004) in her article *Smoothness and Striation in Digital Learning Spaces,* it is*,* "…through students' documentation of their relations to dominant discourses and institutions, (…) [that] constitute them as rhetorical agents ('egents') capable of orienting themselves (…) in a move which places the personal, the expressive and the visual back into academic discourse." (Ibid: 308).

Flora Lysen and Patricia Pisters (2012) see the Smooth and the Striated, "…as a conceptual pair to rethink space as a complex mixture between nomadic forces and sedentary captures." (Ibid: 1). They argue, "While the smooth and the striated are not of the same nature and de jure oppositional, Deleuze and Guattari indicate that de facto they only exist in complex mixed forms. Moreover, the smooth and the striated work in different domains." (Ibid)

Tamsin Lorraine (2010) in her article *smooth space* states that, "…'smooth space' haunts and can disrupt the striations of conventional space, and it unfolds through 'an infinite succession of linkages and changes in direction' that creates shifting mosaics of space-times out of the heterogeneous blocks of different milieus." (Lorraine 2010).

Bayne (2004) continues this line of thought and posits, "Where smooth space is informal and amorphous, striated space is formal and structured. Striated space is associated with arboreal, hierarchical thought, which Deleuze & Guattari oppose to rhizomatic thought – non-hierarchical, underground, multiply-connected." (Ibid: 303). Savin-Baden (2007) uses the ideas of Deleuze and Guattari in educational contexts to argue that, "Smooth learning spaces are open, flexible and contested, spaces in which both learning and learners are always on the move. Students here would be

encouraged to contest knowledge and ideas proffered by lecturers and in doing so create their own stance toward knowledge(s)." (Ibid: 13-14).

As an adjunct to smooth and striated spaces, Ray Land, explains that, "Liminality becomes the space to develop threshold capabilities en route to eventual acquisition of knowledge capability. Liminality ceases to be a clearly differentiated linear sequence of pre-liminal, liminal and post-liminal (…). He argues that, "A true learner is never in a permanent post liminal state' A liminal state comes to be viewed as the norm, with 'continual waves of less and more comfortable liminality." (Land 2013).

Cuthell et al, in their text, *Learning in Liminal Spaces (2011)*, use liminality as, "…a term drawn from anthropology that describes a rite of passage, in which a person moves from one state of being to another". (Ibid: 1). Charles La Shure (2005), describes "…liminality [as] (…) one of the most visible expressions of anti-structure in society. Yet even as it is the antithesis of structure, dissolving structure (…), it is also the source of structure." (Shure 2005).

Dianne Mulcahy (2017) maintains, that, 'In a Deleuzian framing, a liminal space has no beginning or end. It is emergent, a temporal and spatial configuration or assemblage that 'allows us to name a terrain.'" (Mulcahy 2007: 111). She continues by arguing that, "…this space is rhizomatic. Characterized by openness, indeterminacy and movement, this rendering invites a reimagined geography of learning and education. For some commentators on liminality in the social sciences and humanities, the spatial perspective is central." (Ibid).

Lines of Flight: Theories

'Deterritorialization' (Deleuze & Guattari 2005: 3-21) has been a valuable way of thinking about learning spaces as it helped me move away from the ever present and assumed ways we tend to work in our lecture halls, studios and seminar rooms. Teacher

centered, front facing desks in serried rows type of set ups. Deleuze and Guattari's idea is that, "Nomadic waves or flows of deterritorialization go from the central layer to the periphery, then from the new center to the new periphery, falling back to the old center and launching forth to the new." (Deleuze & Guattari 2005: 53).

I continue to use ideas of 'Troublesome Knowledge' (Hill 2010) to enable liminal learning spaces to be thought of, as places where students and staff can safely take risks with encounters that are unfamiliar. Land argues that, "We cannot predict the future but we can help our students anticipate and prepare for it, (…) both students and their tutors will need to encounter a certain strangeness, and deal with knowledge that may be uncomfortable, challenging and 'troublesome.'" (Land 2015: 17). He argues that, "Depending on discipline and context, knowledge might be troublesome because it is ritualized, inert, conceptually difficult, alien or tacit, because it requires adopting an unfamiliar discourse…" (Ibid: 18).

Often used with 'Troublesome Knowledge' is the idea of 'Threshold Concepts'. Professor Glynis Cousin, gives an overview of the research into these ideas and explains that, "These concepts, Meyer and Land argued, could be described as 'threshold' ones because they have certain features in common." (Cousin cited in Flanagan 2018). The idea of threshold is useful in art and design teaching where risk taking and uncertainty are valued and ways of going beyond the normative orthodoxies are seen as virtuous. Architecture educator, Julian Williams (2014), in, *The design studio as liminal space,* considers threshold concepts as active and collaborative and should always be in flux, as they help, "…to keep our teaching alive to (…) build a supportive environment that allows successful mastery via multiple routes." (Williams 2014: 70). This research project uses 'Troublesome Knowledge' and 'Threshold Concepts' as pedagogical ideas

to use when planning and mapping out our learning environments and are useful in a university that seeks to be inclusive in its diversity,

Lines of Flight: Learning Spaces & Places

As the RMIT Learning Spaces Advisory Group stated in 2013 "We now understand that learning spaces are (…) any space where a student can access a computer; talk with another student; read a book or join peers around a table at a café, is a potential learning space." They contend that … the whole university is a potential learning space" (Hall 2013: 22). They see, "…university learning spaces as 'learning landscapes' that broadly encompass, '… conceptually holistic, loosely-coupled interconnections of all formal and informal, on- and off-campus, virtual and physical facilities, sites and services.'". They also argue that, "The spaces in which we work, live and learn can have profound effects on how we feel, how we behave, how we perform." (Ibid: 5).

The 'mapping' of these terrains where learning and teaching can take place is one of the central aims of this research project. The connections, however fluid they might be, between the various aspects of a student's educational life need to be mapped in a way that is recognizable and productive.

Paul Temple (2007), importantly argues that, even though there is an appetite for a better understanding of the relations between innovative learning spaces and effective teaching and learning, this is not well understood, due to the scarcity of research in this area. He argues, "The lack of research may be one reason why there is resistance to change among academics in higher education." (Temple 2007: 4-49 cited in Neary 2010: 11).

Bayne (2004) maintains, "If there is constructive debate to be had over the extent to which the web in general describes smooth or striated space, few doubts can exist in relation to that element of the web which consists of the virtual learning environment –

it is a space of pure striation." (Bayne 2004: 312). If we do not start to think differently about all types of learning spaces, physical, virtual and representational, the ones that remain rigid and undynamic will mean the other spaces that do become more flexible and open will be affected by them negatively.

Savin-Baden (2007) sees representational spaces as coded, clandestine, hidden, symbolic and covert. She uses Henri Lefebvre's 'constitution of spaces' and ideas of institutionalized spaces that prevent creative learning spaces to flourish, as ways of, "…understanding of the diversity and complexity of learning spaces can also inform the ways that they are (re-)created and managed. For example, spaces between people and places are important learning spaces." (Savin-Baden 2007: 10)

Lefebvre's theory on the production of space is based on his three-dimensional dialectic (Schmid, 2008). This conceptual triad is made up of conceived, perceived, and lived. This idea could help how we create our learning spaces to enable students and staff to identify with them as place to inhabit and to belong in. Each part of the conceptual triad is a moment in the process of creation of social reality (Lefebvre, 1974/1991). Lefebvre translates his conceptual triad into spatial terms to explain the production of space: spatial practice, representations of space, and spaces of representation. This spatial triad links these three moments, which interact to produce space. (Wolf & Mahaffey 2016: 60). Representational spaces are often the ones that are easily defined and are often bureaucratically striated.

Liminal spaces are harder to represent, but by seeing the importance of breaking down the conventional separations of learning spaces through imposed restrictions of "…age, class, money and expectations…", Cuthell (2011) argues that, "...the liminal spaces that we inhabit and within which we work are everywhere, and nowhere." (Ibid: 2)

Informal and unformal learning spaces can be overlooked as places where students go beyond what is taught in the formal settings of the university and as places of transition through complex ideas and where they come up with ones of their own. The first step is to recognize these as spaces that can be a part of the ecology of a student's pedagogical life. Laura Praglin (2016) in her text. *The Nature of the "In-Between"* asserts that, "For Winnicott, life itself is always expressed in symbol, for it plays an integral part in the formulation and realization of transitional space." (Ibid)

Cuthell & Preston (2011) quoting The European Commission on Education and Training, state that, "…there has been a growing appreciation of the importance of learning in non-formal and informal settings, and that "New approaches are needed to identify and validate these 'invisible' learning experiences." (Ibid). If we want a way of validating non-formal and informal learning at present, "There is no agreed legal national position or approach to validating or recognizing non-formal and informal learning in England." (EACEA 2017). One of the aims of this research is to help make these types of spaces more recognized as places of learning and teaching.

Lines of flight: Conclusions

As stated before, if only 15% of their time is spent in formal teaching and learning spaces the research asks what can we do to help make the other 85% of a student's university learning life be assembled in a way that enhances their thinking and creates a 'learning gain' rather than a 'learning loss'.

Some critics have argued that the spaces and places where students learn are peripheral to ideas about how the curriculum is taught, delivered and assessed. I would argue that teaching and learning is an assemblage of all the ideas that go up to make a holistic experience for our students to constructively become agents in their own learning.

Spaces and places are often seen as the tangible things that can be altered and that then can lead to students to get a better education. More space, more technology, more flexible spaces, dedicated studio spaces, common rooms, prototyping labs are all things we can make happen, but why will they help a student's learning experience, is one of the questions I pose through this research project. Despite the continuing and extensive literature and research that has been carried out around learning spaces we still seem to make learning spaces and places that are inhabited infrequently and often uncomfortably. Uncomfortable in the sense students cannot and do not want to linger, lurk or even lounge in the spaces provided.

The concepts of smooth and striated spaces in tandem with ideas of deterritorialization can radicalize how we can think about making the spaces our students inhabit become more dynamic places for their lived learning experiences. These ideas help in reforming conventional ways of thinking about ways we construct our classrooms, VLEs, or other seemingly more radical learning spaces or places.

To understand more about the ways we learn, and where we learn the ideas of liminality and liminal spaces have become important ideas in this context as they open up the possibilities of using more of the spaces, virtual, physical or representational, that are at present just transitory and overlooked. It is these in-between spaces, threshold spaces, troubled spaces, 'smooth spaces', that we need to think about using in conjunction with the more formal, dedicated, class room space, that are often striated spaces.

This research continues to argue that to create learning spaces for our present and future students and staff we need to use Deleuze and Guattari's ideas 'mapping' spaces rather than the tracing or retracing of past ideas about learning spaces. For them, "A map is open and connectable in all of its dimensions; it is detachable, reversible, susceptible to constant modification.' Which is how I think we need to see our future learning

spaces. An as this type of map, '…can be torn, reversed, (…), reworked by an individual, group, or social formation. It can be drawn on a wall, conceived of as a work of art, constructed as a political action or as a meditation." As they say, 'What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real.' (Deleuze and Guattari 2005: 12).

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