

# Middlesex University Research Repository

An open access repository of  
Middlesex University research

<http://eprints.mdx.ac.uk>

Maguire, Kate ORCID: <https://orcid.org/0000-0002-8499-4051> (2018) Transdisciplinarity: towards an epistemology of what matters. In: Transdisciplinary theory practice and education: the art of collaborative research and collective learning. Fam, Dena, Neuhauser, Linda and Gibbs, Paul ORCID: <https://orcid.org/0000-0002-9773-3977>, eds. Springer International Publishing, Switzerland, pp. 103-115. ISBN 9783319937427, e-ISBN 9783319937434. [Book Section] (doi:10.1007/978-3-319-93743-4\_8)

Final accepted version (with author's formatting)

This version is available at: <https://eprints.mdx.ac.uk/29870/>

## Copyright:

Middlesex University Research Repository makes the University's research available electronically.

Copyright and moral rights to this work are retained by the author and/or other copyright owners unless otherwise stated. The work is supplied on the understanding that any use for commercial gain is strictly forbidden. A copy may be downloaded for personal, non-commercial, research or study without prior permission and without charge.

Works, including theses and research projects, may not be reproduced in any format or medium, or extensive quotations taken from them, or their content changed in any way, without first obtaining permission in writing from the copyright holder(s). They may not be sold or exploited commercially in any format or medium without the prior written permission of the copyright holder(s).

Full bibliographic details must be given when referring to, or quoting from full items including the author's name, the title of the work, publication details where relevant (place, publisher, date), pagination, and for theses or dissertations the awarding institution, the degree type awarded, and the date of the award.

If you believe that any material held in the repository infringes copyright law, please contact the Repository Team at Middlesex University via the following email address:

[eprints@mdx.ac.uk](mailto:eprints@mdx.ac.uk)

The item will be removed from the repository while any claim is being investigated.

See also repository copyright: re-use policy: <http://eprints.mdx.ac.uk/policies.html#copy>

# Transdisciplinarity: towards an epistemology of what matters

Kate Maguire

Middlesex University, London

(published 2018 in *Transdisciplinary Theory, Practice and Education: The Art of Collaboration, Research and Collective Learning*, D.Fam, L. Neuhauser, P. Gibbs (Eds) Springer

This chapter explores the adoption of a transdisciplinary approach to knowledge by a *doctor of professional studies research programme* at Middlesex University in London. This programme is designed for senior professionals in a range of sectors who wish to bring about change, of varying degrees of magnitude, in practices and attitudes in their contexts. Its research pedagogy combines professional and academic knowledge to meet challenges posed by the temporal limitations of rapidly shifting local and global contexts. It proposes that conceptualising practice, through a transdisciplinary lens, opens up significant possibilities for both articulating and navigating the complexities inherent in any cultural ecology and the positioning of the researcher in that context. This enhances the research process's potency to influence attitudes, focus and impact including the concept of agential knowing in identifying and attending to what matters.

**Key words:** agency, what matters, complexity, practice theory, change, adaptation, higher education, knowledge and knowing.

## Context: Transdisciplinarity and mattering

In Europe, the separation of knowledge into discipline islands became more pronounced in the eighteenth century. In his quest for the value of knowledge through its history, Burke (2016) refers to this period as the location of the shift from 'knowing why' to 'knowing how'. He qualifies this with '*what is considered worth knowing varies a good deal according to place time and social group.*' What is worth knowing is what the anthropologist Cathrine Hasse (2015) refers to as *what matters*, and for Barad (2003:827) mattering cannot be separated from agency

Agency is not an attribute whatsoever – it is “doing”/”being” in its intra-activity. Agency is the enactment of iterative changes to particular practices through the dynamics of intra- activity...Particular possibilities for acting exist at every moment, intervene in the world's becoming, to context and rework what matters and what is excluded from mattering

In 1995 Middlesex University in London was still completing its transition to the status of a university by gathering vocational arts and technical colleges in North

London together into one entity, but spread over several campuses. Technical colleges had been inclusive of students from a wide range of backgrounds not least those with practical skills and leanings towards 'knowing how', that is, knowledge gained from practice and for practice. This did not exclude theoretical knowledge which had been and still is the main preserve of the universities. The Institute for Work Based Learning in Middlesex University emerged out of this transition without full capitulation to the 'knowing why' dimensions of the intellectual paradigm. Rather it began to develop a strong dialogue between the knowledges of the academy and the practice knowledges of the work world, seeking a marriage that would produce offspring to meet the growing technological sophistication and complexities of the new world. The timing was right. The university became the recipient of the Queens Anniversary Prize three times; the Queens Award for Enterprise twice; the Higher Education Academy's Centre for Excellence award and a major funding award to advance work based learning and professional studies across the university and with outside partnerships. These were in recognition of its attention to higher education's role in what matters to communities and what matters for the future for the widest number of stakeholders. This could not be achieved without the reintegration of academic and professional knowledges.

In this new arena of working alliance partnerships with professional bodies and work worlds outside of the university, the Institute explored new conceptualisations of practice, new methodologies, pedagogies and ways of learning; it re-contextualised existing ideas from a range of discourses; it challenged exclusion of experiential learning from the entry criteria for higher awards by pioneering accreditation for prior professional learning, and contributed significantly to the existing literature of the vocational sectors which were available primarily from Australia and the United States. Much later, Europe's Horizon 2020 would embody this value driven approach by making available millions of euros in funding for projects to entice higher education institutes to work with local organisations, from football clubs to local councils, to regenerate communities in what we might call today transdisciplinary ways – working together across difference; openness to listening to the perspectives of the other; consensus rather than compromise and the dialogue of knowledges from street cleaner to CEO, to arrive at what the particularity of local culture needs in order to thrive for the benefit of the individual and the collective in a world of complexity.

After the establishment of its four year doctoral programme, it turned its attention to the need to deep mine the professional expertise and knowledge of recognised leaders in the professional arena who, through a range of significant artefacts, were influencing thinking and practice with a reach far greater than the academy could achieve. However these artefacts, on the whole, embodied the knowledge of individuals or small groups of individuals and had rarely been subjected to critique by their creator/s. As a consequence of this observation, it introduced the Public Works

doctoral pathway, the nearest equivalent being the PhD by publication. This programme now has over thirty graduates.

With over 200 doctoral alumni from a range of sectors and disciplines, 120 current doctoral candidates, and scores of undergraduates and Masters' candidates from major international organisations, the Institute's leadership in collaborative pedagogy, curriculum and research, integrating academic (single discipline) and professional knowledge (multidiscipline) which enhances both, was recognised in 2017 in the university's new strategic plan. The Institute's expertise and programmes have now been integrated into the main university with a mandate to continue this approach to knowledge for the future as the university further aligns to the complexities of interconnected work worlds. However, in 2013, the Institute had added to the title of its highest award, the descriptor *Transdisciplinary*.

This chapter explores why, informed by the evaluation and outcomes of its programmes; the masters and doctoral output of its graduates; the contribution to knowledge of its staff and alumni and a recognition of the complexities of practice. Most importantly, a key motivation to adding the new descriptor was the rapidly shifting contexts of work environments which were challenging higher education's adaptive capacities to keep up with the demands of business led markets and yet not compromise on its wider interpretation of education as inclusive of the arts and humanities, of soft skills like the capacity to relate and reflect, and the value sets which attend to the 'common good'. These are the humanising factors that focus on ways of being in the world as well as ways of doing and challenge the pervasive epistemology of ignorance (Malewski & Jaramillo 2011) which endanger a more equitable and sustainable future. It can be argued that, like anthropology, transdisciplinarity is more than the knowing why and the knowing how, it is a way of knowing; the developing of an attitude to the world which is a contribution to an epistemology of what matters locally and globally.

To arrive at an epistemology relating to interconnectedness and complexity, would also require some attention to complexity as a world view, in other words the ontology of complexity (Boulton *et al* 2015). It was clear to the doctoral team that proficient practitioners coming into the programme already held an ontological position or world view derived from their work worlds, that of interconnectedness and complexity; it was a defining feature of their reality. It was more surprising to them that universities on the whole did not have such a perspective. Our approach then to programme design focused on this ontology embedded in practitioners. Our task was to help them articulate the beliefs, meanings and actions which shape that view through exposure to diverse discourses, and to explore with them ways of bringing about change through this understanding of 'how the world becomes' (Boulton *et al* 2015:11). Transdisciplinary, as will be seen, provides both an articulation of the ontology of complexity and offers contributions to a framework, an epistemology, for constantly engaging in ways of knowing and shaping the world in which we live and work. According to Nicolescu (2010:22)

Transdisciplinarity concerns that which is at once between the disciplines, across the different disciplines, and beyond all disciplines. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge.

## Research Approach

Because our life is a project rather than a series of present moments, we can never achieve the stable identity of a mosquito or a pitchfork (Eagleton 2004:208)

Like Eagleton's view on life, our research pedagogy sees research as a project, an evolving thing that requires not a closing or finishing but a built in adaptive capacity for evolving. For example, the case study intentionally breaks its confines and seeks generalisability through examining other cases studies or through extracting what can be applied successfully across more than the case study locus; or the case study becomes a constantly revisited locus in a longitudinal study; or a case study can be of the interconnectedness of things which does not have a traditional locus thereby avoiding the discipline/culture bound paradigms which can suffer from replication syndrome. Evolving comes with a past, a present and a future but it is neither linear nor determined. Research needs to be more generative than replicative or it will end up, much like Koestler's fear for humans: a dead end species (1978). Boulton *et al* (2015:103), in their call for us to embrace complexity, refer to the same characteristics.

Evolutionary complexity accepts the fact that 'systems' can change their nature qualitatively over time. New elements, new interactions, new problems and new opportunities can appear without design, and indeed these evolving systems will actually co-evolve with each other so that the overall system is really discovering/creating itself over time and responding adaptively, leading to further co- evolutions

Choosing this transdisciplinary approach for our programme reflects our belief in the need to shift away from traditional approaches but as a complementary rather than an opposing action. This approach also resonated with changes in our nomenclature which had started with our foundations in work based learning. A doctoral thesis becomes a research project; the proposal, a plan; the research questions, a conceptualisation of the issues; the outcome becomes the impact; the assessment criteria relating to methodology become the methods most appropriate to achieving the data sets that will enhance the reliability and the impact; the ethics of research become the personal and professional integrity of the researcher/s.

The focus of the PhD can be seen as the equivalent of surface and deep cast mining on specific islands, the loci, using the particular apparatus appropriate to the geological terrain of each island. It will consistently produce a reliable standard of product of what that particular terrain has to offer and over time more complex

'things' evolve and are sent out to be of use, to be applied in different ways in different contexts from atomic bomb to mapping the brain; from social theory to new political movements. The professional doctorates do not have the same loci. They are positioned along the three dimensional in-between connectors of islands, carrying cargo, using apparatus conducive to the changing climatic conditions and open to researching both the connector itself (shipping lanes) and its role in cross pollination between islands (practice) which evolves the knowledge, experiences and products of those islands and creates ever increasing archipelagos. This is at the core of transdisciplinarity: the interconnectedness of things, like the synapses of the brain, and how this can be harnessed and expand to release potential for the future without incurring a psychotic breakdown.

The 'research project' can only ever be a thread in this 'metissage'<sup>1</sup> but its impact can be significant and contribute beyond itself to the evolving complexity. The research project is expected to be collaborative as the practitioner in the work world is never single disciplined and alone. The researcher/practitioner has to know about, but not necessarily be a deep miner in a range of disciplines in order to navigate the connectors successfully and achieve outcomes which matter to the individuals, to the organisations, to the communities they connect and to the existing knowledge landscape; for interconnectedness makes it an imperative to be both highly adaptive and contributory to local context and global influences: the wings of the butterfly; the drop of rain; the shooting of an individual in a street; \$50 dollars on a stock market gamble; the power of the local to influence the global.

### **Agency and story**

It is the very fact that we cannot live in the present – that the present for us is always part of an unfinished project which converts our lives from chronicles to narratives (Eagleton 2004:209)

This shift to researching practice and theorising practice has given rise to one of the most common criticisms of professional doctorates, that is, the use of the first person and not the objective/passive voice. This dictatorship of grammar and syntax (the active and passive, the subjective and objective) to signify what is reliable and what is not in research is a convenient and superficial way to differentiate what should be acted upon and what should not (Eastman & Maguire 2016). Practice is about the agency of the practitioner/s in an interactive relationship with the 'objects' of their world, including other humans and learning and evolving from those interactions. The use of the passive and claims to objectivity can be the abnegation of responsibility and accountability as much as it can be argued as an indicator of reliability through consistency. The agency of 'I' in terms of impact has informed not only thinking but action in what matters to the lives of everyday people: prejudice;

---

<sup>1</sup> French: a weave, like a tapestry (Nouss 2005)

marginalisation; exclusion; vulnerability; identity; financial security; safety and belonging needs; a future for their children; facilities for thriving.

As metrics take over the 'managing' of complexity, the narrative comes into play to explore and explain what sits behind the metrics and prevents their exploitation by those who seek to control the agendas including those of higher education. If higher education was to be likened to an egg in the process of becoming a butterfly, its current metaphoric and metamorphic state would be a chrysalis, trying to evolve from restrictions while vulnerable to being genetically engineered to fly in one direction and communicate with whom it is programmed to communicate and how, rather than as an informed pollinating agent with a value system that aims to do what is needed through collaboration, and a mandate to attend to what matters to people and to the planet. Some of the most influential thinkers of the twentieth century used their individual agency, the 'I' or sometimes the 'we', to present their critical observations and understanding of what it is to be human, rather than the product of a discipline: Pierre Bourdieu, Mark Twain, Barbara Ehrenreich, Albert Einstein, Edward Said, Margaret Mead, Mario Vargas Llosa, Arthur Koestler, Slavoj Zizek, Antonio Gramsci, to name a few. Their impact remains generative over time perhaps because it did not emerge from a replicative system. They dare to declare their own agency and are accountable for it.

They have observed, experienced, conceptualised, contextualised, questioned, thought, compared and acted in and on the world in their unique ways. What links these diverse writers together in a knowledge community is their common humanity. They do not manage complexity, they create ways to both navigate and contribute to it. They do not fear it, only the possibility that we will be irretrievably shipwrecked which could take many forms, from catastrophic damage to the planet to that of the mind, our humanity.

We would be worse than we are without the good books we have read, more conformist, not as restless, more submissive, and the critical spirit, the engine of progress, would not even exist. Like writing, reading is a protest against the insufficiencies of life. When we look in fiction for what is missing in life, we are saying, with no need to say it or even to know it that life as it is does not satisfy our thirst for the absolute – the foundation of the human condition – and should be better. We invent fictions in order to live somehow the many lives we would like to lead when we barely have one at our disposal  
Mario Vargas Llosa (2010)

### **Narratives of complexity**

Complexity is now seen as one of the greatest challenges to successful research yet it is not always part of the preparation of a researcher. For many, complexity is accompanied by some reference to technology and the speed of change. For some,

technology is the creator of complexity. However, Augé, the French anthropologist, has a more nuanced and valuable perspective (1999:53).

We are just learning to imagine the complex past of a planet that until recently had never been grasped in its entirety by a single point of view (even today we would be hard put to find a specialist capable of drawing a single picture of the world during the period when Athens and Sparta alternatively dominated the Greek scene). If we are conscious of the fact that *in and of itself* technological sophistication tends to play a simplifying role – to have an homogenizing effect – we should logically conclude that complexity *precedes* the instruments susceptible of apprehending it and making it manifest

Therefore, at the end of this particular part of the evolutionary path for our candidates, we are not looking for a report or a thesis but a knowledge narrative. It is a story of searches and of relationships, of choices and integrity, of honesty and accountability, of creativity and daring, of revealing and recontextualising. It is a narrative of collaboration and pollination. The research does not begin at the point of entry to the programme; it has started many years before that. The professional doctorate facilitates an articulation of what is already implicitly known; it weaves the why with the how and sets the candidate on the road again with new insights, contributing to a process of becoming, not one of arrival. The researcher brings a story of context to the table; their relationship to the part of the knowledge landscape with which they have grown familiar, in fact, in which they may be considered an expert; they come with a willingness to critique the limitations of their terrain and motivated to explore others; they usually carry with or in them a set of values, a code of conduct which can inform their whole project acting as a barometer for every decision they make from choice of methodology, to participation, to intention. Why would the academy not bring the same to the table?

### **Knowing matters**

A man was on a boat in the middle of the ocean that looked like the middle of nowhere. The boat was going round and round making no progress. The man looked up at the stars and knew they had a message for him. But he no longer knew how to read them (Maguire 2004)

We cannot yet say we do transdisciplinary research in the form carried out by, for example, climatologists, town planners and Horizon 2020 community projects. We are still in the process of clarifying how this discourse can facilitate this meeting of knowledges to achieve more salient outcomes. At this stage, unlike Nicolescu, we may be seeking, not the unity of knowledge, but the coherence of knowledges. For a start, the academy and the work world both have different relationships to temporality. The work world is in an environment which changes from day to day. It has to respond faster, be more adaptive, think outside the box, de-activate memory retrieval to divert energy to the insatiable appetite of the present future. It is a place,

after all, where the future has already arrived. The academy, on the other hand, dwells between the past and an *out of focus* present. Its memory retrieval is excellent – perhaps it needs to work harder on recontextualising it as knowledge for the future. Its tempo is slower, which is not necessarily a negative condition. It has many advantages but the academy, in seeking to be a worthy supplier of goods and services to the work world, can become preoccupied with developing instruments to enhance its value to the outside world which strip it of the very asset that is most valued by the work world: the place to think, to reflect, to learn, to question the what, the why and the how of actions and the consequences of impact.

We can work with senior professional practitioners on how to make sense of the academic discourses for a practical work world. This is a step often overlooked. We currently use transdisciplinarity on our programmes for three main purposes: 1. as the development of a way of being in the world: collaboration; social mindedness; coherence across difference; *being with other* rather than *being the other*; common values of humanity; dialogue; benefits to the widest number of stakeholders; openness to being changed by one's own experience and the experiences of other. 2. as a way to conceptualise complex practice thereby beginning the process of articulation of that which is implicit, pushing beyond the expert's response to Q. *how did you know to do that? as I just knew*. 3. most importantly we use transdisciplinarity as a creative process of imaging and imagining, of transformation through removing the obstacles to one's own knowledge, to being free to think outside the confines of accepted cultural memes

To those who ask what differentiates a transdisciplinary professional doctorate and one which is within a specialist area, the focus of a transdisciplinary doctorate is on the complexities of practice rather than on the discipline or sector. It theorises practice, not pre-existing theory of disciplines. This theorising of practice can contribute to how we develop educators into community activists, engineers into politicians, health professionals into negotiators. It contributes to knowledge which emerges out of practice. Its discourses are practice (Nicolini 2013) and complexity (Boulton et al 2015). Its research sites are always the work world. The national and international criteria of assessment for PhDs and Professional Doctorates are the same. They are arrived at by slightly different routes; more one of emphasis. They both have to tell a comprehensive, convincing, trustworthy and cohesive research story with rationales for their choices. One arrives at the destination by road, the other by sea. They both still arrive but the knowledge narratives will not be the same; hopefully they will have complementary elements.

### **Critical reflection as movement beyond stasis**

Perhaps one of the most distinctive differences between these different doctoral routes is the impact on the researcher. Critical reflection on one's own ontological and epistemological position and on one's own practice and current ways of doing and thinking, is what comes to be a criterion of reliability of the research. In the

professional doctorate the reliability is based not only on the common criteria of rigour but on the trustworthiness of the researcher as capable of researching self rather than on being able to follow the paradigm apparatus. This is why personal and professional integrity are explored. This is the beginning of a thought process towards a consciousness of a way of being as well as a way of doing in the world which is, as stated before, always a process of becoming. Consciousness; articulation of the implicit; freedom to explore other discourses; being creative and achieving a personal and professional impact, are regularly cited in candidate and examiner evaluations and in the research narratives themselves.

We have not achieved mastery of transdisciplinarity in the doctoral arena; we are a work in progress but would never wish to be static in our thinking. When I say 'we', I refer to the candidates, the graduates, the collaborators and partners who have been going through a process of coming to know each other and working together in a way that not one group or individual can achieve on their own. The university has adapted processes to allow us to respond effectively and speedily to the needs of the work world. We work on collaborative programme design at undergraduate, masters and doctoral level with nationally and internationally recognised organisations who can demonstrate the impact of what we do together in terms of both increased profitability and in relational leadership, individual and distributed leadership and in social responsibility. We all enhance our performativity and performance through insight into how we learn individually and collectively through each other, for purposes beyond the limitations of the expectations we impose on ourselves (Barad 2003:802).

The move towards performative alternatives to representationism shifts the focus from questions of correspondence between descriptions and reality eg (do they mirror nature or culture?) to matters of practices/doing/actions. I would argue that these approaches also bring to the forefront important questions of ontology, materiality and agency

So why should the academy seek to go beyond the limitation of imposed expectations of the status quo or be satisfied with a hysteresis that is such a long time lag that the field conditions have changed dramatically by the time we think we are ready? Evolution requires adaptation and technology has increased the dissemination of information. What matters changes over time. Those practices and belief systems, which support stasis as what matters, die out, often in a spectacular manner, a manner which often negatively impacts lives, takes lives even, before their demise. According to Eagleton, it could be the fear of non- being, a terror of *vacancy ...and what they plug it with is dogma*. (2004:208). It is the fear of uncertainty. Observations of millions of years of evolution conclude that human beings are not programmed to change, they are programmed to adapt making them the most successful, voracious, colonising, imaginative, constructive and destructive species on the planet. Afflicted with consciousness and conscience which may temper excess, they struggle with identity and meaning, with fairness, with individual

and collective imperatives of territorial claims in space, time and being. The human species strives for ownership even of that which does not exist after corporeal death. We strive for ownership of resources including human minds; these dictate what matters now but can we shape what will come to matter in the future?

Higher education contributes to the expansion of ownership through preparedness of recruits. However what if what matters is a stake in the future, a good attempt to avoid annihilation? What if it is also about lessening the collateral losses of territorial imperatives and aspiring to the attainment of an equilibrium that is echoed in Bruno Bettelheim's words – the informed heart (1991). Transdisciplinarity is not a dogma; it is not a stuffing of a gap out of fear of uncertainty. It is opening up the creative possibilities of uncertainty in each individual; a positive uncertainty of their hitherto certainty so that they can begin to interact and interconnect knowledges.

### **Evolving thinking**

Transdisciplinarity is not a new concept. It is a product of evolution with recovered traits or new characteristics appropriate to the times, appearing when needed which is the story of evolution; we are not looking to sprout wings. We are individually and collectively manifesting the verbal and value equivalent of wings: the common good, social justice, equality, democracy, plurality. Such wings have echoes of the ancient Greeks, the fingerprints of renaissance polymaths like Michelangelo and Leonardo da Vinci, the voices of twentieth century anthropologists and the socio political vision of adult educationalists like Paulo Freire and Antonio Gramsci. There are more than glimpses of them in work based learning (Gibbs and Costley 2006, Costley & Armsby 2007) which encompass the foundational principles of the Institute. They have emerged again in the discourses of transdisciplinarity (Gibbs 2017) as a response to colliding cultures which can no longer avoid proximity or what some might fear as contagion. If *culture is a systematic acquisition of human experience* (Freire 2013:45) then, if we are moving towards a world culture, what are the desired values which will provide cohesion without enforced homogeneity, progress without marginalisation, plurality without chaos?

For the moment, in the context of one higher education institute which I can speak about, transdisciplinarity, as a characteristic of our research, declares a particular attitude to knowledge and to the other; an intention towards particular kinds of action, actions that are arrived at through cooperation; impact which attends to the common good and inclusion through the plurality voices. Just as *wisdom* cannot be self - ascribed but is bestowed by others who have recognised it in a person, so *transformative* cannot be self -ascribed by the people who design and deliver our doctorate with its transdisciplinary characteristics; it is ascribed to the programme by many of those who have undertaken it. What exactly transformation is and how it occurs for the researcher practitioner remains elusive. We can try to pin it down like the butterfly on the entomologist's tray and teach it but that may possibly ensure its instrumentalisation and atrophy perhaps because it is not solely something that one

does; it is something that one experiences. It is what we do with the experiences that matters.

### **Towards an epistemology of what matters**

Taking a transdisciplinary approach does not mean, as some critics may voice, that there is no theory required. On the contrary, there are many theories and conceptualisations of practice to draw on in order to firstly, conceptualise the cultural ecology which is the location of the research and the practices within it, including that of the practitioner researcher. This identifies not only the focus of the research but the internal and external influences that need to be taken into account when designing the research. The knowledge landscape exploration will include existing knowledge on theorising practice. The aim is not to prove or disprove a theory of practice or to create a new one. It is how to bring about change in a complex environment that is subject to strong internal and external factors, including time, using ethically and methodologically sound processes and procedures. The theorising of one's own practice usually occurs after the data have been collected. This is when the practitioner researcher has both substantial data and their own agential experience to consider and to interpret against existing knowledge and from which to draw learning for themselves, their sector and for the wider field of knowledge. Theorising requires understanding of epistemologies and discourses and the recognition of one's ontological position.

The addition of transdisciplinarity to our doctoral title then was to indicate the approach to knowledge that can be expected; a focus on practice which presupposes that practice is that which involves the practitioner in interacting with and across many other practice cultures. Practices have purposes which influence behaviours: some practices can be manifestations of compliance, others manifestations of a cultural ecology seeking connections to other cultural ecologies as a means to thrive through increasing its adaptive capacities to shifting contexts and inter-contextual dynamics. This seeking is predicated on what matters in the particular context, what matters to the inter/regional context, what matters in the global context and the interrelatedness of these for the small and the big. Practices and changes to practices could be for radical change, others to maintain the status quo. At its best, transdisciplinarity is an approach which is dialogic, consultative, realistic, values driven, context sensitive, open, enquiring and patient.

Ontology in the transdisciplinary context can be seen as an '*ontology of connectivity*' (Boulton *et al* 2015:204). Epistemology is about the way we know or understand the world. It is a collection of ways of knowing. The ontology and epistemology become intricately connected, constantly informing each other in an improvised dance of both skill and creativity unrestricted by rigid paradigms but open to being shaped by and shaping the particular and the global environments in which they move.

Transdisciplinarity, therefore, can be seen as an approach to ways of knowing about what matters. It is agential. It is not

embodied knowledge tied to doings and learning information as lexical knowledge, which is assumed to be static and transferable... In a practice-based learning perspective, knowledge of cultural markers is neither a substance, an object or positioned in the minds of the individual. Knowledge does not exist separately from subjects... (Hasse 2015:161).

For Hasse (2015) and Barad (2003), their deep focus is on how matter comes to matter. How materials are in a sense mattered

If the craft of expert ethnographers is how to include good descriptions of how material matters and gains significance, our own descriptions of how mattering matters must also explain how matter comes to matter to us as researcher (Hasse 2015:13)

To the practitioner researcher what matters encompasses the individual, the local ecology and the wider context in which it sits and to whose influences it has to respond. Transdisciplinarity offers a conceptual framework and an approach to research which begins to provide the conditions to understand how we come to know and to choose what matters at an individual and collective level.

Hasse (2015) inspired by Barad gives some articulation to the agential role of the researcher. She sees Barad's apparatus of the researcher as a metaphor and proposes that the apparatus (the researcher) is an apparatus of *diffraction*

...moving into the bigger apparatus of already established phenomena emerging with words and meaningful materials. The apparatus of the researcher makes a diffracted reading of the ways matter come to matter to the people already nested in their everyday practiced place (2015:15)

A diffracted view is also the lens of disruption as it begins to reveal the out of date rituals which are still believed and held onto preventing the ecology from evolving. For Nicolini (2013:9) there is no one practice theory as

practice theories are fundamentally ontological projects in the sense that they attempt to provide a new vocabulary to describe the world

In having this new vocabulary we can, in facilitating doctoral research, offer articulations to professional practitioners of approaches to their research which do not seek to explore every 'matter' that is local and to attend to maintenance of the system by fixing that which may not really matter at all. Rather our programme seeks to encourage researchers to explore the system (and themselves as part of the system) for the cause of the restrictions to its and their evolution. .

Local practice thus becomes a convenient starting point and a building block for explaining not only the local production of organized action and interaction, but also, the larger, more complex trans-local phenomena, such as the existence and functioning (the organization) of a ward, a hospital, or a health

authority, without contradicting the fundamental notion that practice is an oriented and concerned matter (Nicolini 2013: 236-237)

At some point as we continue to evolve thinking beyond disciplines, transdisciplinarity itself is likely to undergo a change in its nomenclature as it still holds within it the word discipline. What matters is that the core guiding principles will remain as they are universal and because the approach is more about an attitude to knowledge that is about knowing; it is becoming as well as doing and being; it is generative not replicative; inclusive; plural and hopeful. What it comes to be called will be a matter that may not matter.

Higher education in the United Kingdom today finds itself in a storm of conflicting policies, ideologies, purposes and means. It is making diverse and sometimes contradictory and immature approaches to organisations external to itself to forge alliances, partnerships and collaborations. It is imperative that it continues to find new and renewed sources of funding. External organisations are indeed a potential source of funding but most importantly they are a source of knowledge; they are seeking, among other things, new ideas, more relevant change initiatives and the continual development of their practitioners to augment human and cultural capital which cannot be achieved solely by an increase in training and coaching. These practitioners live and work in complexity which is the antithesis of silos. They thrive on internal and external connectivity and high levels of adaptive capacities. This is what we have been engaged with at Middlesex University, a process of translation between difference through our transdisciplinary *doctor of professional studies* and *doctor of professional studies by public works* programmes. Transdisciplinarity is the beginning of creating Gadamer's conditions for understanding between difference (2013). The quality of the dialogue between professional and academic knowledges and cultures could also be improved by the academy undertaking a transdisciplinary approach to itself, to its own ontology and epistemology providing a framework for organising and acting on the values it claims to hold and facilitating a contribution to the future which lets go of the arrogance of a pre-figurative vision of that to which the majority of its members have not been invited. However, with more daring, it can help to shape the perspectives of those who have.

....an African prophet –healer, a group of architects working together on a development project, or a medical team trying to figure out how to intervene in this or that social or cultural milieu all constitute realities of the same nature. Adapting to changes in scale does not mean ceasing to privilege observations of small units, but rather taking into account the worlds that cross through them, overflow them, and in so doing, continuously constitute and reconstitute them (Augé 1999:125)

## References

Augé, M.(1999) *An Anthropology for Contemporaneous Worlds*, Tr. A. Jacobs, Mestizo Spaces, Stanford University Press

Barad, K. "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (Spring 2003): 801-831. <https://doi.org/10.1086/345321>

Bettelheim, B. (1991) *The Informed Heart*, Penguin Books Limited

Boulton, J., Allen, P., Bowman, C. (2015) *Embracing Complexity: Strategic Perspectives for an Age of Turbulence* Oxford University Press

Burke, P. (2016) *What is the History of Knowledge?* Polity

Costley, C. and Armsby, P. (2007) 'Research influences on a professional doctorate', *Research in post-compulsory education*, 12, 3, 343–55.

Eagleton, T.(2004) *After Theory*, Penguin

Eastman C. & Maguire, K. (2016) "Critical Autobiography in the professional doctorate: improving students' writing through the device of literature", *Studies in Continuing Education* vol 38, Issue3

Freire, P. (2013) *Education for Critical Consciousness* Bloomsbury Academic

Gibbs, Paul (2017) *Transdisciplinary Professional Learning and Practice*. Gibbs, Paul , ed. Springer, Netherlands. ISBN 3319561847

Gadamer, H-G, (2013) *Truth and Method*, Bloomsbury Academic; Reprint edition

Gibbs, P. & Costley, C. (2006) An ethics of community and care for practitioner researchers, *International Journal of Research & Method in Education* Routledge), 239-249.

Hasse, C. (2015) *An Anthropology of Learning: on nested frictions in cultural ecologies* Springer

Llosa, Mario Vargas (2010) *In Praise of Reading and Fiction*, Mario Vargas Llosa-Nobel Lecture Dec 7

Koestler, A. (1978) *Janus A summing up*, Random House, 1st American edition

Maguire, K. (2004) Opening remark of a specialised guide to psychotherapy, EACS, London

Malewski, E and Jaramillo, N. (Eds) (2011) *Epistemologies of Ignorance in Education*

Nicolescu, B (2010) Methodology of Transdisciplinarity – Levels of Reality, Logic of the Included Middle and Complexity *Transdisciplinary Journal of Engineering & Science* Vol: 1, No:1, (December), pp.19-38

Nicolini, D.(2013) *Practice Theory, Work & Organization: An Introduction* Oxford University Press

Nouss, A. (2005) *Plaidoyer pour un monde metis* Textuel