Transdisciplinary Practice: Being, doing, knowing

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ABSTRACT

We present a case for facilitating the transdisciplinary practice (TDP) of experienced professionals through a doctoral research programme for whom the research focus is their world of work. Dissemination of transdisciplinary ideas through the individual practitioner as an effective agent of change has been under-represented in transdisciplinary discourses. Our TDP research pedagogy supports the practitioner in identifying and articulating complexity to bring about collaborative shifts in rapidly changing environments on the wild frontier of the uncertain and unpredictable. We demonstrate how TDP can enhance existing theories and epistemologies of practice, and also offer an effective alternative to a process driven management approach to complexity. We confront the gravitational pull of classification that can fuel resistance to new ideas and inhibit much needed cultural shifts. We propose that the frontline experiences of the individual decision-making professional as a TDP researcher can contribute to re-imagining transdisciplinary thinking and practices. TDP is not about the creation of knowledge but new ways of being in the world. We aim to encourage more higher education institutions to develop TDP as a response to the needs of complex practice cultures.

Keywords

agency, complexity, post-reductionist, relational ontology, scholarship of practice, classification.

INTRODUCTION

Can transdisciplinarity revolutionize the practice domain?

In the context of the growing demand for strategies to more adequately meet the needs of the rapidly changing professional landscape, in 2016 our University agreed to a request from four academics (three of whom were latecomers to academia from professional sectors), to design a professional practitioner doctorate and a Masters programme that would more directly respond to the expanding complexity of the interconnected global world of work. This initiative was resource limited but expected to prove its relevance and value to organisations and to the university.

This small team, already influenced by transdisciplinary ideas on complexity through the nature of their previous professional roles, collaborated on designing a research pedagogy that would privilege dialogue and collaboration over traditional transmission delivery by supervisory triads. A cohort-based approach was formulated. It comprised weekly workshops for candidates from diverse sectors and roles, proposing peer to peer, and peer to staff dialogues in addition to individual supervision. Learning platforms were developed curating a range of materials relevant to practitioners in situations of complexity to inform and stimulate workshop discussions. The doctoral programme became a space for them to share their visions and challenges as individual players in roles in which they could effect change; also a place of belonging where they would not be outliers but recognise each other as participants in work cultures that were responding to complexity with increased management protocols. We began to disseminate our work though publications, seminars and a successful candidate and alumni led TD symposium in 2021, during which collaborative networks were increased. It soon emerged that the recognition of individual professionals as 'natural transdisciplinarians' in their everyday practice (from where their knowledge and insights are derived), had been largely overlooked by the field of transdisciplinarity and by the academy despite their potential to change cultures. With the realisation that we were not starting from scratch, our programme participants became key contributors to our evolving pedagogy.

Our current doctoral enrolment is over 100 with recruitment expanding annually. Our applicants are leading sector figures; they range from global heads of HR to faculty leads in other universities, from directors of NGOs to senior members of the UK national health service. They are responding to a doctoral programme that understands and can work with the 'situatedness' (Vygotsky 1978) of their practice, which can be in constant flux, and is not static long enough for more traditional approaches to research.

As programme designers and supervisors, we take a transdisciplinary practitioner's perspective. We benefit from the rich academic and professional tapestry of literature and experience which surrounds us. The first section of this chapter describes the main features of our pedagogy from the nature of practice, to ontological shaping of agency, identity and positionality; to epistemologies of practice in environments of complexity and individual situatedness, and to revealing, discovering and influencing. The second section focuses on two routine challenges professionals face: *classification* and *articulation* which may inhibit the development and manifestation of transdisciplinary thinking and practice.

Section 1

Our evolving approach to practice and to transdisciplinary practitioner research

Experienced practitioners are often 'natural transdisciplinarians' exhibiting many of the characteristics identified by Augsburg (2014) and Guimaraes (2019), including awareness of the whole and engaging with complexity. Our work with them honours these qualities and gives them permission not to reduce the complex to the complicated, neither in perspective, nor in strategies for improvement or change. As a basic axiom of TD, complexity cannot be addressed by conventional research methodologies. Engaging holistically in the practice situation is not a deductive or inductive process. It involves a movement between imagination and experience (Whitehead, 1929) often involving processes of abductive muddling through (Peirce 1955, Shank 1998). The practice situation is inherently messy and unclassifiable and, for this reason, we affirm the contribution of practitioners to the continual re-imagining of TD.

A *post-reductionist* approach to practice

Our candidates are, first and foremost, decision making practitioners who have the status and influence to bring about change in their communities and organizations. The research they carry out while on this programme is an extension of their practice; it is not something done separately from who they are and what they do in their professional roles. This concept of 'the practitioner researcher' motivated us to align to the language and concepts of TD because they not only resonate with what we

already know about the lived environments of practice but because TD visions and articulates beyond the basic modes of knowledge. We suggest that a focus on facilitating the individual agency of a professional practitioner in complex environments can be a contribution to transdisciplinary thinking and evolution.

Practice is a series of actions informed by different motivations and influenced by a variety of factors. Aristotle distinguished between two forms of human action: *Poesis* occurs when the outcomes of action and the means to achievement are known in advance. *Poesis* is best served by *techne* (technical knowledge, *knowing-what)*. In contrast, practical wisdom, *phronesis*, is needed in what he called *praxis* to ensure the actor has the means of discretion needed in order to proceed in situations of uncertainty when the ends are not clear and the means are not prescribed. The wisdom of practice lies in both *poesis* and *praxis*, each involved in providing insight and the impulse for action in the world. There is, then a necessity to establish our own form of wisdom in "the sense in which the search for new wisdom must be an effort to overcome the split that has occurred, especially in the West, between the world of reflection and the world of social praxis" (Morin 1992, 383).

How we speak about practice indicates what the dominant factors may be, not least the influence of paradigms and beliefs which have embedded language codes developed over centuries in some cases. Metaphor can always be found where new concepts, new syntheses, new paradigms are seeking to come into being. It is also a device for articulation that mediates between embodied, implicit practice and its manifestation in the world to be shared and used. For example, we frequently describe the practice situation using the metaphor of a landscape. Landscapes are not to be viewed at a distance - they are the terrain through which we travel. If read as a noun, a landscape implies something fixed and unchanging. However, the landscape of practice is a place to be explored, in-forming the traveller as it discloses its varied topography, prominent features and hidden treasures. Words chosen by Horton and Freire for their book, *We Make the Road by Walking* (1990) – evoke an image that echoes Ingold's description of ethical ways of being in the world through the practice of 'wayfaring' (Ingold, 2011). This concept is important because landscape is subject to changes occurring naturally or, intentionally or unintentionally, induced.

The approach of the TD practitioner to the complexity of their practice situation calls for methods which emerge from the action. As Montuori explained, citing Morin, method should be 'understood in the broadest sense of the word, as a '"way" or "path laid down in walking … it is only in travelling that the right method appears"'

(Montuori 2013, 13). This is the practice of researching without a methodological map, letting the situation determine the process, being 'wayfarers' (Ingold 2011) meandering across the landscape, our senses and feelings alert to every movement, experiencing work as 'a pilgrimage of identity' (Whyte, 2001). For the practitioner researcher who embraces the paradigm of complexity this leads to "a social ecology of being and knowledge" (Chambers in Montuori 2013, 14)

Programme participants bring sector knowledge and professional skill into the programme - they are already equipped with the *techne* of their field. Consequently, our pedagogy is focused on the meta-skills, particularly the development of a repertoire of inquiry practices - what Hasse (2015, p.16) describes as an embodied apparatus - that travels 'through physical place sensing and learning'. As practitioners we make our way in the world as affective, embodied beings by feeling our way around it. Most of the time we navigate our way across the landscape without thinking about it. 'The essential core of being is subcortical' (McGilchrist 2010, 185) grounded in a disposition towards the world and 'any cognitions are subsequent to and consequent upon that disposition' (ibid, 184).

The practitioner-researcher is immersed in an environment which is both the stage for their professional activity and the object of their inquiry which takes the form of a reflective conversation with the situation (Schon 1983). This is not about seeking detailed explanations of processes but of successfully navigating the flow of circumstances or, to change the metaphor, orchestrating the complex movements involved (Shotter & Katz 1996), what Stacey and Mowles (2015) called the 'complex responsive processes' that are at the heart of all social settings. These processes are subtle and often unnoticed in complex environments but are essential to the healthy functioning of these situations.

Following Morin (1992), we evoke a 'paradigm of complexity' which challenges the reductionist 'paradigm of simplicity'. Complexity (Latin, *complexus*) is that which is woven together. Reductionist ways of researching unravels the web, obscuring the patterns, the connections and the interactions, that shape the emergent properties of practice. Complexity recognises the presence of heterogeneous agents interacting with one another, each making decisions about how to behave in response to inner and outer influences in the interests of survival in the super ecosystem. The results of the interaction are emergent, making it impossible to understand the situation by taking a snapshot at one moment of time, or by investigating the individual parts of the system. This calls to mind Deleuze and Guattari's 'assemblage' theory (1980).

Complexity appears everywhere - in the way the stock market works, or how a city functions in the everyday interactions of its citizens. To move the situation in ways that are good for all its participants requires ways of listening and attention to the whole and not just the parts. This reminds us of Ramadier's notion of unity being 'not really desirable, since it would prevent genuine transdisciplinarity' (2004, 438); and instead seeking coherence between the different realities and paradoxes through articulation between the levels of reality. We are making the claim that TDP is a *post-reductionist* response to complexity.

Developing relational perspectives

We use the term *perceptual curiosity* to describe the many ways in which the individual negotiates their way across the complex landscape of practice. In positioning this work as mediating between the currently classified and the unclassified (which we discuss in the second section), we are embracing a fundamental principle of TD: recognition of different ways of knowing, reaching across paradigms and valuing ontological and epistemological diversity. A TD practitioner might employ different discourses in a language game that some will call transgressive. But language is part of the complexity with which we seek to interact; it is intrinsically powerful and contributes positively and negatively to classification practices.

It has become commonplace to imagine the practice environment in terms of systems, comprising discrete parts interacting with one another. The focus of attention is on the features of the parts and the rules governing their interaction. The elements have an identity that is independent of the specific context in which they are being examined. This perspective on reality is abstract and assumes that reality can be explained in objective universal propositions. Detached from the particular and changing environment in which we live and work, such knowledge is inevitably reductionist and the agency of the disengaged [un-situated] subject is diminished (Taylor, 1989).

A TD perspective on practice, on the other hand, is grounded in a relational ontology that sees entities and their relations involved in a causal flux that is constantly changing. Elements of the system are not independent entities. The whole is constituted by the relationships existing within it, the properties of each part influenced by and influencing its relationship to other parts. This reality is not fully disclosed to an observer who may attempt to describe either the entities or their

relationships objectively. It can only be understood from within the relationships. The consequence of this perspective is that the practitioner's sense-making and action cannot be separated.

Prigogine received a Nobel prize for Chemistry in 1977 for his work on open systems. His insights offer an important perspective to our commitment, as practitioner researchers, to make our way through complexity. He argued that 'in equilibrium each molecule can only see its immediate neighbours. Out of equilibrium the system can see the totality of the system. One could almost say that matter in equilibrium is blind, and out of equilibrium starts to see' (Prigogine 1989, 399). This suggests that the TD practitioner needs to attend to the unexpected, the disorientations and surprises that occur on the way, seeing them as invitations to pay closer attention, to look and listen more closely, providing opportunities to experience the familiar differently, passing through the unknown to a new knowing, doing and being.

Faced with reality that Nicolescu (2010) describes as resistance to the mental models, theories, and concepts through which we have, rather lazily, seen the world, these disturbances to what we have taken for granted are invitations to awaken the Subject from the death which is the price we pay for objective knowledge (ibid). When faced with disorienting dilemmas (Mezirow 1991), arresting moments (Shotter & Katz 1996), or disjunctures (Jarvis 1999), the first step is to pause. 'What seems to be required,' writes Mason, 'is a disturbance or a resonance. Not a tidal wave, but a ripple sufficiently great to be distinguishable on the choppy surface which is my experience' (Mason 2002, 68). Liminal moments can come unexpectedly, exposing the pitfalls of hubris and self-deception. This self-awareness is not introspective but interactive - the fruit of a dialogical relationship with reality. An invitation to look beyond appearances, asking 'what is happening when something happens', aware that an event is '*the effect that seems to exceed its causes* and the *space* of an event is that which opens up by the gap that separates an effect from its causes' (Zizek 2014, 3, *italics* in original).

This can be uncomfortable, the uncertainty confusing and stressful. The situation requires the individual to wake up and question their assumptions, and make adjustments to their ways of knowing, doing and being. There is a fundamental choice: Press ahead with whatever the strategy or agenda demands, treating the incident as a complication that has a solution, or remain in the complex zone of uncertainty. Our supervision, guiding TD practitioner researchers through the discomfort and sometimes anxiety of entering the unknown, can be lengthy and intense for both

student and supervisor. It means holding the space together, to monitor inclinations to reduce the issues into complications in search of solutions.

Wayfaring Ways

Our strategy for responding to complexity is to probe the situation through small scale experiments. If an experiment succeeds we amplify it, but if it fails we dampen it (Snowden, 2010). As a result, solutions, and the skills and knowledge that accompany them, emerge through the process. This has an important influence on research design. While traditional research approaches are likely to address a part of the problem, transdisciplinary research in the complex realm is an abductive process (Shank, 1998), working like a bricoleur with what is at hand (Kincheloe & Berry, 2004), undertaking micro-experiments that nudge the situation towards a solution. They suggest that 'the researcher-as-bricoleur abandons the quest for some naïve concept of realism, focusing instead on the clarification of his or her position in the web of reality and the social locations of other researchers and the ways they shape the production and interpretation of knowledge' (ibid, 2). The personal agency of the practitioner-researcher is crucial to this process.

In a comment on the agency of practitioners, Argyris and Schon (1996) acknowledge that, like academic researchers, they are interested in developing explanatory models of their environment but the assessment criteria are different. They are judged by how well they 'work', in the sense of enabling practitioners to do something they wish to do. For them, the 'stopping rule' isn't falsification (Popper 1968) but a sense that their conclusions enable them to achieve their intended outcome in such a way that they can live with any unintended side effects. Knowing does not reduce the complexity, it simply helps the practitioner muddle through with responses (complex responsive processes) that make a difference. 'There is no time to 'construct' a proposition to describe the situation; and the only means by which she can account for the changes she makes is by giving an account of what happened – hence a narrative. The narrative may inform others, not by direct adopting of the action but by suggesting a wider interpretative net by which to capture a similar experience' (Kincheloe, 2006).

In the interactions that occur as the practitioner traverses the landscape of their practice, consenting to the invitations to relate, not dominate, peeling away the false assumptions, awareness of reality shifts. It becomes a relief to make a path by walking it, in humility and wonder, discarding prior conceptions about the world that obscure

rather than illuminate. We learn more of the mystery of the living world although it is never fully disclosed. This is a cooperative process, emerging from a dialogical relationship between self and situation.

These reflections have generated key influences on our evolving research pedagogy of existing practice discourses and foregrounds the contributions of TD in that domain. The following section raises two specific issues from the professional domain influencing our pedagogy and identifying how differences may be bridged between the academic practice culture of thinking and conceptualising complexity and the practice cultures that are at the frontline of complexity itself.

Section 2

Transdisciplinarity: challenges of the practitioner in environments of complexity

While we are enthusiastic about the appeal of our doctoral programme in such a short space of time, it is our responsibility to reveal the how and why of that appeal and to be transparent about the challenges. We have selected two key challenges brought into the academy by our professional practitioners and share how these obstacles can be met by a TDP doctoral programme. They are *classification* and *articulation* which are not only intricately linked but are obstacles to the realisation of the axiomatic pillars of TD (Nicolescu 2010). These obstacles are manifested as resistance to change. We lean towards the ontological components of being that inform doing in the world; and the doing in the world (practice) continues to move us towards the recognition of levels of reality and Nicolescu's (2010, 26) concept of 'the zone of non-resistance …which does not submit to any rationalisation' (2010, 26). Reflecting on levels of reality, Nicolescu wrote 'In other words, our approach is not hierarchical. There is no fundamental level, But its absence does not mean an anarchical dynamic but a coherent one of all levels of Reality, both those already discovered and those that will be discovered in the future' (ibid)

A transdisciplinary scholarship of practice

We have suggested that there are several manifestations of transdisciplinary practitioners in the world. Most of them would not identify themselves as such because they are natural transdisciplinarians without the TD descriptor. Among such individuals is a range of academic/practitioners, from anthropologists and

educationalists, to neuroscientists and environmentalists (see chapters in this Handbook). They have already developed, pioneered even, an articulation of complexity; how humans might navigate the complexities of thought, being and action to interconnect the disparate parts of themselves and the world they inhabit and to shape their quality of being in it. Such humanistic concepts and intentions share much with transdisciplinarity which has become for us, as programme designers and facilitators, the lodestone of these sister concepts.

There are also a significant number of professional practitioners without the TD descriptor who are at the forefront of influencing the behaviour of their living organism, whether it is a corporate entity or a village school. The drive of the contemporary living organism is to survive and thrive in an ever expanding lattice of complexity that requires constant adaptation to exponentially changing circumstances. Contrary to popular perception we work with a number of professional practitioners who can relate to such conceptualising more easily than some academics.

What such scholars and research minded professionals have in common is a perceptual awareness of complexity that arises from working within it, and not in an abstracted mode of compartmentalising it into discrete parts. The perceptual understanding of the complexity of their environments can differ from their peers whose response to events and pressures in practice cultures is often characterised by the short term, fragmented managing of parts rather than engaging with the interconnections that comprise the meshwork (Ingold 2011) of an increasingly complex super ecosystem. What they face is not a lack of agility and adaptability in themselves but in their cultures which can be inhibiting and disabling (McDermott and Varenne 1995) due to classification systems that perceive anything different as a threat to order and cohesion and enforced by language and concepts often alien to the other resulting in exclusion. What is notably different is that while it is the scholar's role to articulate thoughts and experiences, arguing the finer points of such things as ontology and epistemology is not the conscious preoccupation of professional practitioners. Their role usually involves an obligation to uphold compliance as a defence against external and internal influences in a timescale that is not one with which the academy is familiar. Ironically, they are enforcers of compliance as a means to withstand threats without the time and support to bring about cultural shifts that would make the whole more resilient: the paradox of attending to the surface wounds on limbs when the heart is in deep crisis requiring major surgery.

Those 'outliers' who, having accumulated implicit knowledge from practice and a vision at odds with their work culture, often enter higher education seeking the means of articulating what has become implicit knowing in them, but is not within the classification norm of their culture, looking for ways to bridge the differences. Transdisciplinarity can make a significant theoretical and conceptual contribution to ease the barriers that classification and articulation pose to perceptual and fundamental change. What we attempt to nurture in these individuals are the skills to articulate and translate these insights into effective happenings in their practice situation. They may not resolve the big 'wicked problems' (Rittel and Webber 1973) but they can attend to those close at hand through a fundamental shift in their own agency that persuades and invites collaboration among peers to see things differently and act accordingly. Thus, the TD practitioner is involved in creating the conditions for communicative action (Habermas 1986) despite the difficulties that exist in the workplace. However, the challenges of effective communication extend beyond the immediate environment.

Many of the 'objects' in our world that have significantly compounded the complexity are products which we ourselves have busily created (cultures, ideologies, technologies). Some have evolved beyond our grasp due to our overfeeding them (climate change, consumerism). Thus, we can no longer have the illusion that the world and everything in it is 'ours', rather we are only one part of an interconnected super ecosystem. These creations impact our everyday individual lives and that of our planet. The relational imperatives to influence the trajectories of our creations have given rise to how we conceptualise, approach and communicate with them. The most challenging 'objects' are what Morton (2013) calls *hyperobjects*: from higher education to climate change, from public health services to pandemics. Establishing a conversation with these objects needs interlocutors with high level, shaman like, translation skills of the hermeneutic variety (Maguire 2015, 2022). The conversations we try to have in many of our practice cultures may encounter similar frustration of effort. We would argue that TD awareness can develop in the individual practitioner the attributes and skills of a more effective interlocutor, not only within practice cultures but between the practice cultures of academia and the professional world and between the different systems of classification. The challenges to embedded, flat, linear realities are growing and the calls to 'unclassifying' as ways for humans to fully experience the world in all its complexity, are tantalising.

Transdisciplinarity is not without its norms and expectations. It is a culture in that all categorised practices constitute a culture. According to Bernstein ([1981] 2008) 'practices are the realization of categories'. The issue raised here is whether the categories themselves are preventing the healthy development of the organism in climates of change. The reflex reaction is either partial resistance manifested as incremental improvements of sub sections, like focusing on the broken leg when the heart is in crisis, or endemic resistance in the culture manifested by more processes and procedures to maintain the classification norm. Complexity cannot be approached with fearful minds bent on managing it with ever more codifying, plans and procedures. to be complied with. As Morin noted some years ago, it requires us to 'rethink our way of organising knowledge' (Morin, 2001, 5). This has been one of the drivers for TD's evolution in the intervening years, and more recently its attempts to define the characteristics of the practitioner.

As the world faces exponential and unprecedented change, it requires the energising prefixes of *trans, pan, meta and multi* to inform inputs that provoke emergent conceptualisations of the interdependent relationships between the big and small, the animate and inanimate 'objects' of the world we inhabit. These inputs fertilise the ground for emergence in-the-moment. However, the inputs are not enough in themselves.

Process fatigue, that time and circumstance evoke in the struggles to control complexity expansion, can inhibit creative, sustainable solutions. It is experienced by our doctoral researchers exposed to unprecedented levels of shifting demands to survive. We are also seeing a growing number of individuals from the emerging professions. They are the children of this 'new situation' and are seeking ways to influence its direction. Situatedness, as the ontological relationship to environmental, social and cultural factors (Vygotsky 1978), is no longer only a workplace, a town or city, a local or national culture or social set, It is an interconnected planet in which the question arises: *what can an individual do to influence this vast thing's trajectory?* The frustrations are palpable. This explains in some way our appreciation of the notion of agential knowing (Barad 2003, 815) and the power of articulation of implicit practitioner knowledge and knowing that transdisciplinary and sister concepts provide. It is an approach that sees the individual's development as an instrument, not of a paradigm in the traditional sense, but as an agent who, through an altered perceptual lens and deeper articulation mediates within, between, and beyond the disparate

parts of their multi-layered contexts and tensions to persuade and entice collaboration of diverse cultures of practice and beliefs towards expanded possibilities.

Being in the realm of the unclassified

In chapter 13 of *Being Alive*, Ingold (2011) opens his stories 'against classification' with musing on how human beings (unlike animals) come to know what they do in any circumstance and cites Clifford Geertz's identification of the deficit gap as 'between what our body tells us and what we have to know in order to function' (Geertz 1973, 50). Geertz offers what fills it – culture. Culture can be seen as a codified system of practices and classifications on how to function. All kinds of myths are developed to keep particular practices and beliefs (classified) as guardians against the danger of impurities and in such circumstances, entropy can be observed, in both knowledge and practice.

Ingold (2011) expands his ideas on the relationship between knowledge and practice and other ways of knowing outside of traditional classifications:

> Rather than supposing that people apply their knowledge in practice, we would be more inclined to say that they know *by way of* their practice (Ingold and Kurttila 2000:191–192) that is, through an ongoing engagement, in perception and action, with the constituents of their environment. Thus, far from being copied, ready-made, into the mind in advance of its encounter with the world, knowledge is perpetually 'under construction' within the field of relations established through the immersion of the actor–perceiver in a certain environmental context. Knowledge, in this view, is not transmitted as a complex structure but is the ever emergent product of a complex process (Ingold 2011, 178).

At the interface of the real and metaphoric, classified and unclassified, the TD practitioner does not see or seek truth but comes to recognise a shifting kaleidoscope of experiences and truths which surface commonalities and universalities in multiple contexts that can adapt when the contexts shift. Here the researcher is the agent of change itself, responsible for the evidence being produced through the quality of transparency of the researcher, their attributes and their attention, the thoroughness of their chosen epistemology, its inclusiveness and its greater good, informed intention. Change is not in the hands of others. It is facilitated or achieved directly by the researcher and the researcher's agential knowing is deepened through the action of researching.

Ingold is one of several authors in this trans, pan, meta, multi approach to being human:

> Inhabitant knowledge – we could say – is integrated *alongly*. Thus instead of the complementarity of a vertically integrated science of nature and a laterally integrated geography of location, wayfaring yields an alongly integrated, practical understanding of the lifeworld. Such knowledge is neither classified nor networked but *meshworked* (Ingold 2011,154, *italics* in the original).

This calls to mind Nouss (2005) and his concept of *metissage* and the importance of the skills of translation (Maguire 2015) across different disciplines and categories and also of thoughts, practices and experiences where levels of resonance will be found. We suggest that the established professional with experience, curiosity and imagination is more akin to a modern day Hermes, or an ancient seafarer, for whom 'transdisciplinarity' as a resource is a belonging but not a staying place in the sense of how ancient trading cities could provide both welcome and exchanges to ancient merchants and seafaring traders of goods. Most importantly, they were cross pollinators, and 'polluters' (Douglas ([1966] 2002) or disruptors of ideas, practices, and beliefs; precursors, on their good days, in some way, of Ingold's more evolved wayfarers,

> "whose task is not to act out a script received from predecessors but literally to negotiate a path through the world… in wayfaring …things are instantiated in the world as their paths and movements, not objects located in space. They are the stories. Here it is the movement itself that counts, not the destinations it connects. Indeed wayfaring always overshoots its destination, since wherever you may be at any particular moment, you are already on your way somewhere else" (Ingold 2011,162).

Seafarers, travellers and wayfarers commonly thrive in being relatively 'unclassified' or escapees of classification, shaping and being shaped by their encounters, always on the edge of difference. In the early days of professional doctorates at our university our programmes were listed on the website as unconventional. Drawing from the title of Douglas's seminal work "Purity and Danger"([1966] 2002), it could be said outliers inhabit the world between 'purity and danger' evading society's obsession with what is 'pure' and risking a challenge to the norms. Here 'pure' refers to the means used to control what is valid and what is not; what is acceptable and what is not to prevent chaos. The specific role of the outlier is in observing the whole and questioning the

sense making. Classification is a construct, a powerful one. Being alive and being human exists in both these concepts of purity and danger; it can be in constant battle, or in a harmonious relationship, or forging a necessary alliance through skilled mediators such as those facilitated by TDP.

Our programme is in the space between structure (pure/norm) and the possibilities of 'other' (danger). It is a challenging boundary place to be. While cherished classifications have made civilisation and progress possible, they have also contributed to the most shameful acts of social injustice. In the professional context, not complying to 'order', to accepted wisdoms, even if redundant, have often demanded a high price of the individual change agent/polluter/disruptor, such as loss of role and status accompanied by negative labels. However, in our experience, we have noticed a radical change among employers because these are the very attributes and competences that are increasingly in demand.

In our university we have persevered and appreciated increasing understanding and support for how this transdisciplinary approach has benefits for the university and its members. It is recognised as a means of engaging creatively with the professional world and learning from its agile and adaptive capacities. For professional practitioners, one of the benefits of undertaking this programme in a university is exposure to curated theoretical and critical discourses. This exposure supports the articulation of their implicit, complex practice to better see how they may future their own leadership and that of others through enlightened and inclusive approaches to research. Through familiarity and creating benefits, the university has provided a space for the unexpected, and the now, less strange. These developments can be seen as indicators of subtle shifts away from the desperation to classify; and also to begin to question the assumption that compliance to classification, to a rigorous pursuit of controlling knowledge; and therefore the agenda, may not be what is needed to thrive and to draw in the professional world to the riches the university curates but has neglected to contemporize.

Do we have the answers to why our design and our focus on the individual practitioner seems to have a positive impact? Not yet. We can only share our own waywardness that does not end but is a constant process of discovery.

Towards a summing up of why this matters

Transdisciplinarity was born with an aspiration to repair the fragmentation of knowledge. The term serves, for many, as a synonym for knowledge integration, or

convergence (Martin 2017, 4). The quest for a unifying framework in face of the explosion of disciplines, occupying parallel cognitive universes, has fuelled the emergence of transdisciplinary methodologies in the past 50 years. The task has become more urgent as we have become aware of *wicked problems* (Rittel & Webber 1973) faced by the world. However, the transdisciplinary approach to professional practice described here does not seek the unity of knowledge but new ways of being in the world, moving beyond knowledge as a way of understanding to knowing as a way of becoming. John Shotter poses the question: 'is it primarily through something like theories, or is it in our social activities and practices, that we 'hook up' with reality?' (Shotter 1991). In essence, there is no separation of knowing, doing and being for TD practitioners.

TD practice is both purposeful and performative. As they build their relational apparatus, TD practitioners can catch a glimpse of what MacFarlane defines as *kora* - 'a circumambulatory pilgrimage whose goal is not arrival but transcendence ... of the attachments and inattentions that constrain awareness of a greater reality' (MacFarlane 2012, 369). This greater awareness is ecological as we are drawn deeper into relationship with our situation in the 'moment-to-moment coming-into-being' (Ingold 2018, 8). It is not captured in propositions but evoked through image, metaphor and story. The skill of a TD practitioner is to follow 'the grain of the world's becoming' (ibid, 9) exercising discernment and appreciative judgement in the way they show up and make their way in the world.

The paradox of needing time but having no time to waste in the current climate accompanies the significant number who are applying for a TDP programme. This is indicative of a deep desire to seek the means of influencing our small and large worlds when time is being consumed by the complications of a management approach to complexity. Recognition of this has intensified our research pedagogy to create immersive spaces for dialogue with peers, with challenging expanded literature, and for cross sector networking well beyond the traditional supervisory – student relationship. A privilege of our work with TD practitioners is the delight in reading their theses which are as unique as the terrain they cover and, in this sense, 'unclassified' in conventional terms. Some will take on the challenge of theorising the practice, others seek modes of presentation that evoke an appreciation of the implicate order (Bohm 1980) that sustains it; and all in some way impact the locus of their research. We are not prescriptive. We work with what is in front of us looking to reveal the strengths of each individual and in a practice culture that is neither inhibiting nor

disabling of potential. They work like mapmakers carefully choosing, with contextual awareness, the features of the landscape to highlight, and exploring their relationships with themselves and the relational dimensions of being fully alive, bearing in mind that: 'The charm and the pleasure of a map lies in its reticence, its incompleteness, in the gap it leaves for the imagination to fill' (MacFarlane 2003, 183). They say it is a transformative experience and although we have curiosity about this, it arrives differently for everyone. We do not seek to classify it but accept it as an emergent state that will inform future engagement with the world of work as a part of their considerations of self and the planet. Perhaps they are setting out 'to make a conversation of human life itself. This conversation- this life- is not just about the world, … it is the world.' (Ingold 2011, 25).

Why it matters

We emphasise that transdisciplinarity is not experientially unknown to many of our doctoral researchers. Rather, it is basic common sense in their environments. Trading, reciprocity, exchange, negotiation, it could be argued, are natural human abilities. Threatening environments, and ideological and political divides, have never been a deterrent to trade and exchange. It is the nomenclature which is not familiar to professional practitioners. Once it is learned, it is the key to confidence in their positionality negotiating between the classified and unclassified and in an articulation of what they do, how they do it and where the shifts in thinking and practice need to be. The concepts help them differentiate complication from complexity, obstacles from cautions, and dead threads from live ones.

At the culmination of a TDP doctoral research programme, we are not looking to see whether 'transdisciplinarians' have been 'produced' or instruments of a transdisciplinary paradigm have emerged as proponents of a field of study. We are looking for the emergence of an articulate mediator, hyperconscious and aware, able to translate complexity from shop floor to board room, from a small team to a regional municipality, from the arts to business and from science to the arts. They become more adept at border crossing and the implications; they are a kind of virus in service to knowledge sharing and committed to their own knowing and constantly in a process of becoming of themselves and others. Therefore, they are not transmitters of a paradigm; they are human beings who harness the power of articulating practice from within the practice itself and secure in their own integrity. They become the trustworthy having revealed themselves to themselves. They engage with their peers and demonstrate their effectiveness through their research and through expanded

horizons of thought and action. They facilitate and convince others because of their congruence. In *Janus: A Summing Up* (1978) Koestler warns that human beings will become a dead-end species unless there is an extraordinary evolutional leap. We propose that this pessimistic trajectory may be avoided through transdisciplinary practices, aligned creative epistemological approaches, and with more focus on the potential of individual agency to effect change in the individual and society. Therein lies the hope of shifting systemic cultures through a cascading effect of transdisciplinary practitioners in their decision-making roles in their work worlds.

We want to be clear. We are not claiming our candidates are in positions to change the world, but they are in positions to bring about cultural shifts in their organisations and their sectors which impact all our lives from medicine to cyber security, and from the arts to digital transformations through the ripple effect. We have demonstrated that one does not need to be an expert in a discipline to be a guide to those who are already experts, but we need to be a guide towards how to see things differently, from leadership in hard structures to being a poet in residence for climate change meetings; or coordinating the COVID response in London health services to embedding diversity in a global company. Such privileged encounters add to the quality of energy that higher education and these humanistic movements including transdisciplinarity need, if they are to be more than a passing light that eventually fades and if there is to be any chance of responding effectively to Koestler's warning. Perhaps humanistic movements like transdisciplinarity are what he had in mind.

We refer to TDP as *post-reductionist*. Transdisciplinarity emerged as a new synthesis of physics, philosophy and inner experiences formulated by Nicolescu ([1985], 2006) in methodological terms which engaged with the complexities of this contemporary world. It offered a way of embracing the relational capacities of our humanness (biological, psychological, social, spiritual and cerebral) contributing to our understanding of existence and hopefully releasing our stranded ship from its complex entanglements. It was thus a re-opening of the door to daring notions of being and knowing, daring in the sense of being outside of what has become, over several centuries, the norm, and the recovering of older wisdoms, such as the virtues of Aristotle, abandoned in the hegemonic industrial age. Constructs like transdisciplinarity and sister concepts contribute to both our understanding of constituents of our world and can inform how we effectively communicate with them. Trandisciplinarity offers a way to engage relationally with the 'object', its nature and function and in so doing influence its power and trajectory. It is a struggle; it is a huge

step change. It is an important dimension of relational ontology and deserves more attention as a phenomenon. This necessary step change is summed up by Koestler in this observation from his aptly entitled earlier work *The Sleepwalkers:*

> The act of wrenching away an object or concept from its habitual associative context and seeing it in a new context is...an essential part of the creative process. It is an act of both destruction and creation, for it demands the breaking up of a mental habit, the melting down, with the blowlamp of Cartesian doubt, of the frozen structure of accepted theory, to enable a new fusion to take place. This perhaps explains the strange combination of scepticism and credulity in the creative genius. Every creative act – in science, art and religion- involves a regression to a more primitive level, a new innocence of perception liberated from the cataract of accepted beliefs. It is a process of *reculer pour mieux sauter*, of disintegration preceding a new synthesis … (Koestler [1959] 1989, 489).

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