Doing Philosophy at the Boundaries: Researching the Design of Health Multimedia with Doctors and Indigenous Australians

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Abstract

What is the role of philosophy in researching epistemic boundaries and knowledge work in cross-cultural contexts? This paper presents one answer through an account of philosophical research done within a project investigating the use of multimedia Digital Learning Objects for generating understandings of healthy respiration and circulation among first language speaking Indigenous Australians. Developing this method of philosophy requires a novel account of knowers, knowledge and reality which can tell a story of difference that goes further than one of 'social' positionings, and that credits the potential of the research practice itself to generate novel ways of working within and across boundaries. This account has philosophy proceeding through three moves: locating the researcher in the embodied collective situation of the investigation; crediting multiple knowledges through adopting the figure of an outsider; and valuing the vagueness and multiplicity that characterize boundaries through understanding reality as emergent. It is argued that this account does not supersede others, but rather adds to them within a logic of transdisciplinarity.

Introduction

This paper tells of a project investigating the use of multimedia Digital Learning Objects (DLOs)[1] for generating understandings of health, respiration and circulation in first language speaking Indigenous Australians.[2] The project was facilitated by researchers at Charles Darwin University and brought together a medical doctor from the University of Melbourne, DLOs and a multimedia designer from the Melbourne University Biomedical Media Unit and Yolŋu Indigenous Consultants[3] from Northern Australia. The paper recounts some initial stages of the project through three episodes, one from a preliminary meeting during which DLOs were assembled in the Biomedical Media Unit, and two from a

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1   Digital Learning Object is a piece of computer software that is designed and used to educate users through their interaction with a multimedia interface. These can be simple, such as a single digital image, or complex, such as an animated heart and lungs for which the user can manipulate to simulate physical exertion or the impact of a disease in real time.

2   A preliminary report on the project – *Interpreting Multimedia* (Healthy Breathing and Heart) can be viewed at http://www.cdu.edu.au/centres/yaci/im/index.html.

3   The Yolŋu Aboriginal Consultants Initiative (YACI) is an innovative cross-cultural research initiative in Northern Australia which takes the question of knowledge production and validation in cross cultural context seriously. See Yolŋu Aboriginal Consultants Initiative: http://www.cdu.edu.au/centres/yaci/

workshop held in Charles Darwin University some months later. To help truncate these episodes, I refer to participants by role: Doctor, Consultant, Facilitator, Designer. I refer to myself, however, in the first person, which begs the questions, what was my role? This is my main concern and contribution in this paper: what does a researcher, who analyses boundaries between knowledge systems, do? I call this role Philosopher, and while during the workshop my main contributions were in setting up equipment and documenting the proceedings, the following discussion will suggest some ways of doing philosophy at the boundaries and its possible contributions to understanding transdisciplinary research and collaborative research between Indigenous and non-Indigenous peoples in Australia and other post-colonial places. I begin with three episodes focusing on the uses of DLOs in the investigation. Each episode tells of DLOs working in different ways which I identify using a typology of symbol/index/icon.

Episode One

The first task was to assemble as many different DLOs; posters, .pdfs, books, videos, animations, photos, interactive widgets, programs and hand sketched diagrams, into some form of collection. To do this, each object was digitised and re-produced within a single PowerPoint file, and for many hours Doctor, Designer and myself huddled in a cubicle in the Biomedical Media Unit talking about, selecting and arranging the DLOs.

'It is about having many different versions of the same thing', Doctor explained.

Occasionally he described a particular DLO and invited me to comment on its possible effectiveness; my indeterminate responses perpetuating their continuing proliferation.

We worked the many DLOs as mere symbols of the human body; arranging them, editing them, and cropping them, in total independence from any real human body. The PowerPoint file, however, did

not support the embedding of many of the objects: some movies and animations remained distinct files linked via hyper-links in the PowerPoint file and one interactive program had to run from its proprietary CD-ROM. The accumulated DLOs summed over 700 megabytes and it was decided that the PowerPoint file be split into four individual files. We planned to meet one more time to finalise the collection of DLOs before Doctor and I were to take them to the workshop in Darwin. Doctor and myself received one set of the four files each to review before the final meeting, and Designer kept the copies on his computer.

By the final meeting, however, both Doctor and Designer had revised their files. Designer had standardised the formatting to promote smooth viewing and included acknowledgements and copyrights. Doctor had added a few slides and added text to aid his communication of the educational value of the DLOs. The two sets of DLOs were embedded in different files each with hyper-links defined by two different folder structures. The ensuing reformatting, beginning with the Doctor's files, took longer than any prior meeting. Despite our familiarity with DLOs as self-contained objects, independent of any embodiment of what they represented (the human body), they were embedded in different file types, computers and folder structures. Now slightly anxious about the mobility of the DLOs, we burnt the files onto CDs and sent these to the workshop facilitators so they could check that the DLOs opened correctly on another set of computers.

A few weeks later:

Episode Two

It was my job to set up a projector, two laptops, and speakers to display the DLOs and a video camera to document the proceedings. The workshop began with introductions: the Facilitators introducing the project; the Consultants sharing stories of hospital visits, interpreter work and life in remote communities; and Doctor introducing the DLOs with 'have here a whole lot of different ways of talking about breathing. . . . What I want you to do is tell me which ones you think are the best'. The presentation of the DLOs began.

After a few slides, however, a conversation in Yolŋu Matha[4] between the Consultants interrupted proceedings. The Facilitator framed questions trying to elicit general Yolŋu perspectives, not simply the knowledge of the Consultants. English began to be spoken.

'They think it's your blood because it's running through your body', explained one Consultant.

'Blood is running through your body', Doctor confirmed.

'There is air here and here', the Consultant continued, touching her wrist and neck.

'When a Yolŋu is about to die, then the Yolŋu put the wata *from here back again*' another said, massaging from her shoulder down to her hand.

'Yes, yes, but . . . ', Doctor said trying to follow the words and body movements.

'Circulation, in your words it's circulation, but in our words it's wata, *wind.*'

'Or breath', added another Consultant.

'Yeah, and you think of blood then going out into the arteries?' asked Doctor.

'Or air?'

'Or air? Or air going into the arteries!' Doctor seemed astounded.

'Yes', greed the other Consultants.

'You see, this is not so. There is no air in the arteries', *Doctor said. He went onto explain that blood flows in your arteries, and emulated the bodily demonstrations of the Consultant by running his fingers down the inside of his arm as if tracing the flow of blood in*

his arteries. The DLOs were no longer representing independent bodies, but began to index practices of knowing particular bodies in the here and now.

Later that day:

Episode Three

There were long pauses during the afternoon session, and with the conversation frequently in Yolŋu Matha, Doctor and I had little idea of what was being said. The discussion frequently addressed the shared purpose of the project, the potential of DLOs to become useful objects in Yolŋu communities, yet it seemed that addressing the DLOs directly was the origin of the difficulties.

'Pictures like this . . . the moving ones, does it matter? What did you think of that one where you could hear the breathing?' asked Facilitator.

This one was generally liked.

'We've only been looking at lungs', said one Consultant.

'Some [DLOs] for example, we might do a different design because we Yolŋu, we are shy and modest people. We might come up with a different idea, for animated [DLOs]'.

'Are there some parts [of the body] that you should not talk about?' asked Doctor.

'Not really. Just the way of presenting it so that when you have [particular] people, and who's in the room, who's there and who's not, you know, who we should talk about'.

'So the way you tell the story differs for who's present', explained another Consultant.

One way to understand what she was saying is that here in 'the story', the DLOs are like icons; they are not separate from the audience (embodied humans) that they had previously only represented, but tightly enmeshed with them.

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4   A group of related languages variously spoken by Yolŋu Indigenous Australians in north east Arnhem Land.

This was explained again by one Consultant. 'What are we, this group, going to do? We need to take it back to the community, because this is very important, very important, and . . .'

Doctor interjected, 'Yes, I understand you. You're saying . . .'

The Consultant continued, 'I don't want to put you down, or put us down, but I want to . . . show . . . that's the message that a lot of Yolŋu people can't get that clear. Someone has already explained that we thought there was only one lungs, but they are all different, names, and all the terms.'

The Consultant clearly valued the story the DLOs told   that lungs were not simple singular things, but complex things with many different parts named with different terms (bronchi, bronchioles, alveoli, et cetera). What had become obvious was that these stories could not be expressed independently of the people for whom the DLOs were intended to educate.

How do we analyse this workshop in which differences emerged as much unexpectedly as expectedly? What is the role of a philosopher participating within the unsettling interface of radically different knowledge systems? Torres Strait Islander Professor Martin Nakata offers one 'method of inquiry' which he argues can strategically generate knowledge within the tensions which connect and separate Indigenous and non-Indigenous knowers and knowledges at what he calls the 'cultural interface' (Nakata, 2007, pp. 213-217). To practice Nakata's Indigenous Standpoint Theory, in my understanding, one must hold a critical position toward the social power relations which constitute me as knower (philosopher) and my knowledge (philosophical account of workshop), and in doing so draw attention to marginalised accounts often silenced by the 'privileged social positions' (Nakata, 2007, p. 215) within an academy still permeated by universal Science and the colonial project.

As a non-Indigenous researcher, I could develop a counterpart to Nakata's Indigenous Standpoint, one cognisant of radically different knowledge traditions and the social relations of power he articulates, sensitive to the ongoing marginalisation of Indigenous knowledge and livelihoods, knowingly and unknowingly, by the academic institutions within which I work, and re-conceiving my privileged position not as given but as one among many actualised and potential 'standpoints'. While such appreciation of difference is important, accounting for difference through historically contingent social relations risks treating power relations and boundaries between knowledges as fixed and already there in the world, and risks limiting analysis to a careful contextualisation of the knower (as individual human mind) and knowledge (as propositions). I do not want to allow differences in knowledge and power to be explanatorily exhaustive of the project, of its confusion, or of the unsettlement and creativity in the workshop in which I had participated and in which I continue to be involved as researcher and storyteller. I want to be able to account for the undoing and redoing of knowledge-power relations *within* the confusion and unsettlement, and value projects, such as the one here, as both potential moments of redress concerning knowledge-power relations and as potential episodes for their reconfiguration. Developing such an account requires a novel account of knowers, knowledge and reality which can tell a *different* story of difference, a story of different differences to those of 'social' positionings, and one that credits the potential of research across boundaries, within interfaces and within transdisciplinary contexts. I develop this account through three moves.

The first move is to position the knower, the philosopher I am developing here, not in a purely 'social' position, but within the situation of the research itself. In doing so, I am guided by Lorraine Code's thesis of 'ecological thinking'. Recognising that the social positioning theorised in her previous work (Code, 1987) implicitly relied on individual 'generic knowers' with equal (yet different) access to the '"stuff" of knowledge' (Code, 2006, p. viii),

Code argues that:

> . . . ecological thinking relocates inquiry 'down on the ground' where knowledge is made, negotiated, circulated; and where the nature and conditions of the particular 'ground,' the situations and circumstances of specific knowers, their interdependence and their negotiations, have claims to critical epistemic scrutiny equivalent to those of allegedly isolated discrete propositional knowledge claims. (Code, 2006, pp. 5-6)

The figure of the philosopher in this paper begins in the episodes of the workshop I tell above. I was a welcomed and valued participant in the workshop, and here, through the re-telling of my involvement, I seek a credible account of my contribution beyond setting up computers and taking video recordings. It is this dual involvement as participant and researcher, both in the workshop and here as author-in-the-text, that, in following Helen Verran, Annemarie Mol, and Kathryn Pyne Addelson, I am calling doing philosophy (Addelson, 1994; Mol, 2002; Verran, 2002a). This brings me to the second move that this philosopher can make.

The position of the philosopher I am both being and writing about here is of a double outsider, much like Verran's philosopher figure in her accounts of workshops on fire and land management (Verran 2002a, p. 161), in which she is neither an ecological scientists nor a Yolŋu knowledge authority. I was not recognised as a medical scientist and in developing the DLOs I was often positioned as the 'test' subject of the DLO's effectiveness (in Episode One I was shown a DLO, told its story and asked if I had understood and therefore had (or had not) been effected as a knower of the biomedical body). I was also an outsider in relation to Yolŋu people and places, which was most evident in my almost total ignorance of any Yolŋu languages (and I am most grateful to the bi-lingual Consultants and Facilitators for their inclusiveness and careful transcription, translation and explanations).

Being an outsider, as Verran points out, offers the possibility of crafting symmetrical accounts of multiple knowledges. To take advantage of this possibility, my analysis needs to generate a credible account of the Doctor, the Consultants, the Facilitators, their different knowledges and the routines of the project through which participants collectively puzzled over the nature of the DLOs. In doing so, the concern of the project and the concern of this analysis can become common: we are all puzzling over what might useful DLOs be in Yolŋu health contexts. That is, for all of us, in the work of the workshop and its retelling here, the DLOs are an 'epistemic thing': an irreducible, vague, emergent collective entity (Rheinberger, 1997, p. 28). The difficulty told in this story is not of impenetrable boundaries between knowledge systems, nor of incommensurable knowledge practices. Rather, the DLOs emerged differently at different times, and getting a handle on this difference is an important task in accounting for the work and future of the project.

In Episode One, related above, I said the DLOs worked as *symbols*. Here I am using Charles Pierce's semiotic typology of symbol/index/icon as it is re-deployed by Verran (2011) to contrive a useful differentiation of the vague, collective, emergent entity that were the DLOs. Routines in which the sign-referent relation operates as a tightly bound co-constitution are iconic. Routines in which the sign-referent relation operates to sustain a dynamic relation between an index and a field are indexical. Routines in which the sign-referent relation operates as the representation of a more or less independent object are symbolic. Working DLOs as symbols, knowledge becomes representations-in-here-of-a-world-out-there. From within a small office cubicle in the Biomedical Media Unit, DLOs could be generated, edited and assembled independently of any bodies they were representing. In being worked as symbols, differences between DLOs, such as being more or less detailed, animated or static, including a whole body or just the torso, was of little concern as they were all representations 'of the same thing': the

biomedical body. In fact, it was hoped that the Consultant's would judge the relative importance that such differences in representation might make in Yolŋu health contexts. This is not to say that the DLOs were purely symbolic. They were very much materially embedded in computers, filing structures, PowerPoint files, CD-ROMS, sketched diagrams and so on. Learning to work with this embeddedness across different material arrangements of computers proved a less than straight-forward task.

In Episode Two however, while the Doctor and I attempted to treat the DLOs as representations now screened on the wall, the DLOs emerged rather differently. They connected with, or *indexed*, particular sets of practices that go with knowing and being living, breathing bodies. While the Consultants and Doctor had different words to go with these practices, they performed their respective knowledges of bodies through gesturing, breathing and pointing. The obvious shared experiences of being an embodied person, sitting, breathing and feeling a pulse, while simultaneously talking about this experience very differently, was profoundly disconcerting (to paraphrase from Episode Two, 'in your words it's circulation, but in our words it's wind', and 'There is no air in the arteries, it is blood'). My argument here holds this disconcertment as part of the slippage in the reality of the DLOs, not simply slippage between words or conceptual systems. There were differences in words (circulation and *wata*) and in conceptual systems (circulation as blood and circulation as air), but these differences emerged through DLOs indexing them (as fields). The DLOs were successfully connecting with Yolŋu people and places, but not as symbols representing the universal biomedical body. The DLOs were now indexing practices of knowing bodies. For one of the Consultants, this was caring for a dying person by massaging the *wata* down the arm from the armpit to the wrist in order to revive a pulse. For the Doctor, this was tracing the arteries along the inside of his arm with his fingers.

In the Episode Three, the DLOs became *icons*. What had begun life as symbols, free from language and bodies and hopefully agile at boundary crossings, the DLOs were now constitutive of the very bodies we all wanted to keep healthy. The lungs and bodies that the DLOs presented were also our lungs and bodies present in the room. Hence, making healthy bodies in the community meant making different DLOs in the community. As one of the Consultants carefully tried to point out, it was not a matter of rejecting the Doctor's presentation, it was the best they had heard, nor was it entirely about respecting social norms of what can and cannot be spoken of, it was about getting the right combination of people in the right place to make the right DLOs. That is, DLOs, people and places all emerge at once tightly bound together.

This story of difference locates the difference between multiple enactments of the DLOs (Watson-Verran & Turnbull, 1995), presented here as the continuum of symbol/index/icon. It can account for the participation of myself, the Doctor, the Consultants, and the Facilitators in the collective enactment of the DLOs. Most importantly, this analysis does not take difference and boundaries as given in a social realm or in a reality outside the workshop, but as mutually constitutive of the workshop, even if, at the time, it felt thoroughly disconcerting.

The final move required in this account is to make explicit not only my previous participation in the enactment of the DLOs, but also my re-enactment of them here through stories and analysis. It is clear that in rejecting a priori definitions and differences, the philosophical method presented here needs to have minimal commitments toward what is real, what is knowledge and what/who is knowing. Helen Verran's articulation of ontics provides such a minimalist metaphysics. In her accounts of burning grasslands, Nigerian classrooms and designing databases (Verran, 2001; Verran & Christie, 2007; Verran, 2002a, 2002b), Verran's framework of ontics takes realness as emergent in practice.

[Ontics] does not aspire to completeness and accepts and values vagueness. Ontics is a politics of rendering our ontic commitments visible, often by telling stories, but also in other sorts of embodied performance . . . [it] suggests that we would do well to enquire about, puzzle about, the rituals and routines through which we 'do' our worlds (including the methods by which we claim to know) if we are concerned about the character of these emergent realities. (Verran 2007, pp. 110-113)

DLOs, knowers of bodies, and the reality of bodies and hopefully healthier real bodies, are not all separated as knowledge, knower and world, but rather are emergent in the project. Boundaries are not between knowers of a single world, nor are they between worlds inclusive of their knowers. Rather, they are constituted as and between different enactments of the DLOs, here re-told as DLOs working as symbolic, indexical and iconic. Understanding DLOs in this way, as irreducibly multiple in practice, affords them the potential of having a shared reality for both the biomedical sciences and Yolŋu knowledge traditions. Ontics, like Code's ecological thinking, is not directed at replacing other theories of knowledge or ways of knowing. Nonetheless, it is a philosophical project which seeks to radically reconfigure understandings of knowledge, ensuring that their transformative practices are always empirically informed and open to contestation 'on the ground'.

For researchers who work at the boundaries of knowledge traditions, the figure of the Philosopher as presented here is offered as one who engages with epistemic boundaries not simply as separations but as productive, embodied places for both research and future ways of living. Such a Philosopher works with these places as a double outsider, offering accounts of difference which open up tensions and puzzles as lively, emergent realities within which collective solutions can be sought. I have contrasted my approach of epistemic boundaries to that of Nakata's understanding of knowledge work on the cultural interface. For Nakata, the careful

articulation of social positions is necessary for collective work to be respectful and productive. The analysis here does not aim to replace the insights of Standpoint theories, but includes social positions only as one element of a multitude which needs to be articulated in local, collective work. Moreover, knowledge, knowers, and what is known do not precede the local articulation of differences, but emerge from the collective work itself.

The success of the workshop in this account was its articulation of DLOs as working as vague emergent entities, traced here through the framing of symbol/index/icon. As vague and emergent entities, the DLOs did transfer from a Biomedical Media Unit in a large metropolitan university to a workshop with Yolŋu Consultants who live predominantly in more 'remote' places. The DLOs did link together the knowledges and skills of a Designer, a Doctor, the Facilitators, Consultants and a Philosopher. They did generate new understandings of health, respiration, and circulation for everyone. What this paper has tried to provide is a credible account of how this occurred. Analysing the emergence of DLOs in three episodes—1) as representing a biomedical body in an office cubicle; 2) as indexing practices of knowing bodies of a group of people sitting together breathing and pointing; and 3) as emerging only through a careful co-constitution of particular Yolŋu in particular places—we are able to see epistemic boundaries as productive, embodied places. By understanding DLOs as emergent and always open to new connections, we can work with them in more creative ways. We can also appreciate the potential of DLOs as being different in different places, and in doing so, respect and accommodate local needs and resources. As one Consultant pointed out in Episode Three, it is critical that the stories the DLOs told were shared with more Yolŋu, but done so in place and in different ways. By knowingly working DLOs as symbols/indexes/icons, newly emergent in each new situation, such a task may be more carefully and more effectively pursued than it might be if only social differences were taken into account.

I would like to conclude this paper by presenting its analysis in terms of Christie's distinction between interdisciplinarity and transdisciplinarity. This may be particularly useful for those who are working in the academy within which interdisciplinarity and transdisciplinarity are familiar modes of inquiry, and yet Indigenous knowledges are largely marginalised. Christie describes interdisciplinary research as occurring when Indigenous and other marginalised researchers bear the 'lonely responsibility' (Christie, 2006, p. 88) of repeatedly demonstrating the validity and significance of their research and knowledge. That is, Indigenous knowledge becomes an academic discipline for which its members-researchers produce and defend the content and relevance of their discipline. In contrast, transdisciplinary research occurs when research 'moves beyond the disciplinarity of the university and takes into account knowledge practices which it will never fully understand' (Christie, 2006, p. 88).

In accepting and engaging with knowledge practices without capturing them as a 'discipline', and without fully understanding them, research practices come to accept and value incompleteness and vagueness. Collective work between knowledge traditions no longer begins with a thorough and exhaustive articulation of social positions (as it does for Standpoint theories, and for which one instance is Indigenous knowledge authorities defending successfully or not their claim to be a discipline) but through an openness towards who knowers are, what knowledge is, and what reality is in their shared endeavour. As Christie points out, both interdisciplinarity and transdisciplinarity are important. In other words, an academic discipline can understand itself as generating knowledge as a discipline, while accepting that what knowledge is, who knowers are, and what reality is and might become is open to question and experimentation in the local collective work in which it participates.

This paper has told one story of such collective work. In its telling it has demonstrated the value

of a philosophical account of such transdisciplinary work through articulating the multiple and open nature of objects (DLOs) at the very heart of the project, and the multiple ways of knowing and living with healthy hearts and lungs that are possible within universities, hospitals, Indigenous communities and homelands.

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