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Contents

10

Engagements between disparate knowledge traditions: Toward doing difference generatively and in good faith

Helen Verran

HOW TO BE RESPECTFUL of difference but not intimidated or stymied by it in practical engagements between practitioners of disparate knowledge traditions? How to imagine struggles to do difference together? This is becoming a significant issue in the academies of the global South, as indigenous knowledges and their practices begin to find a place in the academy in response to the 'pulls' of market mechanisms and globalisation, and the 'pushes' of postcolonial critiques of the sciences (natural and social). Increasingly, too, we need to consider acts of connecting and separating not only with respect to alternative knowledge traditions, with their disparate metaphysical commitments, but also in the less challenging circumstances where knowledge circulates between disparate knowledge communities, like those, for example, of environmental policy-makers, ecological scientists and environmental activist NGOs.

In many institutional settings in remote Australia there is a need to practise modern science together with an indigenous knowledge tradition. More often honoured rhetorically than in actuality, there are nevertheless some situations where those working with a scientific sensibility genuinely try to learn from Aboriginal experts. Landscape burning is one of these (Andersen 1999; Bowman et al. 2004; Ockwell 2008). In this chapter I tell a story about the opening episode of a workshop that was designed to show environmental scientists how Yolngu Aboriginal landowners go about firing their lands (one of a series staged under the aegis of a local indigenous environmental organisation and its sister cultural foundation); the story provides an experiential basis for my theoretical consideration of how to imagine such engagements.[1]

This workshop had an unfortunate beginning – a disagreement between the senior scientist and one of the instructing elders over whether two plants were the same or different. Perhaps a trivial disagreement, it brought the concept of difference into stark relief. In the discussion that follows the story, I use this disagreement as an occasion to articulate a technology – a set of questions I identify

as an interrupting tool. I contrast my interrupting tool with two orthodox accounts of knowledge which explain 'other' knowledge away. These more conventional responses to 'difference' suppose that the analyst can step outside the situation where difference is experienced.

A story

The women sat by a neat fire on the sandy river bank; as the landowning elders they had arrived early. Waiting for the others who were to join them, they had collected *ganguri,* long thin yams, from nearby patches of jungle. By the time the scientists found them, the fire was already beginning to die down to the hot ashes into which the yams would be placed. These tubers are best near the end of the dry season and collecting them is an integral part of *worrk*, of burning the bush as a form of land care. The arriving scientists joined the elders there on the sand, passing around their bottles of iced water. Those most intimate with the old women and their husbands took up shady positions close by. Visitors who felt themselves strangers respectfully chose to sit behind them, further up the bank.

This encounter on the banks of that little river had been carefully planned. The place where it took place, Wathawuy, is just south of the airfield and the huge open-cut bauxite mine that dominates the landscape, in the most north-easterly tip of north-east Arnhem Land in Australia's Northern Territory. Quite close to Nhulunbuy, a mining town and the largest centre of population in the region, Wathawuy and its surrounding lands are owned by the Yolngu Ngaymil Aboriginal clan. It was the site decided on for a formal presentation by the Aborigines: they were setting out to show their protocols for firing a tract of land to environmental scientists, and to tell how they justify these protocols. Wathawuy is located in the Dhimurru Indigenous Protected Area and is part of Australia's system of reserved lands by which it meets its obligations under international treaties on preserving biodiversity.

We all sat, hot, in companionable silence waiting for the fire to die down and the yams to cook. The creek gurgled as it flowed around rocks. A senior Yolngu man stood, and crossed to the opposite bank of the stream. Apparently at random, he broke twigs from some straggly, dry bushes. One of the women began stripping the stringy bark off sticks that had been gathered to make the cooking fire. Returning with the twigs, the man requested the kitchen knife from one of the women. He began whittling the sticks to produce one with a point and another with a flattened surface about halfway down its length. He gouged out a hole in the centre of this surface. As his wife held the stick with the flat bed section, the fire-maker began twirling the pointed stick in the hole.

The women began to laugh as he twirled and twirled, apparently with little effect. Those sitting further up the bank overcame their shyness, edging closer, and closer, and closer. Eventually their obvious eagerness to see provoked more hilarity than the would-be fire-maker's failure to produce much smoke, though his hands twirled the stick to a whir. The instructors went on, changing places as twirlers of the stick and steadiers of the bed. The hole in the flat bed stick became deeper, the smell of singeing became stronger.

Watching, it became obvious that the trick at this stage was to judge the moment when the collecting pellet of smoulder was large enough to sustain being shaken out into a nest of shredded stringy bark. Once the smouldering pellet was inside, the nest was blown on to ignite it. What was important now was to know when to stop blowing and let the nest, breaking into flames, fall onto the pile of kindling collected on the ground. Too late and your eyebrows would be singed. Too soon and the pellet's smoulder would fail to become a flame. The oldest of the women took on the role of blowing the smoulder into flame amid much shouted advice in the Yolngu *matha* (language – literally, 'tongue'): 'You'll lose your eyebrows!' 'Careful of your nose!' Eventually, to everyone's great satisfaction, she produced a flaming ball, letting it drop onto the pile of sticks which merrily took up the flames. As the ignited kindling burned away, the scientists respectfully posed their questions.

'What is the name of this wood?' 'Do you use the same wood for both parts?' 'Can you show me the plant?' 'We call this "sand paper bush".' 'Does it have to be dead?' 'I want to try. Is that alright?' 'Is this sacred? I don't want to do it if I shouldn't'. The Yolngu Aboriginal instructors obliged with answers in a mixture of English and Yolngu language. Willingly showing the enthusiastic learners how to arrange the sticks, they guided their hands. 'Yes, the wood should be dry.' 'You need to hold the twirling stick very lightly.' 'You'll get blisters. You'll injure your hands.' 'The trees are the same one. One is the grandchild of the other – *märi/gutharra*. That means they are the same one, really.'[2]

There was a moment of deep, awkward silence. It was obvious that the scientist to whom this was addressed was extremely disconcerted by this claim of sameness about plants that to him were clearly different. The peculiar explanation that their sameness was that of the grandparent-grandchild relation no doubt added to his discomfort.

The scientist later wrote about this moment:

> [Having watched carefully, I tried] to copy what I had learnt. [Looking for some sticks] I found that although I knew what species I was looking for, I found it very difficult to find the correct type of stick ... I told the man [who

had done the demonstration] that there were no sticks [nearby]. He laughed and showed me lots of suitable sticks.

He selected some dead sticks from a Tarenna and a Litsea. He told me they were the same. I said it was not true, and proved it by comparing the smells of crushed leaves of each plant. Litsea leaves have a pungent smell while Tarenna does not have any smell, indeed Litsea has alternate leaves [and] Tarenna has opposite leaves, and both belong in very different botanical families. He said they were the same in the sense of making fire sticks, but acknowledged they looked different. I suggested they were like a man and a woman, the same but different, and he agreed with this analogy. (Dhimurru Land Management Aboriginal Corporation 1998)

Cultivating a postcolonial impulse in doing difference between knowledge traditions

I will suggest below that this moment of collective awkwardness over whether plants are the same or different might be usefully described as epistemic disconcertment, and propose that the scientist's allusion to the more personal and familiar 'war of the sexes' is allegorical rather than analogical. Allegory bespeaks tolerance of worlds that are not clearly defined and neatly organised, and that may not cohere well, but it also diffuses or even traps the impetus towards invention and change that can come from a sharply felt encounter with difference. We need to learn to get beyond producing or invoking allegory as a soothing balm for the tensions of difference, applied in moments of epistemic disconcertment.

My contention is that both Aborigines and scientists need to learn to find ways to recognise and explicitly manage the positions that are thrown up in the tensions that epistemic disconcertment expresses, albeit drawing as they must, from their own (incommensurable) epistemic resources. That is what I mean by doing difference generatively and in good faith. Difference in this usage is not difference allowed by a common sameness, but rather difference *before* coming to concepts. Learning to recognise and value such difference, learning to refuse the step which requires a colonising reduction to a shared category, and acceptance that we may not be metaphysically committed to a common world, is what is involved in cultivating a postcolonial impulse.

What is epistemic disconcertment? 'Epistemic' refers to knowledge and how we account for what it is; our story or theory of knowledge. 'Disconcertment' conveys the sense of being put out in some way, and when qualified by the term epistemic it implies that our taken-for-granted account of what knowledge is has somehow been upset or impinged upon so that we begin to doubt and become

less certain. In the story I have just told I attributed epistemic disconcertment to the figures of the senior Aboriginal instructor and the scientist, but I too, as a witness to the disagreement in my capacity as cultural broker and ethnographer, and capable of simultaneously recognising the truth of both claims, experienced a moment of existential panic, what I am here calling epistemic disconcertment. I have been noting and describing such moments of epistemic discomfort since I first experienced it in Nigerian classrooms in the 1980s (Verran 1999, 2001) and then later in my work with Aboriginal Australians (Verran 1998, 2002a, 2004). I have several times previously suggested that cultivation of epistemic disconcertment is crucial for postcolonial knowledge work (Verran 2001, 2009, 2011). And now others, too, recognise the significance of epistemic disconcertment in more ordinary situations (I'Anson & Jasper 2011; Instone 2010: 99; Law & Lin 2011).

Epistemic disconcertment: Beyond allegory as balm

In this chapter I am extending the descriptive sensitising of my earlier writing by proposing a homoeopathic tool to systematically respond to such moments of panic by expanding them; in other words, by provoking further epistemic disconcertment. Taking seriously the adage formulated in Latin by Paracelsus, an early humanist thinker, *similia similibus curantur* (like cures like) – implying that we should treat unease with that which will exaggerate the condition – I have devised a set of questions about knowledge practices which I imagine as quasi-epistemic hooks that might serve to catalyse a generative response. That participants will be responding with quite disparate and incommensurable epistemic resources – that is, from within very different knowledge paradigms – makes peculiar demands on any such tool.

Epistemic disconcertment is bodily and hence personal, but I do not take this experience as a matter that concerns only individuals and their responsibilities. It is an expression of our solidified collective institutional habits. There is a momentary existential panic associated with recognising a way of ordering plants that does not carry the familiar way of dividing up the lumpy-bumpy, blooming-buzzing here-now, and which throws into disarray comfortable categories like matter, space, and time that actually do not feel like categories but rather seem to be reality itself. This speaks to the livewire insidious tentacles of the institutions and unacknowledged beliefs within which we negotiate our existential positioning as knowers. The ways, for example, in which we take what we know to be either somehow inside or outside us, our need for some routine, perhaps even ritual, means of solidifying the here-now and effecting duration. The multiple pulls of these intense habits of knowing are felt bodily, but they do not reside only in bodies. The bodily tension points to the vast inertia of the mesh of institutions,

categories, arranged materials, and communicative protocols and processes which *is* knowledge.

This framing recognises that it takes enormous effort to contain admissible meanings, to limit them to just one single meaning, for example the meaning of the biological classes to which Litsea and Tarenna belong. I am suggesting that this vast collective effort can and should be acknowledged when disparate knowledge traditions seek to engage with each other. The point is not that those efforts are somehow wrong. Not at all. The point is to recognise the effort as such, to recognise why it is important that the meaning of the classes to which Litsea and Tarenna belong be maintained as singular, and to learn how such effort might also be applied in alternative ways to achieve other ends, for example connecting in the here-and-now, in order to contingently go on together in projects that involve epistemic matters where participants in the projects draw on different epistemic resources. We need to make an effort to show ourselves how to work in good faith with respect to the disparate epistemic or knowledge practices involved.

I am taking epistemic disconcertment as a type of experience that alerts us to the tensions of the relations that exist within what we 'feel' as epistemic rightness, something which we are generally unaware of, until that is, it is rent asunder. Only then might we remember the bodily ease, the relaxation that comes with the sense of comfortable rightness (epistemic 'concertedness'?). We experience this sense of comfort with, say, a satisfying explanation. Epistemic dis/concertedness is bodily and personal, and individuals can become sensitised to it. But not only that, it is also analytical and methodological and can be collectively cultivated, as I am doing here through textual means. And, importantly, it can also be collectively denied.

At the end of this chapter I will set out a new imaginary of doing difference in which I consider how, working with epistemic dis/concertedness, we might grasp generative possibilities for going on together doing difference. However, I conclude this first introduction of the concept by pointing to the way in which allegory can act as balm for the unease of epistemic disconcertment, and so close down possibilities for generative tensions. Among its many roles, allegory is a potent protector of institutionalised epistemic practices whose purpose is to circumscribe and avert epistemic disconcertment.

Allegory is meaning that does not delude itself about 'being literal'. It is closely related to the rhetorical devices of irony and metaphor, and as the scientist in my story understands, can in some situations be taken as analogy – that is, explaining one thing in terms of another. Where, under the influence of singularism, the dominant assumption about meaning is that it is 'literally true', allegory is taken to be 'a special effect', so to speak. Allegory means something other than what is actually said. It is the art of saying one thing while conveying another, and expecting at least some of those who hear the allegory to 'read between

the lines'. Allegory will thrive in political situations where commentators fear the consequences of speaking outright; so for example in 2011 a Chinese professor might publish a review of the movie *Dogtooth* rather than talk explicitly about the repressive roles of the Chinese Communist Party in contemporary People's Republic of China. As I see it, in turning to allegory, the scientist has the correct impulse. The problem is that his repertoire of allegory is so limited. And that is exactly what the new working imaginary for engagements between practitioners of disparate knowledge traditions, which I introduce in the final section of this chapter, is designed to attend to.

By way of introducing that new working imaginary, in the next section I lay out two conventional theoretical explanations of difference as displayed in this disagreement. These are two contesting working imaginaries for doing difference which both involve re-framing of the sort I argued against in *Science and an African Logic* (Verran 2001). I re-present first a conventional explanation offered by anthropology, and then an explanation offered by an Australian professor of indigenous studies. In offering these conventional accounts of difference I tie them back to my ethnographic story. In doing this I do not wish to second-guess the old Aboriginal man and the scientist who, in an embodied sense, participated in the workshop. Rather, in attributing particular views of how science and Aboriginal knowledge might relate, I see myself dealing with characters in my story. These characters have an unknowable relation to the men-in-the-flesh who inspired them; it is as *dramatis personae* that I am using them to situate the theoretical accounts.

Difference reared up unexpectedly in the disagreement over the fire-making sticks, and we need to recognise that there are thoroughly conventional theoretical ways of explaining it. As participants in engagements such as I have just described, most Aborigines and scientists would probably arrive already equipped with some version of these stories of difference; these versions matter in the sense that they are tools or devices which frame the collective action. They can get in the way of going on together. In formulating a third approach I will suggest a tool that is *not* a framing device, in the sense of proposing a move to a meta-position, to the 'outside' of knowledge. On the contrary, I will suggest that we need to learn how to work with tools that can make the move in the other direction, towards an infra-level of practices – that is, we need to go deeper 'inside' the encounter, inside the experience of difference. It is crucial to find a way of doing difference *before* coming to (generalising) concepts (Deleuze 2004: 1).

My gripe with these orthodox stories of difference is that they are absolutist. Explaining the other in terms of itself, each actually explains the other away. When taken together, they envisage only implacable division. They are of limited use when people like the old fire-maker and the scientist want to simultaneously maintain and dissolve difference, in ways that are authentic and generative in terms of their own

disparate knowledge practices. The old stories are not mutually generative in the sense that they can allow and support simultaneous separation and connection of the old man's world and the scientist's. They do not enable the negotiation of useful links that can go along with maintaining significant divisions.

Two meta-epistemic framings: Averting epistemic disconcertment

Scientific representationalism

Here is a scientific explanation of the Yolngu Aboriginal knowledge tradition. It gives an account of the difference between science and an Aboriginal knowledge tradition with respect to how reality is known and the nature of the real – that is, it explains ontological difference. It is a story of ineluctably separate subjects and objects which I take from a paper included in a book published by the Australian Academy of Science for the Australian Bicentenary in 1988, edited by an eminent Australian historian of science. The account, 'Aboriginal Conceptions of the Working of Nature', written by an anthropologist and an archaeologist, is the first chapter of the collection (Hiatt & Jones 1988). In this paper, we have a careful appreciation of Yolngu Aboriginal knowledge by experienced and respected social scientists. The paper begins with a quotation taken from Boris Pasternak's *Dr Zhivago*: 'These cosmogenies belong to an ancient world – a world peopled so sparsely that nature was not as yet overshadowed by man ... This ancient world ended with Rome, overpopulation put a stop to it' (Hiatt & Jones 1988: 1).

Here we have the balm of allegory applied even before any unease has been felt. The means for containing epistemic disconcertment that might arise in a serious consideration of an Aboriginal Australian knowledge tradition as part of a self-congratulatory history of Australian science is announced at the beginning: this knowledge tradition is a 'living fossil', a form of knowledge that 'we' have progressed beyond. Elaborating this conventional view of how 'indigenous knowledges' relate to science, the authors propose that

> like innumerable other peoples, Aborigines believe that reality comprises two coextensive domains. One is inhabited by human beings, and knowledge of it is gained through the senses. The other is inhabited by gods, ghosts and demons ... Entry into their domain may be achieved spontaneously by the act of dreaming; conversely, their entry into the domain of mortals may be contrived through the act of ritual. The Dreaming or Dreamtime, as this dimension of reality is often called, is conceived as an ultimate reality, eternal and beyond explanation ...

> As conceived by Aborigines, totems are beings of great power who once roamed the earth performing wonderful deeds of creation and who now lie quiescent in focal points of the landscape. Before disappearing they left behind in the care of men tokens of their being: carved stone or wood, songs, designs ... and so on. (Hiatt & Jones 1988: 10)

The paper goes on to argue that Aboriginal knowledge should be understood by analogy to an ancient European account of knowledge: the Platonic doctrine of forms.

> It seems reasonable to assume that we are dealing with philosophy and art ... an attempt to represent or epitomise the structure of the cosmos. Regarded on that basis *manikay* ['song complexes owned by a consortium of clans'] exhibit some striking features in common with Platonism ... Forms and particulars [sensible things] coexist in their different realms but whereas the latter are visible and ephemeral, the former are invisible and eternal. (Hiatt & Jones 1988: 19)

In science, subjects are removed, judging observers who accumulate information through the senses. Objects are material stuff imagined as located in empty space-time, and the material world that objects constitute is the foundation of the knowledge that knowing subjects possess. The logic of scientific thought ensures true knowledge, since the structure of logic mimics the given structure of the material world. That, of course, is a cartoon of science's realist version of foundationist metaphysics. I am dealing in cartoons here (see Verran, 2001: 14 for more discussion of this question).

As this account of difference has it, *Wangarr* (often called 'The Dreaming' in English) is a foundation for Aboriginal knowledge, just as the material world is a foundation for scientific thought. In that regard, the knowledge traditions are the same in being representationalist. The difference between the two knowledge traditions lies within this sameness.

The paper shows Aborigines as struggling to represent a transcendental domain in the secular domain where they are human beings. Aboriginal knowing subjects are identical, in this sense, to scientific knowing subjects. Both knowledges are representationalist. There is, however, a difference in the objects represented. 'Their' objects are transcendental, 'ours' are material. That *difference* is found within the sameness that both the knowledges *represent*. Aboriginal knowledge, then, can be found as different but nevertheless *within* the sciences' paradigm of representational knowledge, and the authors have a ready explanation for the

difference. As an ancient and original style of knowledge, Aboriginal knowledge is perhaps like many Australian plants and animals. This ancient form has remained alive in Australia, where remoteness created a natural museum. A picture of history as linear and evolutionary is embedded in this configuration of the two metaphysics. It confirms science as the ultimate authority, being more historically evolved, and more empirical.

So sure are the authors about the meta-sameness which frames the difference between science and Yolngu knowledge, that they ascribe a serious category mistake to their erstwhile respected informants. According to the scientists, what is clearly a representation is mistaken for reality itself. This ascription of a category mistake to 'the other' is the means by which the authors escape a fatal contradiction that otherwise would flaw their commentary. In this escape they also remove themselves to a knowing position 'above' that of their Yolngu friends and of 'primitive' knowers generally. The academics suggest that in their enthusiasm for their knowledge, Yolngu and other primitive knowers mistakenly take their knowledge as *actually being* that other domain, the transcendental. 'Primitives' fail to understand, say Hiatt and Jones, that *all* knowledge is a representation, a product of logical thought. Interestingly, in arguing this, the authors slip up in their otherwise very careful attention to presenting the Aboriginal tradition as live and contemporary.

> So profound was the conviction of dependence on the world beyond the senses that cultural products like songs, dances, sculptures and designs were themselves deemed to have emanated full-blown from transcendent sources. (Hiatt & Jones 1988: 19)

This attribution of a category mistake is particularly telling. It amounts to denial that Aborigines are the authorities on the nature of their metaphysical commitments. Yet, the authors of this paper are clearly impressed with Aboriginal intellectual life and have close and intimate ties with their Aboriginal friends. Why do they fail to heed what Aborigines tell them on this particular issue? If the Aborigines' claims were to be taken seriously, they would render unsustainable science's claim that the two traditions share commitment to knowledge as representation, with the difference residing only in the types of objects being represented. Commitment to the tolerant sentiment that as knowers, Aborigines are 'just like us', is based on bad faith if it explains *away* the difference between the knowledge traditions as really sameness.

Indigenous essentialism

While anthropological accounts of Aboriginal knowledge are quite common, there are relatively few Aboriginal accounts of science vis-à-vis Aboriginal knowledge.

I take the version I re-present here from an eminent Aboriginal Australian who has worked closely with the Yolngu Aboriginal community. She is Professor of Indigenous Studies at the University of Melbourne (Langton 1998). For this commentator the Aboriginal knower

> is conceived of, not merely as a body enclosing a singular conscious being, but rather as spatialised by virtue of totemic affiliation. Persons with inherited spiritual essence shared with non-human beings share the world of those beings including their natural habitats, as a most personal responsibility ...
>
> A cosmology of totemic affiliation poses a different set of relational values between the human and non-human from the inherent hierarchy ... of values attributed to subjects of natural science ... such as [separating] and privileging [the] environmental over [the] social. (Langton 1998: 27–28)

Langton insists that Aboriginal subjects, the knowers of Aboriginal knowledge, *are* the transcendental domain of Spirit Ancestors along with the world they know. The Aboriginal knowing subject and the known world are one; knowledge is performance or enactment, and not representation, and certainty too is constituted in performance. The account carries the claim that science's story of its knowledge is mistaken in several ways. The false epistemic consciousness of science, which not incidentally permits its colonialist commitment to a spatial universalism, suggests that it ought to outgrow its immature empiricism.

Difference here lies in the fact that, unlike Aboriginal knowers who *are* expression of a transcendental cosmos through having an inherited essence of places they know, science has human knowers and the material world they know as *a priori* separate from each other. The mistake in science's story is profound, from the Aboriginal point of view, but it is a mistake that can be explained. Adopting Aboriginal metaphysics as a meta-framing device, this author has the difference between the two traditions of knowing resulting from the fact that peoples who have deep cultural roots in the places they know, which have been developed over many millennia, inevitably have very different epistemic relations with those places than immigrant communities deriving from vastly different regions. For this Aboriginal knowledge authority, the difference between science and Aboriginal knowledge is just what one would expect of a recently derived knowledge tradition which originated far away from the places it purports to know. Science is too young and too mobile; it needs to settle down and learn from 'us'. The Aboriginal account of difference also appeals to history, but here history is not evolution but rather constancy in place. Rooted in place, science might eventually discover and become

the essence of place as Aboriginal knowledge is, having, in the Aboriginal account, been co-constituted in original acts of creation.

Here too a sameness, knowledge as an essentialist expression of cultural origins, locates difference within it. This time the balm of allegory allows the knowledge traditions to each have an original purpose, one which expresses the time and place where the tradition came to life. But science is recent and expresses the greedy intentions of historical European imperial courts; its claims to know *here* are both invalid and illegitimate. This configuration of difference found within sameness leaves Aboriginal explanations of difference as authoritative. It effects a description of science vis-à-vis Aboriginal knowledge traditions that inverts science's account of its relations to Aboriginal knowledge.

Juxtaposing the two orthodox framings

These commentaries each contain an account of metaphysical commitments and offer explanations of difference. Each one amounts to the statement: 'Recognise us as the ultimate authority, and we will let you have your difference.' Both are absolutist and iconoclastic towards the other. When we put them together and treat them with equal respect and candour, absolute separation and inevitable and implacable division seems to be the only option. In the light of these competing and incommensurable explanations, I want to briefly reconsider that awkward moment at Wathawuy that developed over alternative claims of the sameness and difference of the plants from which the fire-making sticks were plucked. I want to elaborate on the incident that tripped up the old man and the scientist in the light of the different stories of difference I have just recounted. I am attributing these generic explanations of 'the other' to my characters in the text here. How this links up with what the old man and the scientist in-the-flesh actually told themselves, or if they had any explanatory story about the incident, is not the issue.

The encounter at Wathawuy between scientists and Yolngu Aboriginal knowledge authorities was focused on practical matters. Rehearsal of such accounts of difference as I have just elaborated was not the point of the exercise. Participants took themselves to have shared understandings of the environment/the land – difference was not what they understood themselves as doing. However, connecting things up proved both difficult and elusive (see Verran 2002a, 2002b). There was authentic encounter on a personal level but cognitively the episode failed to get beyond mere spectacle. Perhaps one of the reasons for this was the unrecognised reality that mutually incommensurable accounts of sameness/difference were circulating. In pursuing this idea I speculate on how each of my characters – 'the scientist' and 'the old fire-maker' – might explain the other's claim about the fire-making sticks.

The scientist in this little drama assumes that the knowledge category by means of which the old man recognises sameness – his *märi-gutharra* – represents the transcendental spiritual domain. In terms of the scientist's understanding of the old man as a knower, he thinks the man is saying that the sticks and the types of bushes they come from are the *same* on the basis of an ideal category of being. Perhaps the scientist feels that evoking sameness through human family relationship is quite fitting for a 'spiritual category'. After all, as he sees it, the old man, being committed to ideals, *believes* the sticks/types of bushes are the same. Perhaps the scientist understands this 'belief' as of the same sort as his own 'belief in God'. As science has it, faith is the only way to be certain about an ideal category. It may be that the scientist is beginning to feel that his participation in the workshop is a matter of his private, spiritual growth; that part of his self that is outside the orbit of science is what is being called on here. For the scientist, what it comes down to is that he is reasoning on the basis of observation, and the old man is doing the spiritual thing – being religious. Respectfully, the scientist sees before him a venerable 'primitive'. In finding a way to go on with the joint enterprise, the scientist understands himself as a private individual being tolerant and respectful.

The old Aboriginal man in this dramatic version also understands himself as being tolerant in going along with the scientist. He recognises that the criteria of sameness he is using are not those the scientist is using to derive the category 'botanical family' – the smell of crushed leaves, observable leaf placement and so on. He knows that the sticks and the plants are linked to different clan lands and to different clans; the origin of those links is of the utmost interest to him. In fact, what connects plant, stick, area of land and clan is stronger than 'a link': the stick, the plant, the clan, and the area *are* each other – that is how transcendentally justified categories work – they stand in for each other. For the old man the sticks, like clan members, *are* live exemplifications of formal categories, differentially located in the formalised recursive system of categories called *gurruṯu*, which is translated into English as 'the kinship system'. For the old man, doing the sticks' sameness and difference by using them to make fire is doing clan sameness and difference. *Bäpurru* is the Yolngu term for this complex entity of a *gurruṯu* group. It happens that the *Bäpurru* involved here, in the form of the sticks, are relationally located as particular reciprocals in *gurruṯu*. Their relationship is unity.

The old man is doing a formal logic whose entities are in some ways akin perhaps to geometry, where a pencil line on paper and the distance between two points is one and the same. He hears the scientist speaking 'baby talk'. In helping babies and children learn, he is continually pushing them beyond 'baby eyes', beyond such irrelevant difference/sameness distinctions as the scientist has just expressed. Taking the scientist seriously as a learner, he explains the (formal)

relation between the two plants – 'they are the same one really'. The old man sees before him a 'beginning learner' and tolerantly takes care in instructing him.

Both the scientist and the fire-maker identify a connecting sameness, but in each case sameness is achieved by rendering 'their' tradition as already 'within our tradition', effectively explaining difference away. Symmetrically refusing that move, and instead taking both stories together, allows only for absolute separation between the stories. When it comes to engagement in good faith between disparate knowledge traditions, tolerance is a good beginning but in the end it is not enough; it is merely a way of not taking the other seriously (Stengers 2011). Mutual interrogation, which can reveal 'our' traditions to ourselves, as much to the other, is what is called for here.

Questions about knowledge practices: An interrupting technology opposing the balm of allegory

I have identified two means of using allegory as balm that can circumvent epistemic disconcertment. Both allegories manage potential contradictions by shifting 'upwards' to a framing device for explaining 'the other' away. As devices they shift the commentator, the author of papers such as this, to a *meta* position with respect to the knowing they are commenting on. Accepting such a positioning carries profound implications for how the commentator is configured as knower, for how she can know, and for what she can know. For a commentator to accept such a *meta* positioning implies that there is one set of answers to such questions for those whose knowing is being examined by the commentator, and another set of answers for the commentator herself. The assumption is that the commentator is a removed, judging observer with the gods'-eyes view. My commitment to materialist multiplism is not compatible with such notions of framing and meta-positioning. If I am to comment, I need to find a way of staying in the same plane of knowing as those whom my stories are about. Thus, instead of a meta-framing device, I offer a burrowing device, one that insidiously gets 'inside' those clotted routines and practices by which knowledge is collectively generated, with the aim of loosening things up, and which can equally well be operated by all participants, not only the commentator.

Knowledge practices? Aborigines have knowledge practices; scientists have knowledge practices. A modest and tolerant basis for engagement? Maybe. But I need to be explicit here. The category of knowledge practices chosen can all too easily be a way of imposing a sameness in which 'our' categories (knowledge/belief, practices/concepts, abstracting/situating) are mapped in an absolutist way onto 'their' collective life. I need to be careful to avoid being taken as proposing knowledge practices as a 'translating sameness'. That would be just replicating the theoretical moves I have criticised in rejecting meta-framing devices. Part of that

avoidance is refusing to slip into the easy assumption that knowledge practices are something 'out there' waiting to be 'found'. I am remembering the lesson of my 'finding' a Yoruba numeration system when I was struggling to articulate the difference of Yoruba numbers, and more particularly remembering the difficult and painstaking work I needed to do later, to show myself *how* I had both contrived that finding of a 'waiting out there' Yoruba numeration system, and assiduously hidden the contrivance of finding from myself (Verran 2001: 71–91).

I introduce 'questions about knowledge practices' as an analytic burrowing tool, by way of alluding to Stengers' notion of 'an ecology of practices' (Stengers 2005a). Contingent and strategic as a category in use, my 'knowledge practices', or Stengers's 'ecology of practices', is a tool only ever constituted fleetingly, and with some on-the-ground difficulty. Necessarily, in each instance of its use, the category 'knowledge practices' is re-formulated as a set of propositional questions, using the resources of the situation being analysed.

Stengers notes that she came to see the need for the tool she proposed as 'an ecology of practices' to help physicists deal with two serious challenges that their discipline is facing, but which physicists are unable to attend to without making things worse because they are bereft of appropriate tools. The first of these she identifies as the inappropriate clinging to a habitat of an intellectual life that is long since dead, the 'habitat' within which physics as a tradition of analysis came to life. Back then, as it came to life in 17th-century Europe, physics made a claim about an imagined, ideal 'physical reality' as that which it knew – a totally knowable reality to whose existence physics was committed. Stengers, who has worked for many years with physicists, is trying to show that to insist that there is a fully knowable reality, and that only physicists can know it, is actually to misrepresent physics's epistemic practices. It is a waste of energy to insist on that sort of singularism.

Like physicists, in struggling to work together through responding in good faith as practitioners in Aboriginal or environmental science traditions of expertise, the practitioners I work with need new ways to articulate the means of their expertise. My offering of 'questions about knowledge practices' to experts like the senior Aboriginal fire-maker and the authoritative environmental scientist, and more generally those who would engage 'other' knowledge practices with some intimacy, is made in the same spirit with which Stengers engages physicists.

Knowledge practices are those collective, routine socio-material ways of carrying on that enable people to say 'we know' with at least some degree of certainty. They can be understood as accomplishing what would count as an answer to one or more of a series of questions, albeit that most practitioners would feel that these are a rather odd series of questions: Who knows? ('How are knowers configured as outcomes of the practices of knowing?' – glossed as 'knowing subjectivities'). What do we/they know? ('What entities are co-constituted along

with their knowers in these practices? – glossed as 'ontologies'). How do we/they know? (What methodological means do we/they adopt in practices that co-constitute knowers and the entities they know? – glossed as 'methods'). How do we/they know that we know? (How is enough certainty co-constituted along with knowers and what they know?' – glossed as 'epistemologies').

We can understand this series of questions as a provocation. Were they to be seriously entertained on all sides, as questions about 'our' knowledge practices, they would add to the unease of engagements between practitioners of disparate knowledge traditions. The suggestion that these questions would actually be answered in advance of anything we *say*, simply by our sticking to *doing* our practices as usual (practices which we usually do not bother to articulate), will likely inflame things further. The questions, by infecting knowers with the painful condition of epistemic disconcertment, would add to the tensions and discomfort of engagement with difference. It is a treatment that mimics the destabilisations of the engagement itself.

The questions, posed by a commentator inhabiting the same plane of knowing as those whom her stories are about, can be understood as the stutterings of an idiot (Stengers 2005b: 995). The term 'idiot' here refers to one of philosophy's conceptual personas, a shadowy, mysterious

> something else ... that appears from time to time or that shows through and seems to have a hazy existence halfway between concept and preconceptual plane, passing from one to the other ... The [old rationalist] Idiot says 'I' and sets up the cogito [and] also lays out the plane [in which concepts appear].

The poser of questions about knowledge practices, the new idiot, has no wish for the indubitable truths of singularism, the simplifications of rationalism, but insists on ineluctable and irresolvable complexity (Deleuze & Guattari 1994: 61).

What exactly do these new idiot questions, designed as a tool for treating epistemic disconcertment by provoking it further, actually do? How do they work as a burrowing device that loosens things up? One thing they 'do' is to elicit support for mutual engagement, through precise tightening of the surface tensions of epistemic difference. They work to maintain action as collective *before* the arrival at (generalising) concepts. In concluding the discussion, I develop and illustrate this answer by going back to my ethnographic story and offering a third commentary.

A working imaginary for doing difference together before coming to concepts

Imagine the shocked silence that I described following the articulation of the disagreement between the senior Aboriginal man and the scientist over whether two

plants were the same or different. Now imagine the intensified collective discomfort if I (neither Aborigine or scientist), had at the time idiotically asked questions of the workshop practitioners. *How is this disagreement revealing of what you know; how is it showing your ontology? How is your configuration as knower, your knowing subjectivity coming into play here? How are the means that your collective cognitive processes adopt in generating concepts on show here? How does this disagreement implicate the means you collectively engage in, generating (enough) certainty?* What inappropriate temerity on the part of a know-nothing cultural broker/ethnographer it would have been to ask those questions then and there. Recognising that, I acknowledge that if the tool I have designed is to have any use it must be wielded 'in place' by the participants themselves. This chapter, and in particular this conclusion, is an attempt to show how that might be done.

I am offering a third commentary on my ethnographic story. I am mobilising those questions I articulated in the previous paragraph as a tool that might both help to exaggerate the epistemic disconcertment we all felt, to offer a challenge; and to provide a quasi-epistemic means to foster a common plane of knowledge-making within which we might all work collectively. To begin with, I suggest that we can see a move to the *insides* of the routines of both Aboriginal and scientific knowledge practices already happening in the engagement I described in my story.

In responding to the disagreement that flared so intensely at the very beginning of the workshop and finding a way to go on, letting the disagreement pass into the background, the two experts implicitly posed, for themselves and for the other, at least one of the above questions. The scientist offered the suggestion that the plants could be recognised as simultaneously the same and different, just as men and women are simultaneously the same and different, a proposition with which the fire-maker agreed. The problem is that things stopped there, and the allegory worked as a balm for epistemic disconcertment, usefully also providing a loophole through which a commentator could scramble to a meta-position, to reframe from 'above' an event in which she was marginal to begin with. The commentary I offer here eschews escape through that loophole, refusing the comforts of dualism for the commentator, although not denying possibilities for others (scientists and/or Aborigines) to be committed to a metaphysical dualism. Beginning as, and remaining, uncomfortably marginal in the event itself, this commentary re-performs it, perhaps convincingly, perhaps not.

I claim that participants in engagements such as the workshop on firing need to be able to wittingly go further with the allegory they came up with. They need to reliably be able to recognise *at the time* that such a turn to allegory is a beginning, not a way to end the discomfort of difference. There need to be established protocols and procedures for grasping the opportunities offered by expressing a felt need for allegory in *that* here-and-now, in order to do some

philosophical work within the real time of the event where the engagement is taking place.

The allegory that the sameness/difference of plants was a version of the sameness/difference of men and women was collectively taken as a soothing tactic; a means for covering up, closing down, and moving on. But nevertheless it contains within it an explicit recognition that *how* 'we' know, as a senior Aboriginal man and as an authoritative scientist, is different: the collective cognitive processes we each adopt in generating concepts are not the same. That is the implication of the content of the allegory. Using this starting point, how could my burrowing tool of 'questions about knowledge practices' dig deeper into the event to adduce some of the specificities and particularities of difference without resorting to a meta-framing that explains the other's knowledge away?

The scientist is a Linnaean: for him the Tarenna and the Litsea are species, units in a linear, hierarchical taxonomy. Each plant type features as a unit in a higher unit, a genus, which in turn features as a unit in a family. In shock he says, not only are these plants different species, they are units in different families! You do not find them as connectable units until you get to the level of the Linnaean category 'order'. In mobilising the Linnaean classification system (kingdom, phylum/division, class, order, family, genus, species) he is engaging the familiar abstracting, one/many generalising methods of the sciences.

The senior Aboriginal man, with his startling claim that the plants are the same, understands them as parts of a whole. He generalises and comes to concepts using a form of generalising not much engaged in the natural sciences. Plants, like everything else in the Yolngu universe, are parts of an interrelated, vague whole. According to what Yolngu commentators have been telling scientists for several hundred years now, one of the elements that emerged as this universe came into being is a formalised cyclical manner of being of this whole, known to Yolngu as *gurruṯu*, which anthropologists renamed 'kinship'. In this cycle the two plants that generate fire occupy one position, the null position in the cycle. Their oneness is an outcome of their being distinct particulars that occupy a single position within a formalised, although still ontologically vague, whole.

In pop psychology, which I take to be the origin of the allegory offered by the scientist, the possibility for men and women to be simultaneously the same and different similarly relies on the contrast between generalisations of the form one/many and whole/parts. The popular imagination that this allegory draws on is based on contesting concepts of men and women. Some popular commentators argue that being male and being female are 'units' of the experience of being human, and together they add up to the category 'human': men and women are fundamentally different but complementary – 'men are from Mars, women are from Venus'. On this reading one can only experience being human through first experiencing being

as a specific man or a specific woman. Such commentators are adopting a one/many form of generalising. In contrast, other commentators, engaging a whole/parts form of reasoning, insist that men and women should be understood as parts of a whole 'humanity' (it is only experience of being human that makes possible the particularity of experience either as a man or as a woman or, some more liberal commentators add, both as a man and a woman). Or alternatively, men and women are imagined as sexual parts of a coupling, which is possibly what the scientist had in mind in proposing his 'analogy'. This is the form of *gurruṯu* generalising that links man and women in the relation of husband and wife.

Irrespective of how the allegory is cashed out, the point is that it contains within it recognition of alternative ways of coming to concepts, and also that in consequence, different concepts are in play. Embedded within the allegory, the question 'how do we know?' can be found. What the burrowing tool of questions about knowledge practices can do, is bring this to the surface, and 'give to the situation the power to make us think, knowing that this power is always a virtual one, that has to be actualized ... [it must be something] that makes us think and not recognize'(Stengers 2005a: 185). What is required is thinking together, rather than merely recognising that we have experience in common here and using the allegory to close things down.

Together we should cultivate the collective disposition to interrogate the familiar: the agreed sense that men and women are simultaneously the same and different. *That* is what needs further questioning. Let us have some further fun with this allegory by considering what the participants might have said to themselves. 'In terms of questions about knowledge practices (Who knows? What do we know? How do we know? How do we know we know?), what are we saying when we agree that claiming that these plants are the same/different is like claiming that men and women are the same/different?' Pursuing the tension through stories of the endlessly entertaining and vexing relations between men and women, all the while recognising that what we are doing together here is making a particular use of the burrowing tool of 'questions about knowledge practices', could change the way we do difference. Participants could get to the point of saying that the event of the disagreement, together with its ready allegory, points to a salient difference here and now, one we would do well to take note of: knowing through vague wholes is different than knowing through specified units, and differing cognitive skills are involved. Maybe just that recognition could offer a way to name the problem that had the scientists coming to learn from the Aborigines in the first place.[3]

Notes

1 Discussion of some of the issues that arose in that series of workshops is given in Verran 2002a, 2002b.

2 The old man is referring to reciprocal positions in the *gurruṯu* or kinship system through which most ongoing life is ordered in this region. For an introductory description of *gurruṯu* see Exhibit 4 *Singing the Land Signing the Land* on the website http://singing.indigenousknowledge.org/

3 Members of the Yolngu Aboriginal community at Yirrkala, especially the Ngaymil Clan, the Dhimurru Land Management Aboriginal Corporation, environmental scientists employed by the NT Parks and Wildlife Service, teachers and students from the secondary section of the Yirrkala School, and students Margaret Ayre and Jonathan Wearne are gratefully acknowledged. This research was funded by an Australian Research Council Linkage Grant.

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