# After Incommensurability

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## 1. Introduction

It's a great pleasure to be invited here to comment on this fine work of analytical legal philosophy. I was invited as someone 'able to discuss some of the legal and theoretical issues surrounding the role of the law of evidence which the book deals with at various points.' In my comments here today, consistent with this remit, I intend to focus on the final parts of Connolly's monograph, particularly the implications of the rejection of the radical cultural incommensurability thesis. While I intend to speak mainly about the implications of Connolly's work for procedure and proof in native title and heritage protection litigation (and implicitly criminal law), it is my intention to say a few things about scientific evidence because that is where I normally work and Connolly's monograph possesses several non-trivial resonances.

Initially, it's probably appropriate to disclose something of my intellectual lineage. I am a direct intellectual descendent of Thomas S Kuhn. My honours thesis, in the history and philosophy of science, was supervised by John A Schuster. Schuster was a PhD student at Princeton University from 1969-74 under the direct supervision of Kuhn. This rather arcane information might be revelatory because Kuhn was responsible for stimulating interest in incommensurability through his seminal work *The Structure of Scientific Revolutions* (1962, republished 1970). Kuhn's theorisation was derived largely from his work in the history of science, primarily chemistry and planetary astronomy—notably his earlier study of the emergence of the Copernican heliocentric universe and its gradual success over its Aristotelian natural philosophical rivals in Europe during the 16th and 17th centuries. After studying the history and philosophy of science, I studied law and most of my subsequent work has been in *post*-Kuhnian science studies (the sociology of science, especially the sociology of scientific knowledge (SSK) and science and technology studies (STS)) and evidence law, particularly expert opinion evidence. This background is, to varying degrees, relevant to what I will say today. The references to Kuhn and his influence are significant because his work (and simultaneous work by Paul Feyerabend and others) seems to have stimulated a good deal

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of late 20th century thinking about incommensurability.[1] Though, unlike Connolly, Kuhn discussed incommensurability within *the* Western intellectual tradition.

## 2. Toward 'thin' acquisition

It is a credit to Connolly's patient and meticulous scholarship that my discussion is primarily oriented to the final chapters and the implications of the rejection of the *radical cultural incommensurability thesis*. The radical cultural incommensurability thesis:

> ... maintains that as a matter of theoretical necessity no judge possesses or is able to acquire any culturally different concept. This is to say that there is no theoretically possible world in which any judge possesses or acquires any culturally different concept or that the possession or acquisition by a judge of a culturally different concept is theoretically impossible.[2]

The strong version of the thesis seems to have few necessary implications. It might, depending on background assumptions, encourage recognition of the sovereignty of others. Though it might, just as easily, legitimate subjection (and even decimation). The inability to comprehend aspects of cultural difference is really a doctrine of pessimism, particularly following colonisation where a return to original conditions or full sovereignty are not realistic (and may not even be desirable) options. In the absence of indigenous autonomy or sufficient sympathy (remember the thesis suggests that empathy is not possible) from the dominant cultural and political group(s) there is nothing to do. In a kind of neo-social Darwinism those who are culturally different are responsible for themselves (and possibly subject to the whims of others). According to the radical version of the thesis, ('our') indigenous peoples must be the authors or victims of their own inferior cosmologies and abilities (whatever the cause) and their inability to adapt (by acquiring, accommodating or overcoming Western

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1 H Sankey, *The Incommensurability Thesis* (1994); R Harris (ed), *Rhetoric and Incommensurability* (2005).

2 A Connolly, *Cultural Difference on Trial: The nature and limits of judicial understanding* (2010) 165, 9. I am sympathetic to the physicalist-functionalist account of intentionality, action and interpretation. I accept, without being particularly familiar with the philosophical literatures, Connolly's argument about shared human 'hardwiring' for the acquisition of concepts and understanding of agency (what is known, fashionably, as 'mind reading') through a range of sensory and communicative abilities (drawn from evolutionary biology).

ideas, values and technologies).[3] If we took the cultural incommensurability thesis seriously there is nothing that law ought to do in terms of procedure and proof, other than adopting, or perhaps enforcing, a paternalistic attitude in the way endangered animals or children (eg *in loco parentis*) might be treated.[4]

The strong version of the incommensurability thesis is implausible and – importantly for a book on the nature and limits of judicial understanding – irreconcilable with the assumptions and foundations of proof in all contemporary Western legal systems. So-called 'rational' approaches to evidence and proof, following Jeremy Bentham (1748-1832), James B Thayer (1831-1902) and John H Wigmore (1863-1943), require an ability to acquire concepts in order to understand and assess evidence.[5]

Moreover, the incommensurability thesis is inconsistent with contemporary biomedical and psychological research, particularly following shared evolution, as well as lived experience. On the latter, members of minority groups from cultures radically different to mainstream or dominant cultures seem to understand, occasionally perform well and even thrive in a variety of non-*traditional* (let's say Western) settings. Ethnographic research indicates that in some situations those who are relatively disadvantaged and powerless, such as servants, the poor and we might extrapolate to slaves, often have quite sophisticated practical understandings of dominant groups that enable them to get by – if not always flourish (in the Aristotelian sense of *eudaemonia*).[6] There are numerous exceptions – both historical and contemporary – to the radical version of the thesis and its implications and, as Connolly quite properly concedes, perhaps few serious proponents. Consequently, the radical version of the thesis is inconsistent with our actual ability to communicate across cultures. It seems to make little sense diachronically, is incapable of

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3 I accept that the relativists defending the strong version of the incommensurability thesis might not frame their approach in terms of a hierarchy, particularly inferiority.

4 On the question of what substantial law might look like, the inability to assimilate would require reserves and management. This reinforces the poverty of such a theory as well as some of the ideology underpinning some historical practices.

5 W Twining, *Theories of Evidence: Bentham and Wigmore* (1985); R Allen and J Miller, 'The Common Law Theory of Experts: Deference or Education' (1993) 87 *Northwestern University Law Review* 1131; see also eg *Evidence Act* 1995 (NSW) ss55, 56.

6 Historically, those with power have not been particularly interested in acquiring the concepts and perspectives of the weak: JC Scott, *Weapons of the Weak: Everyday forms of peasant resistance* (1985). Those 'below' tend to have perspectives about those in power that should not be ignored or trivialised by those wielding power or managing institutions purportedly dispensing justice.

accounting for cultural change (and most conspicuously progress), let alone the development and acquisition of concepts within cultures – also a problem for Kuhn.

Connolly offers a formidable technical critique of the radical incommensurabilty thesis. He nevertheless emphasises that we should recognise that weaker variants of incommensurability – or the practical implications of degrees of commensurability – create very serious difficulties in our everyday world, particularly for indigenous peoples embroiled in legal disputes within the mainstream legal institutions. These problems are not created by our biological condition, but rather by the way our cognitive and sensory abilities interact with our experiences and the particular concepts we acquire as well as the rules and procedures developed around particular legal entitlements and rights, along with our social and institutional arrangements. They are created and perpetuated by different concepts, ideology, related experience and social histories. Nevertheless, degrees of incommensurability or difficulties in understanding cultural differences (or acquiring foreign concepts) continue to create practical problems for legal institutions. They create problems in areas such as native title, heritage protection and criminal law, but they also create difficulties with other types of exogenous (ie non-legal) knowledges – such as scientific and medical evidence (see section 5).

Initially, I want to say something about indigenous knowledge and judicial acquisition of concepts, then I will turn to scientific evidence and subsequently the legal system and reforming legal practice.

## 3. Overcoming conceptual deficits and communication problems

Once the theoretically suspect and empirically untenable radical version of the thesis is abandoned, the hard work of actually understanding cultural difference, the agency of others and acquiring and understanding the cultural significance of concepts for legal decision making begins. The first thing to recognise is that notwithstanding the fact that 'thick' or deep concept acquisition or cross-cultural understanding is possible it is often difficult and probably exceptional[7]. It would seem to be particularly unusual in courts. Our legal institutions have not, after all, developed with such ends in mind. Rather, legal institutions and practice tend to reinforce or reproduce existing socio-economic hierarchies[8].

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7 C Geertz, *The Interpretation of Cultures* (1973).

8 D Kennedy, 'Legal Education and the Reproduction of Hierarchy' (1982) 32 *Journal of Legal Education* 591.

Our legal systems did not evolve to accommodate, and have only relatively recently attempted to adjust to, exogenous knowledges.[9] Problems with standing and recognition meant that indigenous knowledges and perspectives were often ignored, elided or treated as legally irrelevant. In their initial responses, attempting to accommodate indigenous knowledge, perspectives and beliefs, Australian legal institutions have approached indigenous knowledge as basically a variant of other evidence. They have endeavoured to adapt existing rules and procedures (ie adjectival law) in order to enhance the provision and comprehension of indigenous claims – in the context of contested proceedings.

Having dismissed the strong version of the thesis, Connolly's monograph turns to grapple with the persistent difficulties of inter-cultural exchange and understandings. Through the persistent example of ochre we can appreciate the failings of strong incommensurability, and yet the reader might feel that a description of ochre as a yellow powder, used in certain ceremonies and for painting, might not adequately capture the complex metaphysical and indeed epistemological and cultural elements in play.[10] (In saying this, I don't think Connolly would disagree. Though it does seem to have direct relevance to the possibility of understanding – and what understanding actually means for legal practice.) Having concepts explained, and even acquiring a basic or provisional impression (or 'understanding') of their context or significance does not necessarily entail 'thick' comprehension or even very much at all.[11]

Many years ago I was struck by Peter Goodrich's[12] account of Haida First nations people giving evidence in *Delgamuukw v British Columbia* (1991) in an attempt to forestall commercial logging on their traditional

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9 In the case of experts, the 18th century sees the modern beginnings. Recognition of land rights and substantial interest in indigenous knowledge and perspectives emerged only in recent decades. See T Golan, *Laws of Nature, Laws of Men* (2004) and B Keon Cohen, 'The *Mabo* litigation: A personal and procedural account' (2000) 24 *Melbourne University Law Review* 893.

10 We might say the same about Micronesian navigation (D Turnbull, *Masons, Tricksters and Cartographers* (2000), the classification of animals by tribes in Papua New Guinea, the rejection of second-hand hearsay accounts by several South American indigenous peoples, and even explanation of the double helix.

11 I do not mean to suggest that perfect or full comprehension of concepts is necessary for meaningful exchanges or even understanding. See for example the use of 'boundary objects' by S Star and J Griesemer, 'Institutional Ecology, "Translations" and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39' (1989) 19 *Social Studies of Science* 387-420

12 Peter Goodrich, *Languages of Law: From Logics of Memory to Nomadic Masks* (1990) 182-4.

lands. The Haida were allowed to explain their 'symbolic dress, mythologies, masks and totem poles as well as the legends, stories, poems and other forms of interpretation that such art and mythology implied'. Ultimately, this evidence seems to have been ignored by the trial judge.[13] There is, after all, very little in the rational tradition of evidence scholarship that would equip a judge to evaluate the evidentiary implications of a dance, or a piece of art or even some creation myths or traditional stories. What, after all, is a judge to make of a dance, its nuances and subtleties, cultural registers or cosmological implications?

What we can say about indigenous concepts or activities (such as the significance of ochre, a dance or tracking an animal) is that even if we have them explained or provide institutions where they may be explained and explored they may still seem foreign and we may have profound difficulty understanding them let alone accommodating them within substantial legal categories and using them as proof.

It is possible to appreciate that a dance has some relationship to place, tradition or cosmology – in ways that may be legally significant in a purportedly rational Western legal procedure concerned with procedural fairness and the need to consider all relevant *evidence* – but it might be difficult to understand, in a way that resembles the understanding of those reared in the 'traditional' way – whether dancing, watching or customarily excluded.[14] It is not obvious that indigenous concepts (and practices) will necessarily make legal sense or even permit the drawing of relevant inferences.[15] (It may be that being told that a dance signifies or embodies something about a tradition or a relationship to a place or set of actions provides a sufficient basis to draw inferences. If so, this would seem to be an impoverished or indirect form of 'understanding'. It operates as some kind of implicit corroboration to link people to a tradition or location or to value some animal, plant or other resource – without necessarily appreciating its deep significance in the lifeworld or to the cosmology.[16])

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13 This was addressed, in part, in *Delgamuukw v. British Columbia* [1997] 3 S.C.R. 1010.

14 I don't want to suggest that traditions are even homogenous or completely shared within cultural groups. Different experiences and differential levels of exposure to secret-sacred knowledges will create disparities within (claimant) groups, but they will usually be more conversant than 'outsiders'.

15 Here, I'm reminded of Wittgenstein – 'If a lion could talk, we could not understand him' L. Wittgenstein, *Philosophical Investigations* (1968) 223. Although this seems to imply a more radical version of the thesis – albeit in relation to a specific context.

16 It may be that judges do not actually need to, or in the alternative rarely do, understand culturally different concepts or their broader cultural significance. This, however raises questions about their application of the

What I think we can say – and this follows from Connolly's critique – is that while judges have the *potential* to acquire a range of culturally foreign concepts (including an understanding of agency), in reality they are likely to acquire only rudimentary impressions, even if such (limited) understandings are generally socially desirable – and very expensive – quasi-public *tutorials*. Current rules and procedures are not designed or operationalised to facilitate much more than superficial understandings. That is, concept acquisition during the course of the few days, weeks or months of a trial is unlikely to capture the complex metaphysics and epistemology of culturally different others. Judges are not, after all, anthropologists.[17]

Connolly does not discuss, at least in much detail, how concepts, concept acquisition, and therefore the possibility of understanding, are linked to sensory perception and experience:[18] what used to be described as the theory loading of observation.[19] Because our perceptions seem to be based, substantially, on theories, experiences and expectations, it might be quite difficult (and much more difficult) for some individuals to acquire or fully understand foreign concepts (especially where they depend on long sensory exposure, cultural immersion and tacit knowledge).[20] The world is perceived and understood in terms of our previous experiences and concepts and this may make it difficult – though not impossible – to acquire sophisticated understandings of culturally foreign concepts.[21] It may,

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law – to underlying 'facts', which might be controversial and difficult for non-indigenous persons to assess. It might also be read to imply that law might not be especially accommodating. That is, lawyers and judges may force foreign concepts into more familiar legal categories. You don't have to know the local metaphysics of ochre (and its uses) to recognise that it might suggest some association with particular tracts of land and traditional cultural practices. If people still, albeit occasionally, rub ochre on themselves or paint with it, then an ongoing relationship with certain areas might be credibly inferred without much of an appreciation of the practices or their significance to the culture or tradition.

17 G Edmond, 'Thick decisions: Expertise, advocacy and reasonableness in the Federal Court of Australia' (2004) 74 *Oceania* 190-230.

18 G Bowker and S Star, *Sorting Things Out: Classification and its consequences* (1999).

19 A Chalmers, *What is this Thing called Science?* (1982); J Berger, *Ways of Seeing* (1972).

20 This is implied in the assertion that: 'A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it' – T S Kuhn, *The Structure of Scientific Revolutions* (1962) quoting Max Planck.

21 It might be possible to mount a qualified argument about incommensurability on this basis, but it would be limited by particular experiences, exposures and ages.

however, be easier to acquire some kinds of foreign concepts than others and may be practically impossible in some legal settings to actually acquire much in the way of understanding. If socialisation and experience shape perception and the practical ability – as opposed to the innate (in)capacity – to acquire concepts, then judges may be in a position where it is practically difficult (and sometimes extraordinarily difficult) for them to understand foreign concepts notwithstanding good will and attempts to embrace or develop more sympathetic procedures.[22]

## 4. Legal institutions, statutes, rules, procedures and proof

Having rejected the radical version of the incommensurability thesis it is illuminating to consider some of our current rules and procedures from the perspective of the objects of the federal *Native Title Act* 1993 ('the Act'). According to section 3:

> The main objects of this Act are:
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> (a) to provide for the recognition and protection of native title; and
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> (b) to establish ways in which future dealings affecting native title may proceed and to set standards for those dealings; and
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> (c) to establish a mechanism for determining claims to native title; and
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> (d) to provide for, or permit, the validation of past acts, and intermediate period acts, invalidated because of the existence of native title.

22 Learning a second language might be a useful analogy. Generally, the more language a person possesses the easier it will be to understand what others are saying and intending. Usually, time spent in country or with native (or experienced) speakers is necessary to learn to use language and become conversant in a way where communication is fluent and effective. By analogy, judges seem to get a little 'language' and are expected to understand (for law's purposes). The understanding might be better than without exposure, but it seems unlikely that they can appreciate the complexity – which must be part of the conceptual apparatus. Those who are not fluent are unlikely to appreciate subtlety, allusions, jokes and so on. The limits are largely a function of experience, opportunity and ability – rather than the impossibility of learning – but the practical realities as opposed to the possibilities for acquisition and understanding would seem to be non-trivial.

There is scope to recognise native title over land, tidal zones and fisheries, along with a range of cultural practices and rights. It is not obvious, however, that adjectival law (ie rules, procedure and burdens of proof) are conducive to facilitating these objects. Here, cultural difference and its significance continues, along with the substantial law (eg the burden of proving unbroken 'traditions' and limits on what can actually be claimed), to raise serious and sometimes practically intractable difficulties for individuals, groups and institutions[23]. While, *in theory*, these might be transcended, because of resource and time constraints, legal rules and procedures, disinclination (whether from indigenous groups, lawyers or judges), cognitive abilities, and various motivations, they are unlikely to be *practically* overcome – at least consistently. Nevertheless, some and potentially many, aspects of cultural difference may be grasped, or grasped sufficiently to have (what might be represented as) a practically adequate understanding (ie 'thin' concept acquisition). Moreover, because we are not in a position to *objectively* evaluate legal decisions – because this requires knowing both 'the law' and 'the facts' – legal decisions may appear reasonable even when they do not rise above superficial or even misguided impressions.

Because it seems theoretically possible, we tend to assume that judicial concept acquisition is practically adequate and that simply tweaking our adjectival law will enable our rational tradition to accommodate foreign concepts and beliefs. Connolly, in the final chapters, explores some of the recent interventions and possibilities that might improve or facilitate cultural understanding – such as the value of a charitable hermeneutic (ie 'principle of charity'), enhanced judicial education, architectural reform, and a range of adjectival adaptations including more inquisitorial (and therefore less adversarial) procedures, respect for secrecy and scope for restricted proceedings, the provision of evidence in groups and holding hearings on site to facilitate participation, views and performances.[24]

In addition to proposals considered by Connolly, recent statutory amendments in many jurisdictions, including the Commonwealth, NSW and Victorian *Evidence Acts,* following recommendations by relevant law reform commissions, introduced exceptions to the exclusionary hearsay and opinion rules for indigenous witnesses.

### *Section 72 Exception: Aboriginal and Torres Strait Islander traditional laws and customs*

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23 P Burke, *Law's Anthropology: From ethnography to expert testimony in native title* (2011).

24 Connolly, *Cultural Difference on Trial,* 152-156.

> The hearsay rule does not apply to evidence of a representation about the existence or non-existence, or the content, of the traditional laws and customs of an Aboriginal or Torres Strait Islander group.
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> *Section 78A Exception: Aboriginal and Torres Strait Islander traditional laws and customs*
> The opinion rule does not apply to evidence of an opinion expressed by a member of an Aboriginal or Torres Strait Islander group about the existence or non-existence, or the content, of the traditional laws and customs of the group.

These exceptions to exclusionary rules are designed to enable members of Aboriginal or Torres Strait Islander groups (but not anthropologists) to express opinions or repeat hearsay about 'the existence or non-existence, or the content, of the traditional laws and customs'.[25] They were intended to ease the provision of evidence and proof in native title and heritage protection litigation (and will also apply in criminal proceedings). They may help to prevent objections, sometimes innumerous, from well-resourced interests contesting the existence or continuity of title.[26] They make it easier and effectively uncontroversial for indigenous persons to present evidence, especially evidence of a kind that might be derived from the group or handed down over generations.[27]

It is difficult, and would be inappropriate, to argue against these statutory responses, or Connolly's suggestions, as techniques that might enhance the likelihood of acquisition. It is, however, important to recognise their highly conventional nature, particularly when set against the espoused objects of the *Native Title Act*, the history of violent dispossession, earlier legal dispositions (eg the sham of *terra nullis*) and persistent disadvantage experienced by the first Australians.

What we do not know is whether the new rules, and even the existing practices, readily facilitate or dramatically improve the understanding of cultural differences. There are good reasons to think that holding hearings

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25 *'Traditional laws and customs'* of an Aboriginal or Torres Strait Islander group (including a kinship group) includes any of the traditions, customary laws, customs, observances, practices, knowledge and beliefs of the group.

26 See eg *Harrington-Smith v Western Australia (No 7)* [2003] FCA 893; *Neowarra v Western Australia* [2003] FCA 1399; *Daniel v Western Australia* (2000) 178 ALR 542; *Jango v Northern Territory (No 2)* [2004] FCA 1004.

27 This was tentatively permitted via an anthropologist in *Milurrpum v Nobalco* (1971) 17 FLR 141, 159-60.

on site, allowing claimants to speak in groups, allowing groups to rely on hearsay or express opinions about traditions and customs might all enhance the understanding of cultural differences by lawyers and judges (and of law and legal practices by indigenous and other Australians). However, what all of these approaches seem to do is provide mechanisms that *might* enhance communication and understanding but with few ways of assessing whether that is actually achieved. Significantly, because the burden of proof is imposed on those asserting title, or some interest or right (so-called claimants), *the risk that the decision-maker may not understand or may misunderstand* – where understanding is too limited, too frail or simply wrong or naïve – *lies with the claimants.*

While these reforms and proposals are all welcome, especially in the years after the *Native Title Amendment Act 1998* (Cth), there is scope for more radical action that is consistent with, and more likely to obtain, the objects of native title (at the very least). Rather than tinker with adjectival reform we may need to re-consider the substantive law, burdens of proof and even our institutional arrangements.[28] I want to briefly consider the burden of proof and the configuration of our decision-making institutions. Because proof lies with the claimant, the risk of incommensurability (whether full or partial) and failure to satisfy the standard of proof (ie on the balance of probabilities) lies largely with indigenous peoples (ie claimants). The failure of a decision maker to fully, or adequately, understand some concepts or appreciate their complex entanglement in cosmologies may contribute to claims failing – and the practical extinguishment of title, rights and the permanent loss of traditions. It is far from clear that legal representation, facilitating site visits or admitting hearsay and indigenous opinions will overcome such difficulties or dangers. There are reasons to consider re-ordering legal practices in ways that redistribute the risks and implications of cultural misunderstandings and judicial and procedural limitations.

It strikes me that if we are serious about recognition of native title (or even the objects of the Act), heritage protection and a range of legally enforceable rights then we should reverse the burden of proof in native title and heritage protection litigation so that the risk of non-comprehension and a lack of (documentary) evidence ought to lie with the state – rather than the claimants. That is, we should require the state to persuasively show that there is no native title or rights or explain how they have been positively extinguished or abandoned since European settlement.[29] That way, continuing relations with land and traditions might be presumed to exist and be continuing and the real danger of misunderstanding concepts would be

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28 B Keon Cohen, 'The *Mabo* litigation: A personal and procedural account' (2000) 24 *Melbourne University Law Review* 893

29 Obviously claimants could contest evidence, but would not be obliged to bear the risk of non-persuasion.

less important (and less detrimental) to any outcome. This seems to make more sense given that indigenous cultures were largely oral, relevant documents may have been lost, destroyed or strategically drafted by those with competing interests in resources, access and ownership (such as the state, settlers, farmers and miners). It should be conceded that such an approach might be inferior, in terms of cultural exchange (and recording the details of traditions and practices), but it would transfer important risks. The state (or some other interested group) would be obliged to demonstrate, on the balance of probabilities, that there is no ownership, continuing relationship, heritage or legally recognisable rights.[30] We should require unambiguous proof of extinguishment rather than attempt to interpret whether culturally different concepts and practices support continuity in traditions. This approach is not only consistent with the objects of the *Native Title Act*, but it gets around *some* of the dangers of misunderstanding and the difficulties of proof. Shifting the burden of proof also recognises that an error in recognition of title may, as in the case of loss of access to lands or resources, or the suspension of practices, actually compromise or extinguish dynamic traditions.

We must be very careful before we allow our legal institutions to 'find' that there is no tradition. It might, for example, be better that some exaggerated claims and questionable traditions are formally recognised, with the limited entitlements they confer, than risk not recognising genuine traditions particularly where they might be impaired or lost forever. This resonates with the very old idea, underpinning modern forms of criminal justice, that it is better to let ten guilty persons go free than imprison someone who is innocent. In parallel with the criminal law's Innocence Projects, that recognise disturbingly frequent wrongful convictions, in the aftermath of two decades of native title and heritage protection litigation we may need *Ownership Projects* to revisit some of the outcomes, procedures and assumptions used to resolve claims – for all time.

In addition, we might wonder about the form of legal proceedings and whether adversarialism is generally the most appropriate way to operate a process aimed at ascertaining a range of factual issues associated with

30 To take but one prominent example: the burden might shift from the Yorta Yorta having to persuade a trial judge that a 'contract' between an aboriginal youth and a white colonist exchanging tribal lands for some tobacco in the mid nineteenth century was unsound, to the government (or others challenging title) having to prove that a self-serving diary entry accurately encapsulated a credible exchange based on a legitimate contract that was not impugned by misunderstanding, deception or coercion. See A Reilly, 'The Ghost of Truganini: Use of Historical Evidence as Proof of Native Title' (2000) 28 *Federal Law Review* 453–75; *Members of the Yorta Yorta Aboriginal Community v. State of Victoria* [1998] FCA 1606; *Members of the Yorta Yorta Aboriginal Community v. State of Victoria* [2001] FCA 45.

recognising, respecting and protecting indigenous persons, their cultures and evolving traditions. This is not a critique of adversarialism so much as a question about the symbolism of persistent formal challenges from governments and a range of private (ie commercial) interests supported by political and lobby groups (eg Minerals Council of Australia and the National Farming Federation). It may also be important to consider some of the dispute resolution techniques recommended by indigenous elders and leaders in devising a scheme that will facilitate the objects of various legislative regimes along with respect of peoples and cultures. In terms of respect, an inquisitorial approach or inquiry, perhaps supplemented by additional personnel (more below) might be preferable: more conducive to recognising title and perhaps facilitating the understanding of cultural differences (and foreign concepts). It may be that different processes would enhance the social legitimacy of outcomes.[31]

There are even more radical possibilities. We could, for example, have indigenous persons (from Australia or elsewhere) sitting with legally-trained judges on a panel. In the 21st century it seems anomalous to have white men sit in judgment over a range of very foreign concepts, issues and peoples. It might be argued that indigenous Australians have an interest in native title such that they could not credibly hear and decide a case with sufficient independence (ie *nemo iudex in causa sua*). There is also the question of whether indigenous peoples are well positioned to acquire the concepts of other indigenous groups. There are several possible responses. Concerns about self-interest and independence seem to be questionable when it comes to claims made by *other* indigenous groups. Would it mean that we could not have an Aboriginal judge hearing a native title proceeding (where she was not from the particular group)? We might, moreover, wonder whether European Australians have less of an interest (albeit more indirect)? Why shouldn't indigenous persons from other parts of the country sit alongside judges to hear and assess claims? There are good reasons to think that indigenous Australians are at least as likely as judges to acquire or comprehend non-local concepts and beliefs. If nothing else, they might be able to convey to lawyers and judges concerns about conventional legal processes and categories and their potential for violence.

## 5. Other exogenous knowledges: Incriminating forensic science evidence

At this point it is useful to make a digression that might help to illuminate how similar sorts of issues arise elsewhere and how difficult it is to stimulate change even where there are explicit objectives and putatively correct understandings (or appropriate methods and practices) or more

31 T Tyler, *Why People Obey the Law* (1990).

scope to ascertain them, and the concepts (or knowledge) constitute part of the mainstream intellectual tradition.

Much of my scholarship has focused on the reception and non-reception of non-legal forms of knowledge, primarily forms of incriminating expert opinion evidence in legal settings. Originally, I was trying to understand what went on. More recently, in response to continuing problems with the forensic sciences in criminal proceedings, I have begun to think more about intervention.[32] At first, it might seem that the relations between law and science, and the forensic sciences in particular, are a long way away from judicial efforts to acquire indigenous concepts. Once you begin to think about it, however, similar conceptual problems arise in relation to the judicial (and jury) acquisition of many types of scientific, biomedical and statistical knowledges.

Interestingly, there are problems with the epistemic foundations of many forensic science techniques. As the National Academy of Sciences (US) recently explained, there are serious doubts about the research underlying many comparison sciences routinely admitted and relied upon in criminal proceedings.

> With the exception of nuclear DNA analysis, however, no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source.[33]

In addition, there is strong evidence that prosecutorial ethics (and restraint), codes of conduct for experts, cross-examination, rebuttal experts, limiting the ways evidence is expressed, judicial instructions and warnings, and judicial review have limited ability, individually or in combination, to identify or adequately convey the weakness of many types of forensic science evidence.[34] In consequence, evidence derived from techniques that

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32 National Research Council (NAS), *Strengthening the Forensic Sciences in the United States: The Path Forward* (2009); G Edmond, 'Actual innocents? Legal limitations and their implications for forensic science and medicine' (2011) 43 *Australian Journal of Forensic Sciences* 177-212.

33 NAS, *Strengthening*, S-5-6. The criminal justice system is awash with 'expert' opinions that are questionable in terms of their epistemic value and the manner in which they are expressed. These include: mixed DNA results, fingerprints, hair, footprints, ear prints, bite marks, voices, images, blood spatter, handwriting and so on.

34 Law Commission of England and Wales, *Expert Evidence in Criminal Proceedings in England and Wales*, 34 Law Com. Report No 325 (2011); G Edmond and M San Roque, 'The cool crucible: Forensic science and the

are unreliable and often obtained in circumstances that ignore notorious methodological, statistical and cognitive dangers (eg forms of contextual bias or the use of misleading terminologies) is routinely admitted and presumably relied upon in trials and appeals.[35] It is left to the parties and the judge, in the context of an adversarial proceeding, to manage any problems notwithstanding that the trial and its safeguards seem inadequate to the task.

Having some insight into a range of methodological and practical issues enables observers to appreciate some of the problems with contemporary practice, at least in the criminal sphere with respect to the acquisition of exogenous knowledge – here scientific and technical evidence. We can appreciate how the primary aims (or objects) of criminal justice, concerned with truth (ie rectitude of decision, after Bentham), the need to avoid convicting the innocent (better to let the guilty go free), and the goal of fairness ('doing justice in the pursuit of truth'), are not embedded in actual legal practice.[36] For, unreliable forms of incriminating expert opinion evidence are routinely admitted and presumably relied upon, and the trial mechanisms seem inadequate as a form of regulation or management. The problem is how should courts engage with exogenous scientific and expert knowledges in ways that will achieve their goals, if these ideas (truth, err on the side of non-conviction, and fairness) are the dominant aims or principles guiding criminal justice practice. In a similar way, the objects of the *Native Title Act* do not seem to be well served by existing procedures, the burden of proof and institutional structures. This example has obvious resonances with understanding cultural difference in the context of indigenous knowledge and cultural practices.

The difficulty for our criminal justice system is how do we change things so that we achieve our goals – of which understanding, or sensitivity to the risks of misunderstanding and non-comprehension, form a significant part. While I have been arguing for reform, particularly the imposition of a reliability standard to keep unreliable expert evidence out of the courts,[37] it is my impression that judges are not in a good position to respond, and even the exclusion of unreliable evidence does not substantially enhance understanding, it merely reduces the likelihood that a person will be convicted on the basis of unreliable expert evidence. The issue is not simply

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frailty of the criminal trial' (2012) 24 *Current Issues in Criminal Justice* 51–69

35 I Dror, D Charlton and A Peron, 'Contextual Information Renders Experts Vulnerable to Making Erroneous Identifications' (2006) 156 *Forensic Science International* 74.

36 Like the objects of the Act, these criminal justice objects may not be facilitated through practice and the way rules have evolved and are applied.

37 G Edmond, 'Specialised knowledge, the exclusionary discretions and reliability: Reassessing incriminating expert opinion evidence' (2008) 31 *UNSW Law Journal* 1-55.

the difficulty of acquiring foreign concepts, but also how do these needs align with substantial law as well as existing legal practices, values and beliefs.

## 6. Partial knowledge

One of the difficulties with acquiring foreign concepts and understanding, as well as law reform, whether adjectival or substantive, is that a range of ideological, professional and institutional concerns seem to impact upon legal, and particularly judicial, practice.[38] By way of example, criminal justice practice suggests that judges have a strong – though ultimately unsustainable – faith in the efficacy of trial safeguards and tend to admit incriminating expert opinion even where it is unreliable or speculative.[39] They tend to be more sceptical in their responses to expert opinions adduced by criminal defendants (notwithstanding the objects of criminal proceedings) and interestingly, tend to be quite distrusting of expert evidence adduced by plaintiffs in civil proceedings. Revealingly, many judges have been quite dismissive of claimant anthropology in native title and heritage protection litigation.[40] This suggests the importance of ideology, along with professional and institutional factors that, in many cases, make it difficult for judges to recognise native title and confer substantial rights. Judges (and legislators) are embroiled in difficult social decision making where there is a need to balance the legitimacy of the institutions and outcomes with public and economic sensibilities as well as evidence and substantive law, and the interests of indigenous Australians.

Judging is always bigger than the ability to acquire and apply concepts (or facts) to law.[41] Indeed, a theory of limited commensurability is unlikely to explain judicial practice because judging is such a complex socio-epistemic activity. Judges are not amateur anthropologists or lazy anthropologists and our current institutional structures are not particularly well suited to acquiring concepts, although they have certainly adapted and continue to do so. Moreover, our current rules and processes, as the discussion of the burden of proof neatly illustrates, are not arranged in a

38 Perhaps a final irony is how little we know about our legal institutions, the effectiveness of procedures, and the actual reasons for decision-making. This is ironic because many of our indigenous peoples have been studied more intrusively and systematically than our judges, lawyers and legal practices.

39 G Edmond, 'Actual innocents? Legal limitations and their implications for forensic science and medicine' (2011) 43 *Australian Journal of Forensic Sciences* 177-212.

40 G Edmond, 'Thick decisions: Expertise, Advocacy and reasonableness in the Federal Court of Australia' (2004) 74 *Oceania* 190-230.

41 J Frank, *Courts on Trial: Myth and reality in American justice* (1949).

manner that appropriately recognises the very real difficulties in both producing evidence and the risk that even where adduced it might not be understood and valued in relation to traditions and their legal implications.