

The turn to DSI in bioprospecting: Some implications for traditional and indigenous people and knowledge

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This presentation focuses on a shift in science and technology, to draw some implications for traditional knowledge and peoples as custodians of biodiversity. The increasing dependency on digital data in bioprospecting has triggered a fear for new forms of biopiracy voiced by activists and global south actors. Fears are about the implications of databases gaining in popularity as sites of biodiversity extraction, eventually displacing the focus on *in situ* biodiversity and *ex situ* collections. If data-mining moves away the extraction of genetic materials from actual jurisdictions and local communities, and if data can be de-coupled from material samples and just accessed, analysed and copied from databases, how will local communities come to claim ownership on biodiversity as data? The datafication of biodiversity has triggered fears of dematerialization, deterritorialization and deregulation. Further implications of the genomic and big-data turn in bioprospecting can be imagined. As technological advancement makes some forms of life easier to access and work-with (such as microorganisms in extreme environments), would the focus on more 'typical' forms of biodiversity and environments be displaced? This is important to the extent that the CBD originated in a particular historical context where the importance of indigenous knowledge was acknowledged in so far as they are custodians of particular forms of biodiversity, mainly plants. So, will technological advancements ultimately push towards a reconfiguration of what counts as promising biodiversity and who is entitled to it? If indigenous people are the custodians of *in situ* biodiversity, who are the custodians of biodiversity as data?

Evolving Models for Co-Production of Marine Science Knowledge in South Australia

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Australia presents a complex example of a locale where there is increasing awareness about the moral and legal requirements associated with benefit sharing and acknowledgment of traditional knowledge, particularly Indigenous knowledge sources. After a brief overview on the history and current status of Indigenous communities in Australia, we present a series of vignettes associated with marine research in South Australia where different types of engagement or collaborations have occurred between academic and governmental researchers and local Indigenous communities. We use these vignettes to problematise typical Western scientific methods of giving credit and including local and traditional knowledges as part of knowledge production methods in scientific research, and explore a broader range of options such as diverse forms of benefit sharing that in turn can support a more robust vision of what is epistemically and morally relevant in these domains.

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Whilst once western scientists could simply collect observations of traditional use of plants or animals and develop products with no sharing of any benefits with the traditional users, today this process is subject to legal oversight, particularly under the Nagoya Protocol. However, interpretation of relevant legislation can be challenging. It also embodies an asymmetry between traditional customary approaches and a formal legal system, whereby owners of TK would have to defend their rights under the legal system of those who might misappropriate them. This asymmetry carries through to other interactions with indigenous peoples.

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The invention of the public domain helped to lay a foundation for “the invention of traditional knowledge” as a political and legal category worthy of rights. But while theory of the public domain has served to undergird claims for traditional knowledge protection to reward stewards of cultural preservation, so too has it proved a stumbling block to modern claims for recognition and reward for the poor as inventors. Today, claims by indigenous people and the poor go beyond equitable benefit sharing; increasingly, the poor seek to own copyrights, trademarks, and patents in their own cultural and scientific innovations. Paradoxically, however, the concepts of “traditional knowledge,” the “public domain,” and “cultural environmentalism” are obstacles to understanding poor people’s knowledge as intellectual property. Claims by native peoples to hold intellectual property are resisted as threats to the public domain, as the false consciousness of neo-liberalism, or as a radical assault on our intellectual property tradition, which encourages and promotes cultivation, not stewardship.