Open Science and Traditional Knowledge

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Overview

- Open Science is a more democratic approach to science based on global sharing of data and knowledge without restrictions on use
- Concerns over misuse of TK generally result in calls to limit sharing and use

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Open Science

- OS is a way of doing science – the systemic enterprise of understanding the universe and its components through standardized empirical studies – with origins in 17th century Europe
- In contemporary terms, OS includes open access publications, open data, tools and materials, and the absence of restrictive intellectual property
- It competes with proprietary models of science

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Promises of OS

- Open science promises a variety of advantages over proprietary science:
  - Reduces costs of creating teams
  - Reduces duplication
  - Reuses data/materials collected for one purpose for novel purposes
  - Engages communities in priority setting, data and material collection
  - ➢ Democratizes science

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Traditional knowledge

- TK engages science – whether open or proprietary – in a limited fashion
  - Indigenous communities may be the subjects of biomedical research given specific genetic or social features, using DNA and tissue samples
  - Environmental TK – relating to the environment, flora and fauna changes/cycles – may provide important information regarding climate change or affect of proposed developemnts

Traditional knowledge

- Traditional plants may be used to hybridize with commercial plants to provide desired features
- Plants and animals may be subjects of genetic studies to identify desired traits
- DNA from plants, animals and people may be used to understand human history and development

Protection of TK

- Various forms of protection over TK:
  - Veto rights – e.g. in Brazil
  - Obligations to share benefits
  - Secrecy
- Some of these include quasi-property rights in the sense of limiting access to knowledge, data or materials

OS and TK

- OS may conflict with quasi-proprietary approaches to TK in that OS insists on open and free sharing, without restrictions whereas TK limits this
- All depends on how we implement TK protections

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OS and TK made compatible

- Can render OS and TK compatible by the way we construct TK rights
  - If veto is exercised only at beginning of project, allowing all future uses of data, tools and materials, then no necessary incompatibility
  - If secrecy traded for data protection (as in pharma) then can draw on data in future without losing control
  - Benefit sharing agreements, if restricted to first collection of data and materials, can be accommodated through prior agreement

OS and TK

- In fact, recognition of TK as belonging to indigenous communities can further OS's aspirations to better engage communities, particularly where power imbalance exists
- By recognizing TK, researchers can help build trust, set priorities and develop better ways to share knowledge with communities

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