

The Politics of Scientific Arguments in ABS

Or : Undoing the Western science bias in the DSI negotiations requires undoing epistemic barriers

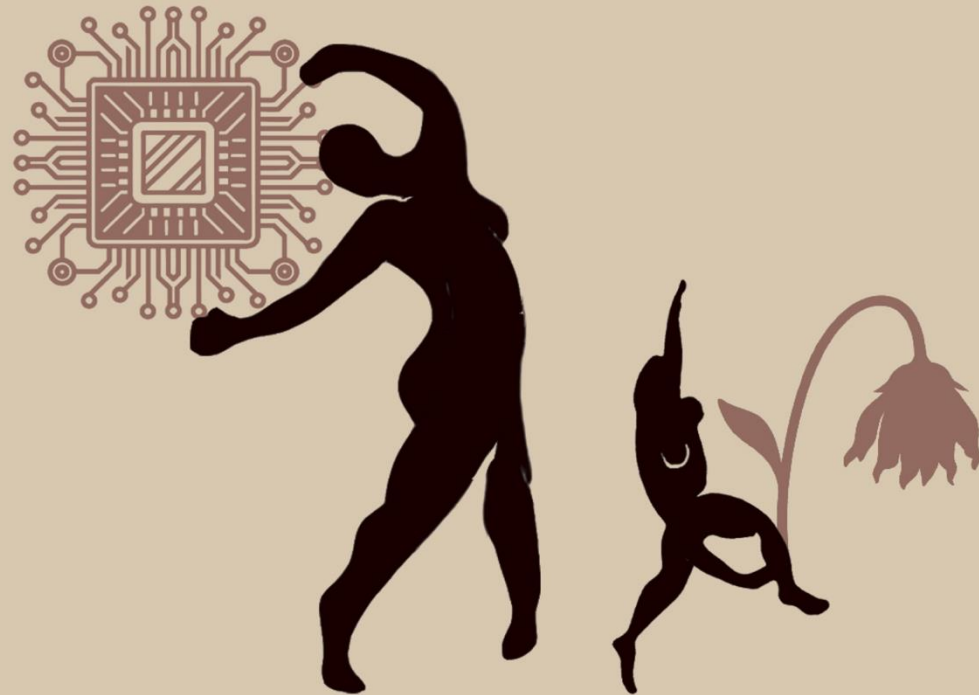
DSI 10

DSI at 10: Charting a Decade of Digital Sequence Information International Governance

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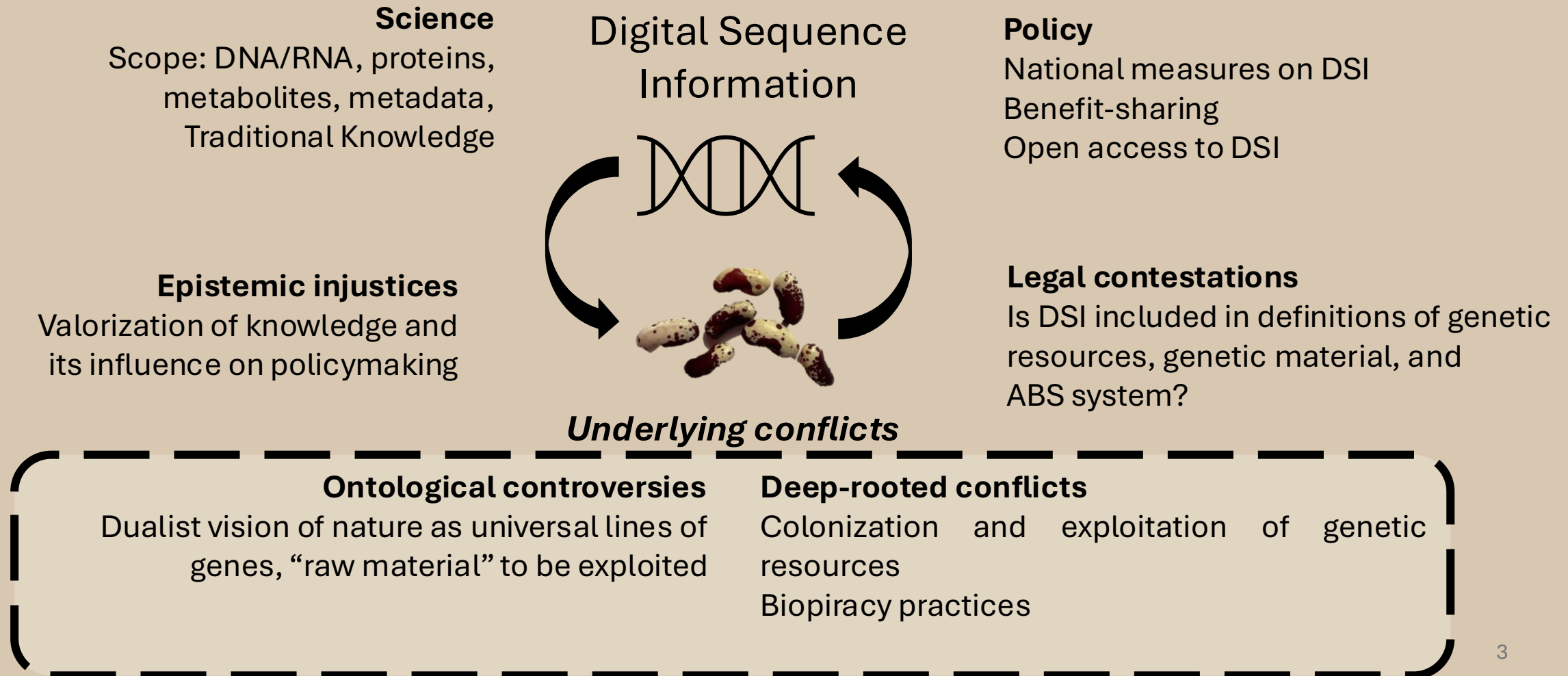
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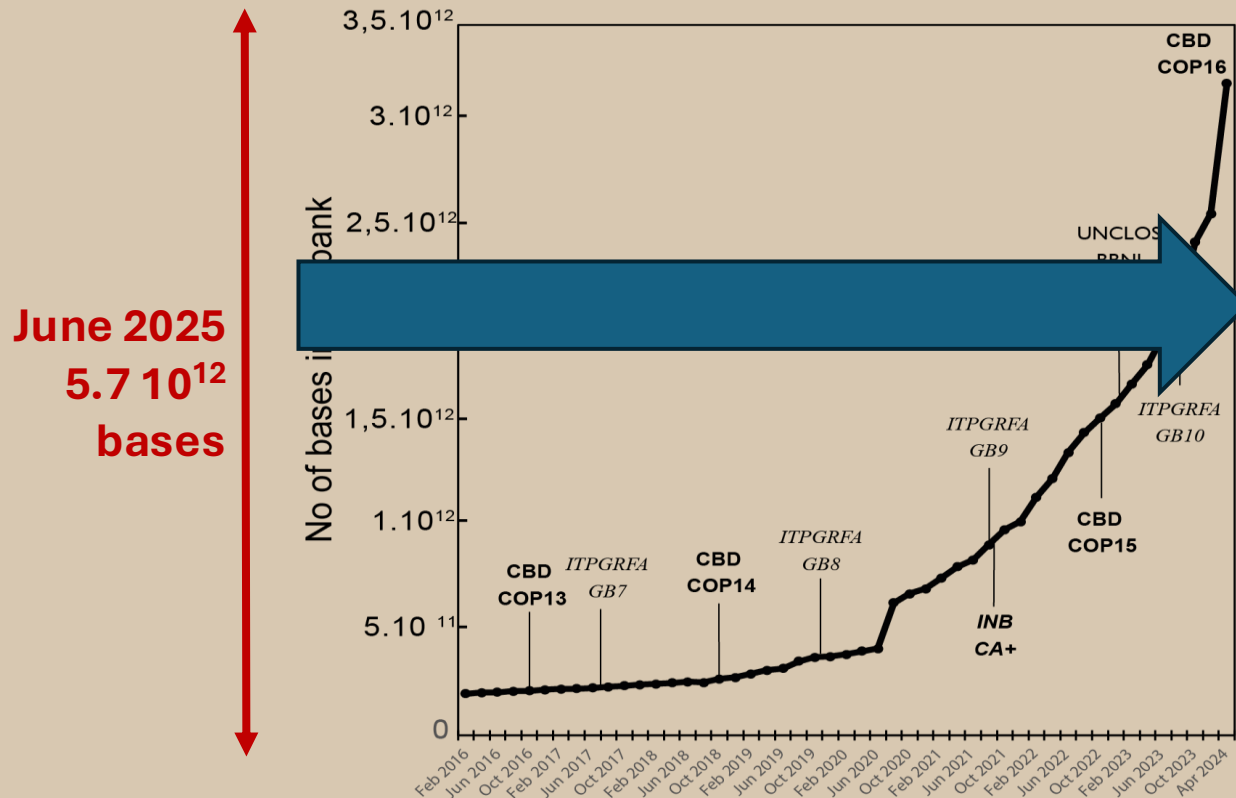
Outline of the Presentation

1. DSI and Epistemic Issues
2. Methodology
3. Mapping the science-policy
4. Examples of epistemic choices
5. Epistemic Barriers and injustices

1. Introduction



1. Introduction



Data: NCBI Genbank
Aubry et al. 2026 JGHL

- **2016 (COP13):** DSI placed on the CBD agenda
- **2018 (COP14):** Science-based policy process
- **2022 (COP15) and 2024 (COP16):** Cali Fund
- **2025 (GB11):** Collapse of negotiations on the eMLS

2. Methodology

- **Analytical Framework : Epistemic justice lens**
 - Testimonial and Hermeneutical injustice (Fricker, 2007)
 - Meta-epistemic filters (Catala, 2025)
 - Individual, structural and systemic levels (Cummings et al., 2023)
- **Epistememic injustices in DSI Governance**
 - *Epistocratic dynamics*
 - *Epistemic choices*
 - *Epistemic selectivities and barriers*

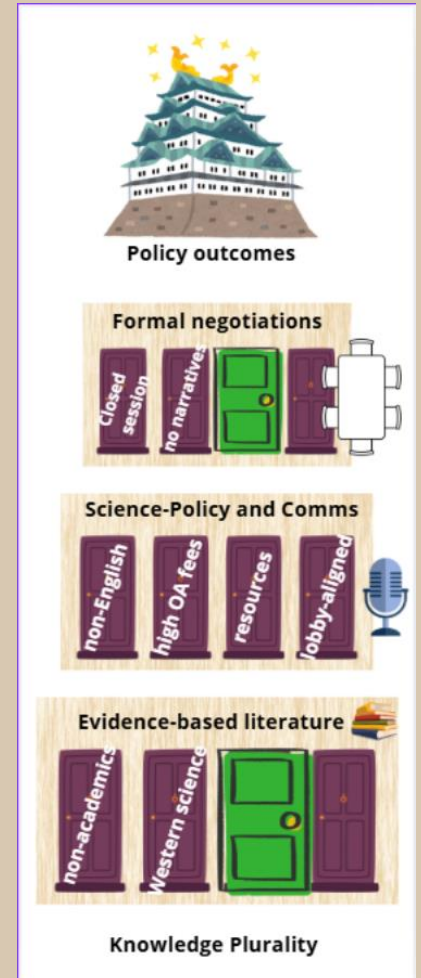
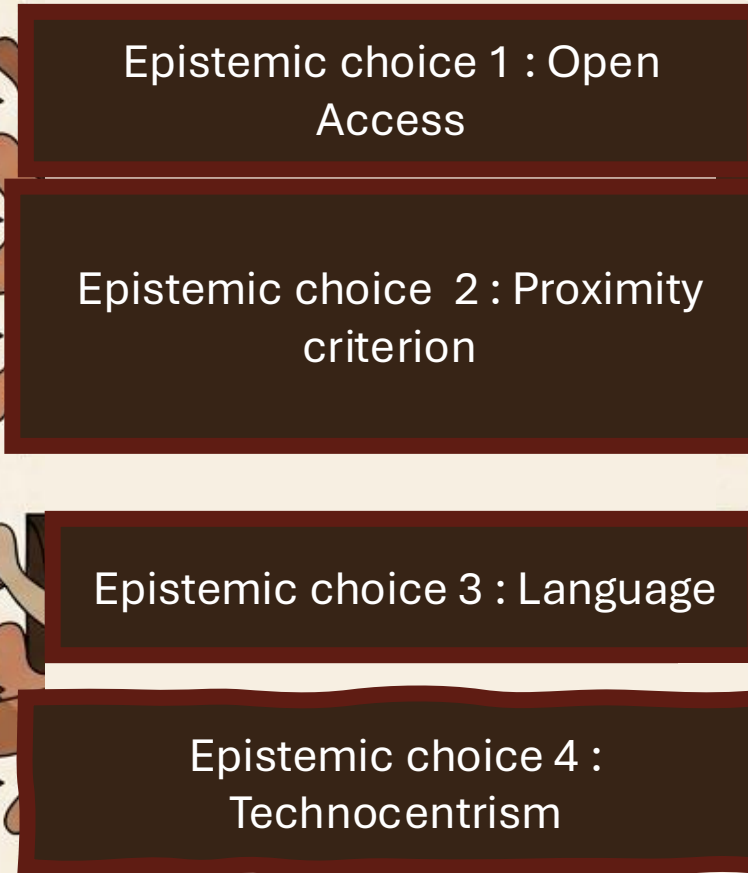


Illustration : epistemic choices

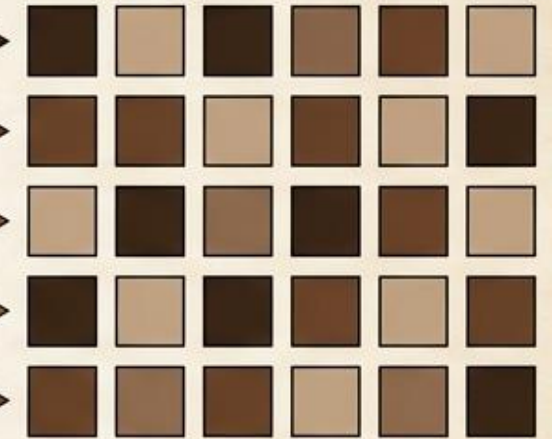
The Substantive Reality



Diverse global worldviews, Indigenous oral traditions, and intricate ontological, epistemological, and ethical complexities (e.g., Digital Sequence Information - DSI).



The Technicized Outcome



2. Methodology

- Data & analytical strategy
 - Document analysis (CBD, ITPGRFA, WHO,...)
 - Participatory observations (COP 15-16; GB10-11)
 - Interviews (n=10)
 - Diplomats, scientists, Indigenous representatives, CSOs, farmers, observer groups
 - Subjects: Knowledge types, circulations, constraints and epistemic injustices
- Objectives:
 - Identifies how epistemic choices have political effects
 - Reveals mechanisms of (epistemic) dominance in DSI governance

3. Scientific argument in DSI Discussion



States strategically mobilize epistocratic argument:

- **Science as a guide:** scope and terminology of DSI, and state positions on DSI, genetic resources, access, and benefit-sharing
- **Science as a goal:** Open access to DSI as necessary for scientific progress, and benefits for humankind

Belgium emphasizes the importance of adopting a science-based approach when exploring a possible common understanding of the scope, definition and concept of DSI. [...] To identify appropriate and more precise terminology, it can be useful to explore the terms commonly used by the scientific community in the context of genetic research (**Belgium, GB8**).

The generation and open sharing of digital sequence information on genetic resources provides benefits through increased scientific information and discovery. The use of digital sequence information on genetic resources increases the value of biological diversity and enables scientific progress and innovation (**Australia, COP15**).

3. Scientific argument in DSI Discussion

- Defining DSI (vs. GSD, TK) influences its legal status
- “Ontological cuts” to reinforce a physicalist interpretation?
- Cross-interferences : states’ positions in commenting on CBD studies
- Science obscuring historical inequalities (open access vs fair access)

GSD are neither genetic material nor a genetic resource. It is essential to maintain a conceptual and definitional distinction between genetic material itself and data associated with that material (**United States, COP15**).

Our view is that a prolonged focus on terminology is not helpful for obtaining clarity on the concept of ‘DSI’. The goal of a focus on terminology is to narrow the scope of applicability of the Nagoya Protocol, and have certain subject matter excluded from it. (**African Union Commission, COP15**).

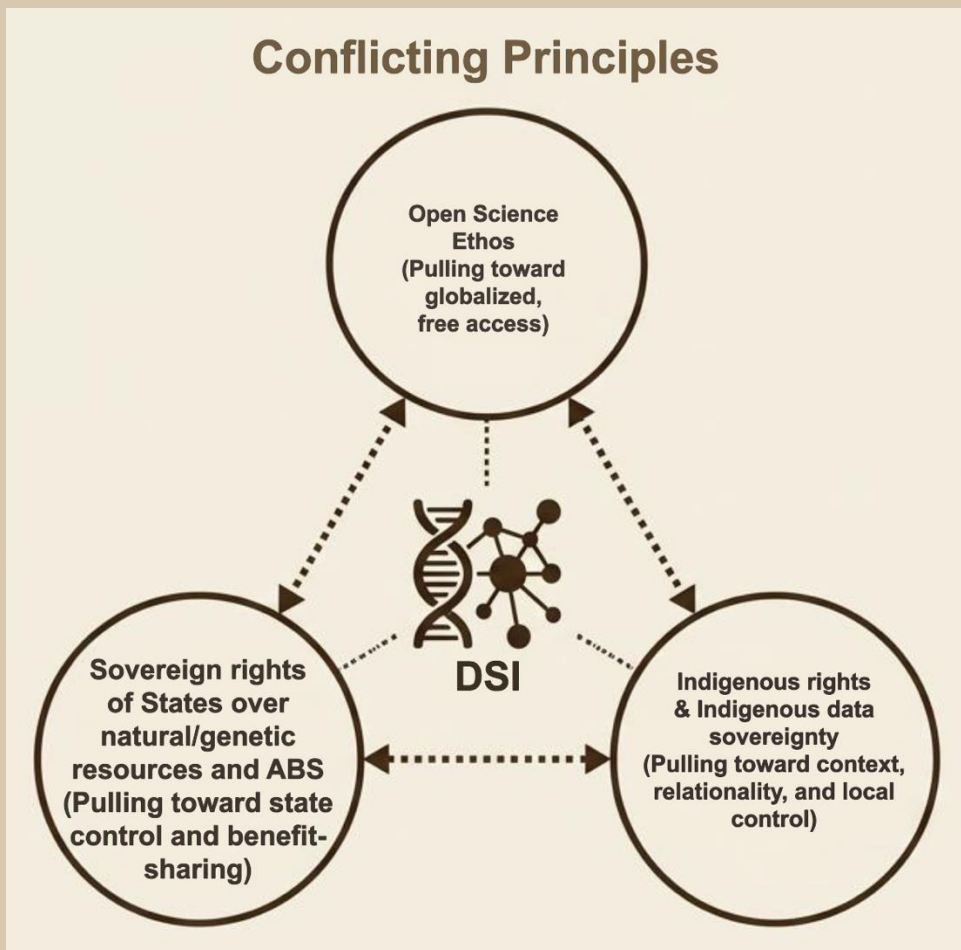
Work on a definition [of DSI] that explicitly makes reference to the genes or genetic material which constitute a genetic resource. (**South Africa, COP15**).

‘DSI’ is no physical material and therefore cannot be qualified as a genetic resource (**Germany, GB8**).

It is not possible to ‘manufacture’ genes virtually: it is necessarily required to start from the physical resource [...] Scientifically, this fact must be acknowledged: DSI derive from PGRFA” (**Burkina Faso, GB11**).

4. Epistemic Choices in DSI Negotiations

Prioritizing Open Access and Science



Analyses

❖ *Science as a goal*

- Strategic mobilisation of open science narratives (Walckiers, 2026)
- Open access vs fair access (Aubry, 2019)

❖ *Attempts at Reconciliation (FAIR, CARE)*

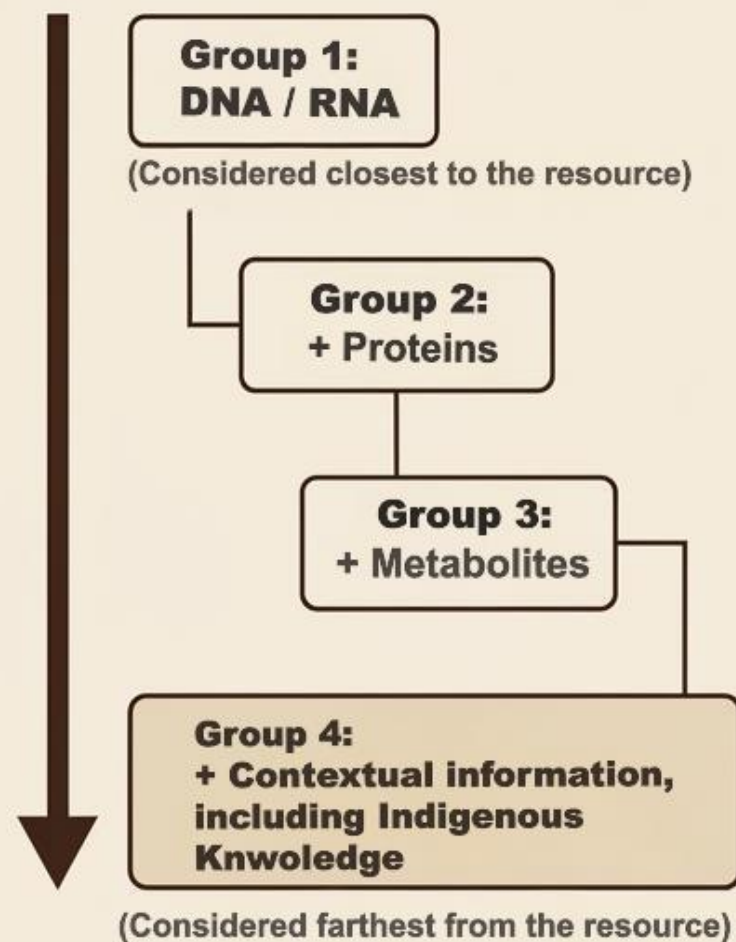
- Open access remains the dominant imperative
- Indigenous data governance and sovereign rights are often **expected to adapt** (Alexis, 2023)

❖ *Open access and ontology of DSI as **raw material** (detachable, decontextualised, freely usable)*

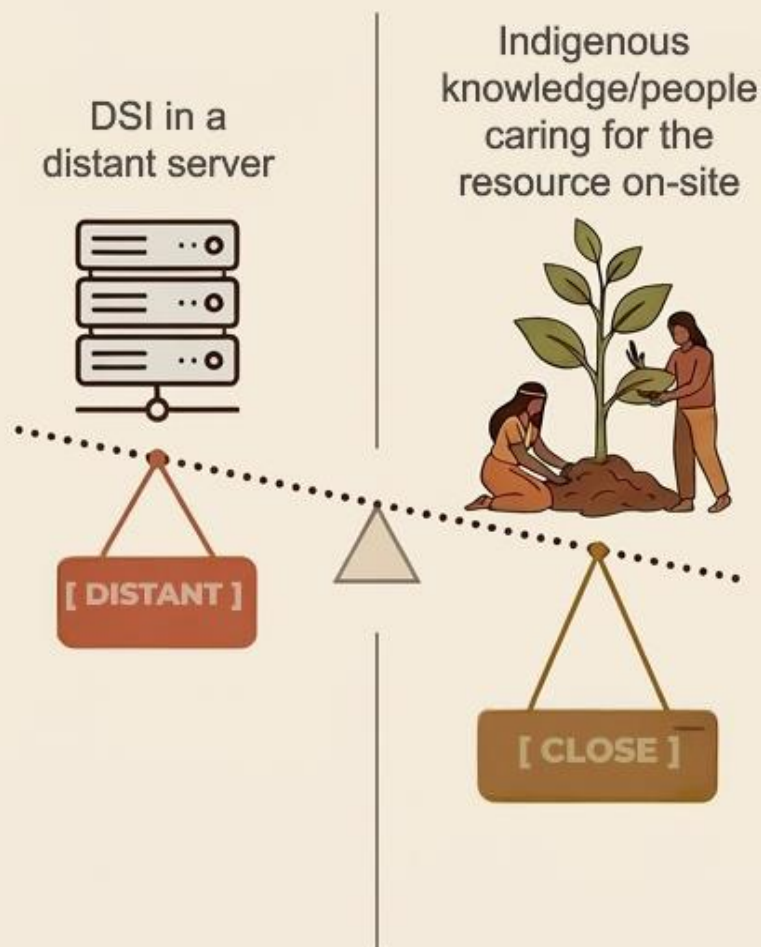
Defining DSI: The "Proximity Criterion" and its Limits

The proximity criterion/thesis

Classification of DSI into 4 Groups



Antithesis



Critique

Limits of the Criterion

Spatial contradiction: One might ask how digital DNA stored on a distant server could be considered closer to a physical genetic resource than the original context from which that resource is extracted

Epistemic reductionism: (molecular) biology knowledge that sees nature as a "universal store of genes", sidelining more relational accounts of biodiversity and/as people (Bonneuil, 2019)

Unjustified exclusion: A questionable proposal to exclude traditional knowledge from the scope of DSI on traceability grounds.

Negotiating International Legal Instruments (on DSI) : Language & Technicality

Asymmetry in International Environmental Negotiations

1 English as Lingua Franca

Official languages & practice: Instruments typically available in (6) official UN languages/simultaneous interpretation covers only a fraction of spoken languages

"Illusory" translation:

Translations may be grammatically correct, but they are never fully precise, fully simultaneous, or entirely coherent, leaving visible traces of the translation process

Asymmetric access:

Ex: CBD Secretariat studies on DSI are available in English only, entrenching participation inequalities

2 Documentary Mediation

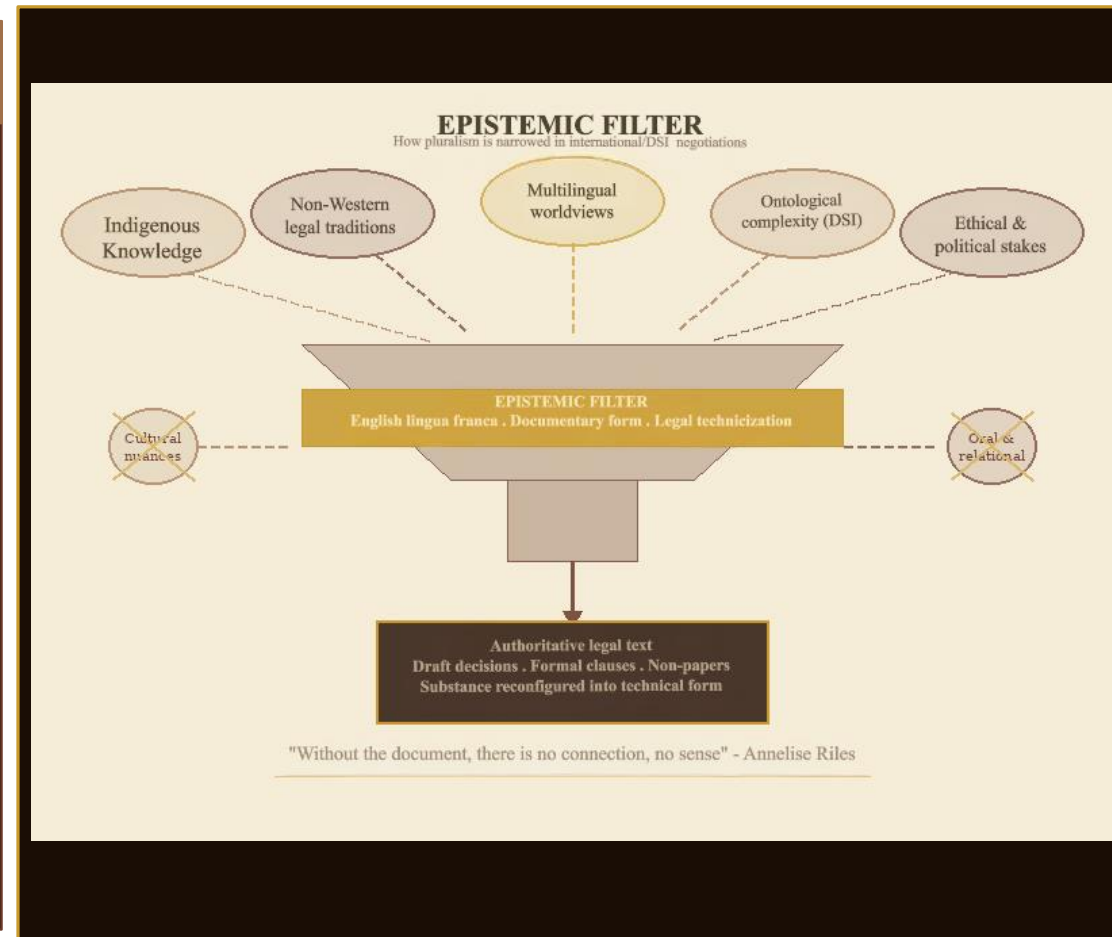
Document-centred process: Negotiations revolve around draft decisions, non-papers, and reports. "Without the document, there is 'no connection, no sense'" (Riles, 1999)

Orality subordinated:

Oral communication refers back to a circulating corpus of written texts

Technicality :

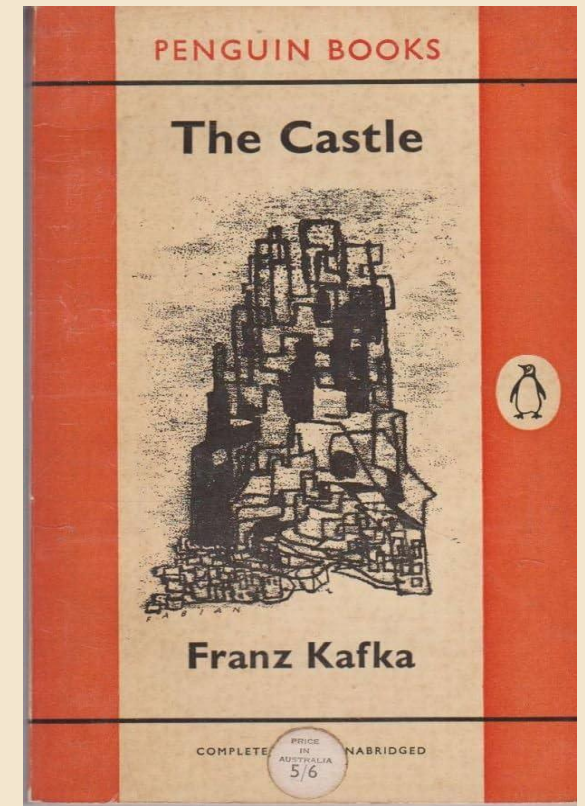
DSI's ontological and ethical complexity is reconfigured into clause drafting, marginalizing perspectives outside formal international legal language



Epistemic filter diagram

Documentary practices privilege certain legal solutions while marginalizing perspectives that do not readily translate into the formal language of international law

Entering and Navigating the COP-castle



Research and science-policy

Language and geographic diversity

- e.g. FAO CGRFA report on ABS that had undercited literature on Brazil.
- Vast majority of literature on DSI is from Global North (thesis Adam McCarthy, 2025).



Famous singers in the karaoke booth

- Larger voices are reinforced - others struggle to make themselves heard - some are drowned.
- Research in non-famous journals is regarded as lesser or not found by scientists/policymakers.



Conference barriers and observer biases

International travel

- Costs of attending bias observer presence towards Global North academics.

In-country participation

- COP hosts define the participation room.

Lone and lost wolves

- Researchers do not collaborate as much as they could, both in terms of data collection and in policy input to negotiators.



Deal-making

Ethnicity-, gender-, language- and age-related biases are still present at meetings

Scientization of debate and disregard of ‘non-rational’, unfamiliar and ideological concepts

- e.g. biocultural data removed from final text.
- Negotiators zone out with observer statements if they do not follow a script.

Interpersonal dynamics influence trust-building and energy-level

- Informal work remains crucial.



5. Epistemic Barriers

Research and Science-Policy

Formatting and data collection choices in commissioned reports



Resources to publish



Discipline- and funding-related biases



Access to education



Conference Barriers and Observer Bias

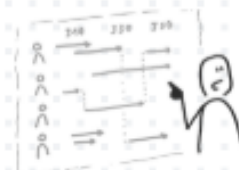
Observers and citizens face difficulties navigating international process



Travel barriers and participation criteria to attend conference



Networking effects and decisions who can present during negotiations



Anglophone bias leads to technical details being lost in translation



Negotiations and Deal Making

Negotiators struggle with knowledge plurality and 'non-rational' arguments



Technical support advantages, scientization of draft texts and gender/age bias



Overstretched delegations, burnout and overinvolvement of 'the person'



Time-pressured and closed deal making squeezes out observer interests





 **Mentimeter**

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Recommendations

- Having multilingual and -disciplinary author teams and diversity in reference lists.
- Arrive as 'one' at COP, contribute to A&R caucus, and participation of scientists from Global South.
- Join Party delegations and appoint topic ambassadors.
- Formulate joint research agendas on basis of COPs.



Thank you for your attention

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