

KEADILAN EKOLOGIS: TRANSDISIPLINARITAS UNTUK MEMBANGUN KEPEKAAN INTERSPECIES

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Outline Presentasi

- **Pembuka**

- Krisis
- Pendidikan dan Generasi Pembaharu

- **Literasi Ekologis**

- Place-based Knowledge
- Literasi ekologis dan epistemic justice
- Transdisiplin
- Membangun rasa, bukan hanya ratio, memaknai, bukan menghafal, menghargai different knowledge system (termasuk pengetahuan local/tradisional)

Basically A Personal Journey

SEEING THE UNSEEN - LISTENING TO THE UNHEARD



Why Crises Demand That We Think Beyond
What We Already Know

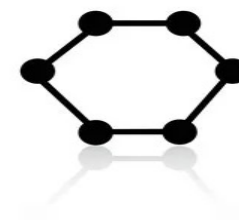
PEMAKNAAN TERHADAP KEADILAN
EKOLOGIS

Ernst Cassirer: An Essay on Man, 1946



<https://www.goodreads.com/>

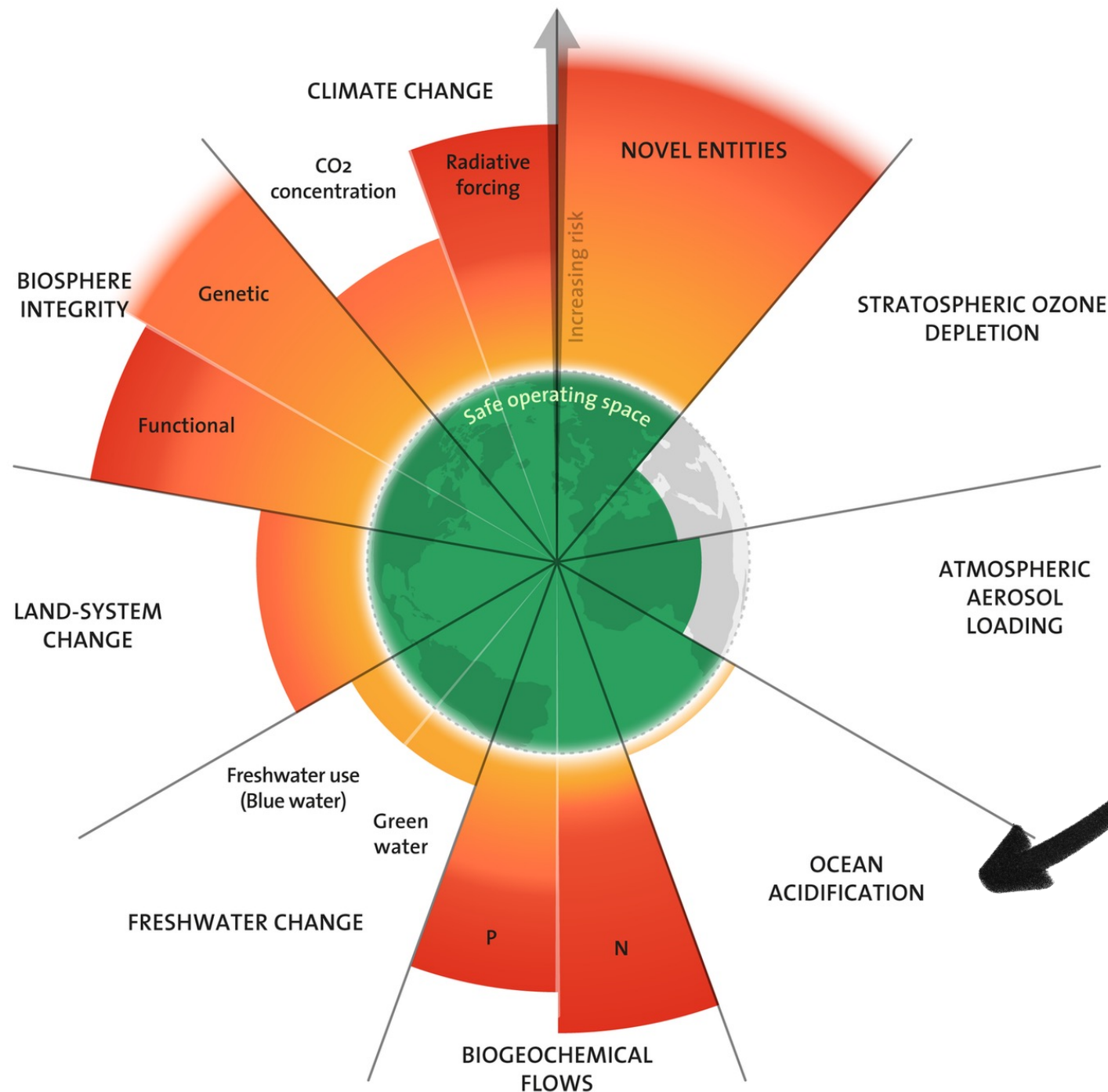
- Kehidupan manusia ditandai oleh kesanggupannya memahami dunia perlambangan, yang, menurut Cassirer, menjelma melalui sistem kepercayaan, bahasa, seni, sejarah dan ilmu. Ilmu sebagai sistem perlambangan merupakan wahana yang mengantarkan manusia pada puncak keunggulan keberadaannya di tengah makhluk lainnya.
- Penguasaan ilmu tidak lagi membuat manusia menjadi sekedar makhluk yang harus menyesuaikan pada lingkungan alamnya tanpa pilihan. Sebaliknya, penguasaan ilmu menjadikan manusia sanggup melakukan rekayasa terhadap alamnya demi kepentingan hidupnya. Kepentingan ini bukan hanya terkait pada **kebutuhan (needs)** untuk bertahan hidup, melainkan juga untuk mencapai berbagai **keinginan (wants)** yang nyaris mekar tak kenal batas.



THE ENLIGHTENMENT PERIOD: THE GREAT AGE OF REASON: 18th Century

<https://cdn.vectorstock.com/>

'7/9 PLANETARY BOUNDARIES NOW BREACHED'



*For the first time, **this also includes the boundary for ocean acidification.** This means that several of Earth's life-supporting systems risk crossing critical thresholds, with severe consequences for both ecosystems and societies.*

The 2025 update to the Planetary boundaries. Licensed under CC BY-NC-ND 3.0.
Credit: "Azote for Stockholm Resilience Centre, based on analysis in Sakschewski and Caesar et al. 2025".



<https://www.istockphoto.com/id/foto/kaki-gajah-gm140467139-3191206>

Sedih, Gajah Sumatera ini Mati Diracun Pemburu

Taufik Wijaya [Palembang]
8 Jan 2018 sumatera

Komentar

Bagikan article



"Gajah jantan ini mati di kebun warga yang masuk kawasan Hutan Lindung Gunung Raya".

Foto: Muhroni/Jejak Indonesia

Non –Human Rights

When the [Whanganui river in Aotearoa was granted status as a living person](#), personhood meant that *“the law now sees no differentiation between harming the tribe or harming the river because they are one and the same”*.

In March 2017, the Whanganui River in Aotearoa New Zealand was the first river to officially receive the status of a legal person. This legal personhood is based on the ontological understanding of the river as an indivisible and living whole and as the spiritual ancestor of the Whanganui Iwi (a Māori tribe)

<https://www.tandfonline.com/doi/full/10.1080/19452829.2020.1801610#abstract~:text=htps%3A//doi.org/10.1080/19452829.2020.1801610>

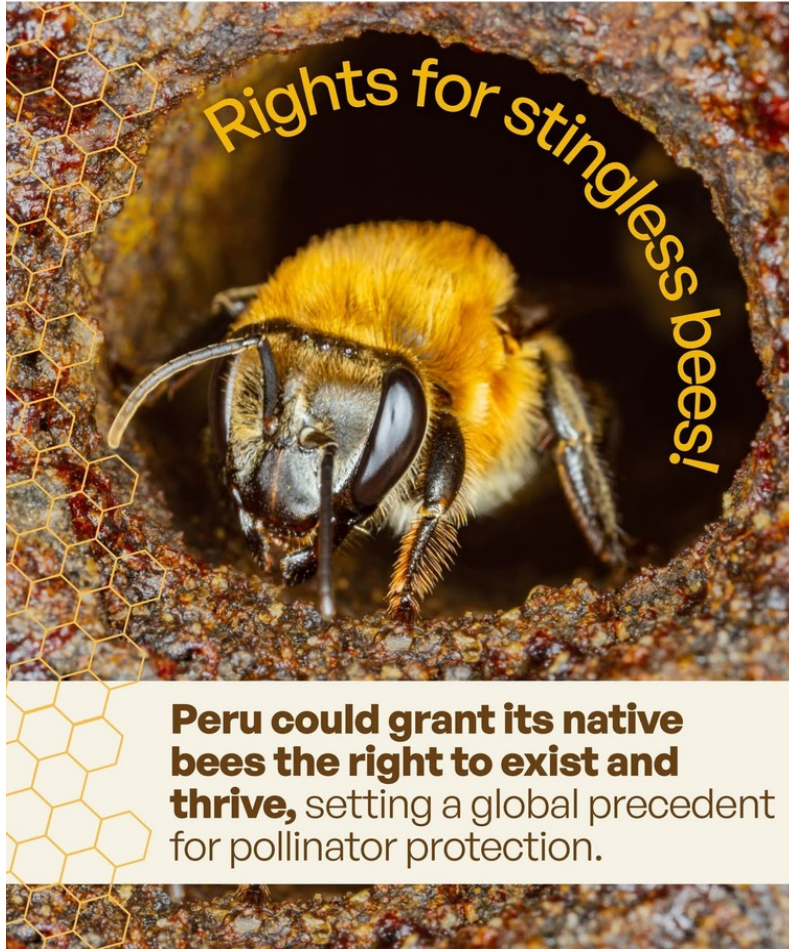


Non-Human Rights



avaaz_org and earthlawcenter
110K followers

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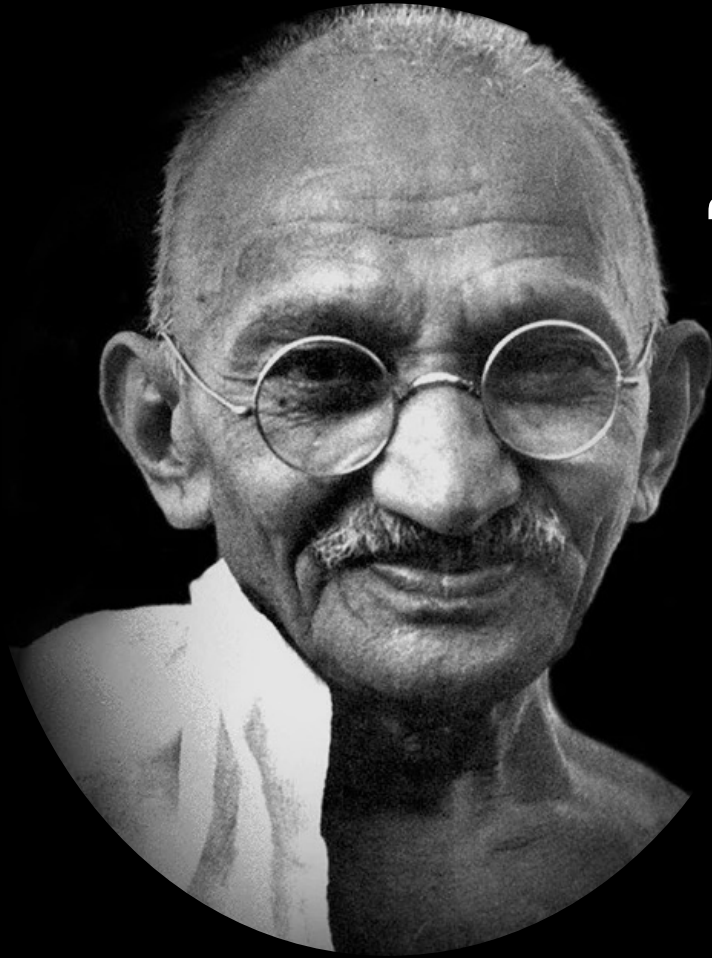


Wild, stingless bees have been granted legal rights in some parts of Peru, the latest effort in the growing global movement to protect animals by giving them similar status as people and companies.



He Whakaputanga Moana (Declaration of the Ocean) Polynesia

Provides transnational protection (beyond one country) to whales and dolphins, signed in March 2024 by Indigenous leaders from across Polynesia. It recognizes whales as legal persons with inherent rights, including freedom of movement and the right to a healthy ocean. Grounded in Indigenous worldviews and kaitiakitanga, the declaration calls for stronger whale protection through marine protected areas, rāhui, and the weaving of Indigenous knowledge with science.



Mahatma Gandhi (1869-1948)

“The greatness in **humanity**
is not in being human,
but in **being humane.**”

WHAT DOES THIS MEAN?

Human vs Humane

Human

- Knowledge system
- Civilization
- Culture

Humane

- Compassion
- Benevolent
- Characterized by tenderness

Indians gather to get water from a huge well in the village of Natwarghad in the western state of Gujarat in 2003. Although its population growth has slowed in the past quarter century, India still has the second-highest population, at 1.19 billion, with three births for every death. (Amit Dave/Reuters)

Today's Sustainability Crisis is **NOT an ecological problem** calling for a technical solution: It is a societal problem calling for a **cultural solution** (Thomas Reuter, 2020)

Explosion of new species and species extinctions have also always been part of the **evolutionary life cycle**.

When the loss of species rapidly outpaces the formation of new species, this balance can be tipped enough to elicit what are known as "**mass extinction**" events.

What is the Root Cause?

- 
- **Cause**: Modern ways of life and laissez-faire capitalism are -Ecologically Unsustainable + Socially Unsustainable
 - **Solution**: All human ecologies are cultural artifacts, we create them, we can change them.
 - **Main Obstacle**: Contemporary worldview marked by spiritual disorientation

(Reuter, 2020)

“Ketidakmampuan untuk melihat konteks bumi dengan segala kompleksitasnya membutuhkan kecerdasan yang menumbuhkan ketidaksadaran dan perilaku tidak bertanggungjawab”

-Edgar Morin-



Contemporary Worldview Marked By Spiritual Disorientation

Key elements:

- Scientific materialism
- Modernism,
- Liberal individual humanism,
- Capitalism,
- Reckless technological innovation,
- Industrialisation
- Greed

Reuter, 2020

CRITICAL REFLECTIONS

**On human and humaneness,
epistemic justice- transdisciplinarity**

- Knowledge System: holism-reductionism
- Changing worldviews and Knowledge Development
- Unity of Knowledge
- Redefine the meaning of “being”



CRISIS OF SELF AND OF HUMANITY

PERAN PENDIDIKAN

KAK: Dalam konteks krisis antroposen, pendidikan perlu bergerak melampaui model informasional menuju model transformatif— yakni pendidikan yang membentuk kesadaran kritis, tanggung jawab etik, dan solidaritas ekologis lintas generasi

Tradisi pendidikan di sekolah kita sangat mementingkan pendidikan untuk memupuk pengetahuan dan mengabaikan pendidikan untuk membina kesadaran dan kepekaan nilai. Ini merupakan warisan dari tradisi pendidikan Abad XVII dan XVIII (Mochtar Buchori, 2009)

Pendidikan Sebagai Intervening Factor untuk Melahirkan Generasi Pembaharu

Paleolithic Age (Old Stone Age)



- Paleolithic emotion
- Medieval Institution
- God-like Technology
(EO Wilson)

MASA DEPAN SEPERTI
APA YANG AKAN KITA
CIPTAKAN?

PENDIDIKAN
UNTUK
MELAHIRKAN
GENERASI
PEMBAHARU
(Mochtar
Buchori,
2009)

Pernahkah Indonesia melahirkan generasi pembaharu?
Berulang kali! Generasi 1908, 1928, 1945, 1966, 1998

Yang perlu dicermati sekarang ialah: Bagaimana sebenarnya proses kelahiran setiap generasi pembaharu? Mereka itu "dilahirkan" atau "lahir sendiri"? Kalau "dilahirkan", oleh siapa? Dan kalau "lahir sendiri", karena apa? Dan apa peranan pendidikan dalam kelahiran suatu generasi pembaharu?.

Ada pandangan bahwa berbagai generasi pembaharu lahir karena suasana zaman. Suasana zaman atau "**semangat zaman**" (**Zeitgeist**) bagi orang-orang yang **peka terhadap nuansa-nuansa dalam dinamika kultural (nuances within cultural dynamics)** lalu terasa mengandung panggilan zaman, dan orang-orang yang peka nilai ini lalu berusaha untuk memenuhi "panggilan zaman" atau "**menjawab tantangan zaman**" ini

"Bagaimana
caranya
mempersiapkan
kelahiran atau
kedatangan
suatu generasi
pembaharu?"

- Pendidikan Untuk Mendorong Lahirnya Generasi Pembaharu
 - **Pertama, mendefinisikan kembali (redefining) tugas –tugas pendidikan.** Yaitu, bahwa dalam masa peralihan ini tugas pendidik pada akhirnya ialah mempersiapkan murid-murid mereka untuk menjadi generasi pembaharu.
 - **Kedua, mengarahkan segenap program pendidikan untuk mendorong peserta didik dapat memahami semangat zaman dan menangkap "panggilan zaman"**

GENERASI PEMBAHARU

- Kedua hal ini membutuhkan kepekaan sosial dan kepekaan kultural yang tinggi, di samping kesadaran sejarah. Selama pendidikan tetap berorientasi kepada "pengetahuan tentang kehidupan", dan bukan kepada kehidupan itu sendiri, selama itu pula akan sangat sukar bagi pendidik untuk menimbulkan kemampuan memahami "semangat zaman" dan "panggilan zaman" tadi.
- Membangun gagasan2 kedepan Bersama untuk peradaban bangsa

Fungsi Pendidikan: Rumusan Pedagogis (Buchori, 2009)

Tidak cukup hanya mengutamakan "penguasaan ilmu" atau "pengumpulan pengetahuan" (accumulation of knowledge) dan mengabaikan pendidikan untuk **mempertajam kepekaan terhadap nilai-nilai**. Selama pendidik bekerja di sekolah dengan suasana pendidikan seperti ini, selama itu pula kita tidak akan dapat membimbing generasi muda untuk memahami "semangat zaman" dan **menangkap "panggilan zaman"**. Kedua hal ini membutuhkan kepekaan terhadap nilai-nilai, kepekaan terhadap suasana yang ada dalam masyarakat.

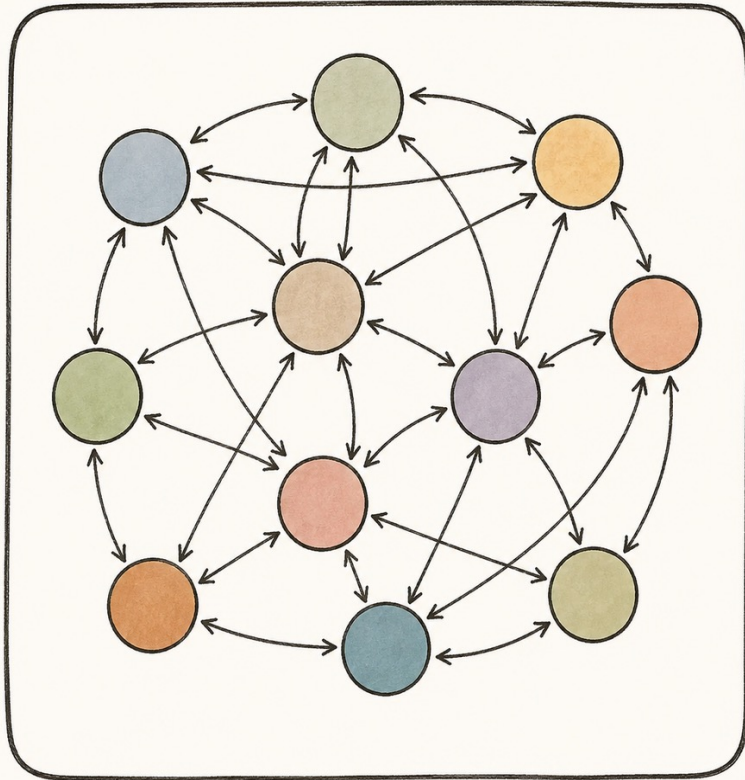
Artinya:
Pendidikan harus
membimbing
generasi muda
untuk:

Mampu menghidupi diri sendiri (*to make a living*).

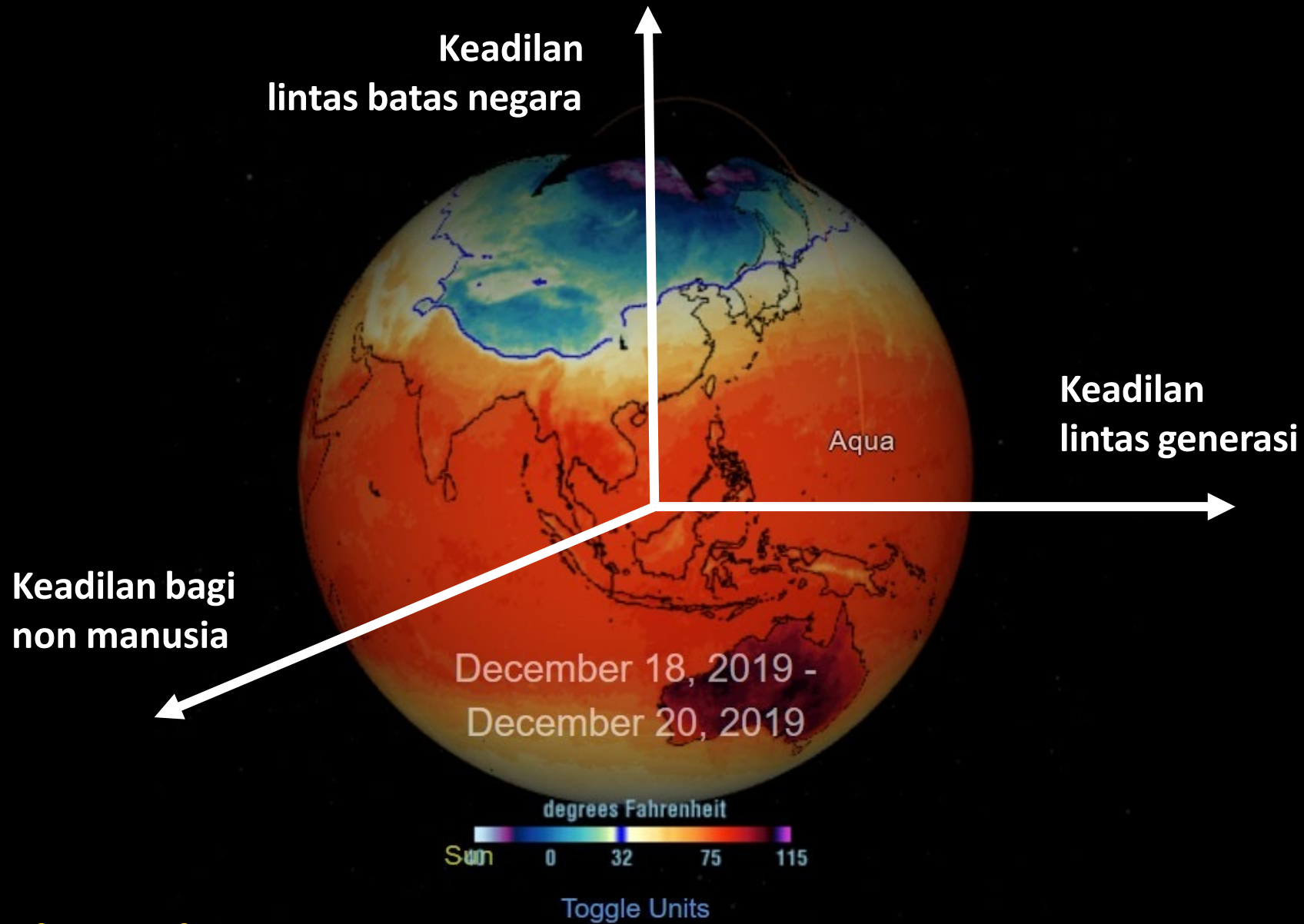
Mampu mengembangkan kehidupan bermakna (*to live a meaningful life*).

Mampu memuliakan kehidupan (*to ennoble life*).

TRANSDISIPLINARITAS DAN KEADILAN EKOLOGIS: SEEING, LISTENING and UNDERSTANDING INTERCONNECTEDNESS



- EPISTEMIC JUSTICE
 - PLACE BASED KNOWLEDGE
 - OPACITY
-
- ATTRIBUTE OF TRANSDISCIPLINARITY
 - KURIKULUM : PHILOSOPHY AND HISTORY OF THOUGHTS



Dimensi Keadilan Bumi

Dryzek and Pickering (2019)
Photo: NASA Global Climate Change

Ngumbung, Rebu, dan Begu: Eksistensi Mitologi pada Masyarakat Karo

- *Ngumbung* adalah hari dimana masyarakat dilarang untuk menginjakkan kaki di tanah perladangan (setelah panen raya). *Ngumbung* sendiri adalah salah satu bagian dari sistem *Rebu* (sesuatu yang tabu atau pantangan).
- *Ngumbung* atau tabu untuk mengunjungi perladangan ini didasarkan pada cerita atau mitos.
- Mitos yang berkembang turun temurun mengisahkan bahwa sehari setelah masyarakat panen, maka giliran *Begu* atau roh-roh ghaib yang akan melaksanakan pekerjaannya. Oleh karena itu, selama *Begu* atau roh ghaib ini mengunjungi perladangan, manusia tidak boleh mengunjungi karena dapat berakibat buruk.





Bunga Dawa, Kelimpahan Pangan, Kesadaran Berbagi dan Mempertahankan Relung Ekologis dalam Menjaga Biodiversitas (Welsy Kasdolatta Sembiring)



- *Bunga dawa lempe bulungna, bunga dawa lempe bulungna*
- *Mole ole i embus angin, mole ole i embus angin*
- *A o bunga dawa, bunga dawa lempe bulungna*
- *A o bunga dawa, sampang malem nge pagi dungna “*

- Bunga Dawa= jewawut (*Setaria italica* L) pengetahuan dari Karo, North Sumatra.
- Salah satu makan pokok masyarakat selain beras.
- **Selain sebagai makanan, bunga dawa atau jewawut tersebut memiliki peran khusus** dalam masyarakat Karo dalam proses penjagaan keseimbangan alam.
- **Setelah penanaman padi selesai maka masyarakat akan menabur biji dawa atau jewawut di pematang ladang, pinggiran lahan, selang seling pada baris padi serta di jalan-jalan perladangan.**
- Masyarakat Karo percaya bahwa menabur biji dawa pada daerah tersebut adalah bentuk permisi pada roh roh alam sehingga tidak terjadi gagal panen. Menaburkan biji dawa akan kembali dilakukan menjelang panen padi. Selain di pematang ladang, bunga dawa juga akan ditaburkan di pinggiran jalan dan di padang rumput. Menaburkan dawa sekali dianggap sebagai bentuk rasa syukur dan terima kasih dan meminta izin untuk panen kepada roh alam.



Bunga dawa ditanam bersama dengan padi namun bunga dawa atau jewawut akan berbuah terlebih dahulu bahkan sebelum padi berisi. **Bunga dawa mulai berisi pada umur 3 bulan sedangkan padi secara tradisional umumnya pada 4 bulan. Burung-burung akan terpikat memakan biji dawa yang melimpah sehingga padi aman dari gangguan burung.** Burung-burung sendiri lebih menyukai dawa karena ukurannya yang lebih kecil dan lebih mudah dimakan. Saat musim dawa, berbagai jenis hama umumnya mulai muncul di perladangan padi. Pada saat yang bersamaan, telur burung-burung akan mulai menetas dan membutuhkan lebih banyak pakan. **Burung-burung akan mulai memangsa serangga dan hama hama lain pada batang padi.** Proses ini akan menekan laju pertumbuhan populasi serangga sehingga padi aman dari kegagalan panen. Kawanan burung yang semakin banyak akan mengundang predator lain yaitu elang dan alap-alap. Elang dan alap-alap tertarik karena kawanan burung namun justru lebih banyak memangsa tikus di perladangan karena lebih mudah dimangsa. Sekali lagi proses ini akan menekan laju hama tikus sehingga padi aman dari gagal panen.

Tanaman jewawut memiliki karakteristik yang mirip padi sehingga digunakan sebagai pendamping atau kadang pengganti padi dalam masyarakat Karo yang agraris

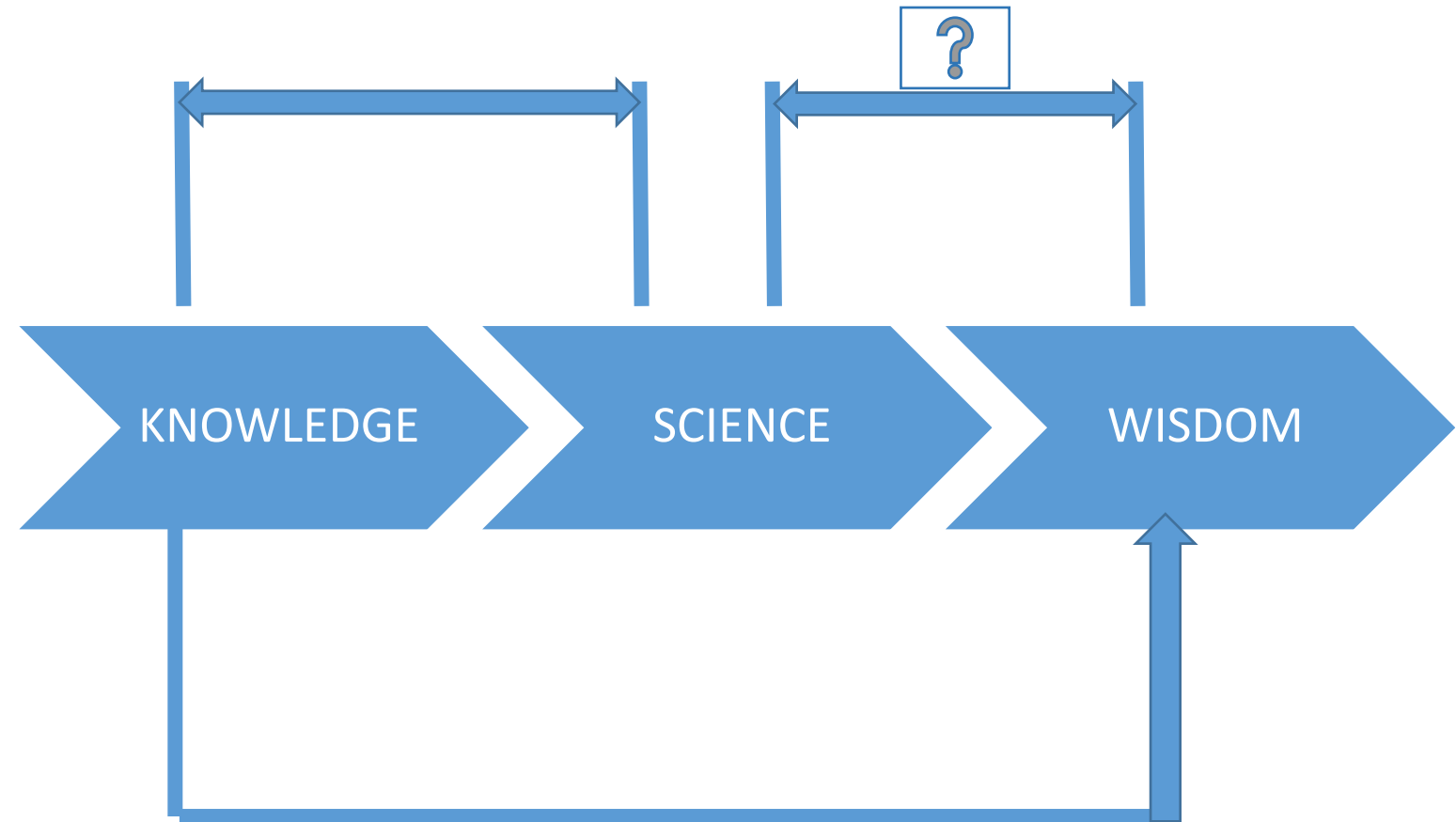
TRADITIONAL&INDIGENOUS KNOWLEDGE: BERPIKIR SYSTEM

- **SASI:** understanding of population ecology and the link between seasonality and reproductive biology of fish and its enforcement in the society
- **Petalangan community:** Understanding the link between bee ecology and behavior and interlinkages with the environment of the forests
- **Subak:** Understanding the interlink between biogeochemical cycles, pest suppression, water resources, trihita karana
- **Ngumbung:** Memberi makan pada hewan2 lain

A QUEST FOR SUSTAINABILITY:
Understanding complexity as a form of the very ancient principle of universal interdependence.

Place-based
Knowledge:
Understanding
Holism and Opacity
(the right not to be
understood)

Modern Science and
the Power of
reductionism



DIVERSE KNOWLEDGE SYSTEM and EPISTEMIC JUSTICE



Table 2 1 Life frames of nature's values.

Chapter 2 applied four life frames to understand how certain broad and specific values are highlighted in particular decisions related to policy outcomes.

Life frames of nature's values	Living AS nature	Living IN nature	Living WITH nature	Living FROM nature
Examples of broad values relevant to policy framings	Oneness and harmony with nature, reciprocity, self-realisation, epistemic justice	Belonging, beauty, freedom, enjoyment, health, procedural justice for place-based management	Stewardship, responsibility, respect, recognition justice with regard to other species	Prosperity, livelihood security, efficiency, distributive justice for sustainable use
Emphasised specific values for nature & nature's contributions to people	<i>Relational & intrinsic</i> values for communities of humans & non-humans	<i>Relational</i> values of non-material & context-specific nature's contributions to people	<i>Intrinsic</i> values, <i>relational</i> values associated with stewardship, <i>instrumental</i> values of regulating nature's contributions to people	<i>Instrumental</i> use & option values of material & regulating nature's contributions to people, <i>relational</i> values of non-material nature's contributions to people in agriculture & fisheries
Example indicators to assess progress	- Participation in practices of care (<i>sociocultural</i>) - Conservation status of natural entities considered to harbour agency (<i>biophysical</i>) - Connectedness to nature scales (<i>sociocultural</i>) - Ethnographic references (<i>sociocultural</i>) - Recognition of legal personhood for nature (<i>sociocultural</i>)	- Landscape character assessments (<i>sociocultural</i>) - References in historical document analysis (<i>sociocultural</i>) - Tourism revenue (<i>economic</i>)	- Alpha, beta & gamma biodiversity (<i>biophysical</i>) - Legal rights of natural entities (<i>sociocultural</i>) - Planetary pressures adjusted human development index (<i>integrated</i>) - Extent of community conservation plans (<i>integrated</i>)	- Stock indicators (<i>biophysical</i>) - Environmental economic accounts (<i>economic</i>) - Inclusive wealth (<i>economic</i>) - Circular economy indicators (<i>economic</i>) - Gini correlations with natural resources (<i>economic</i>) - Recognition & distribution of indigenous and local land rights (<i>sociocultural</i>)
Example of policy measures	- Establish active targets & measures to address 'nature deficit' for urban populations and children (e.g., forest schools). - Design policies to protect languages & biodiversity in an integrated manner. - Support customary governance practices that ensure integrity of IPLCs & ILK.	- Link natural & cultural heritage through place-based management. - Design blue & green infrastructure to recognise needs of diverse groups through effective participatory processes. - Integrate green prescribing in health systems.	- Establish new protected areas in accordance with IUCN categories in partnership with diverse knowledge holders. - Build legal frameworks to establish & respect rights of nature. - Consistently assess impact on biodiversity & nature's contributions to people in tandem with economic impacts.	- Implement standards for national & corporate environmental accounting. - Implement alternatives to GDP more inclusive of natural capital. - Review resource access & rights distributions to take account of distributive justice concerns.

IPBES Assessment on Values (2022)

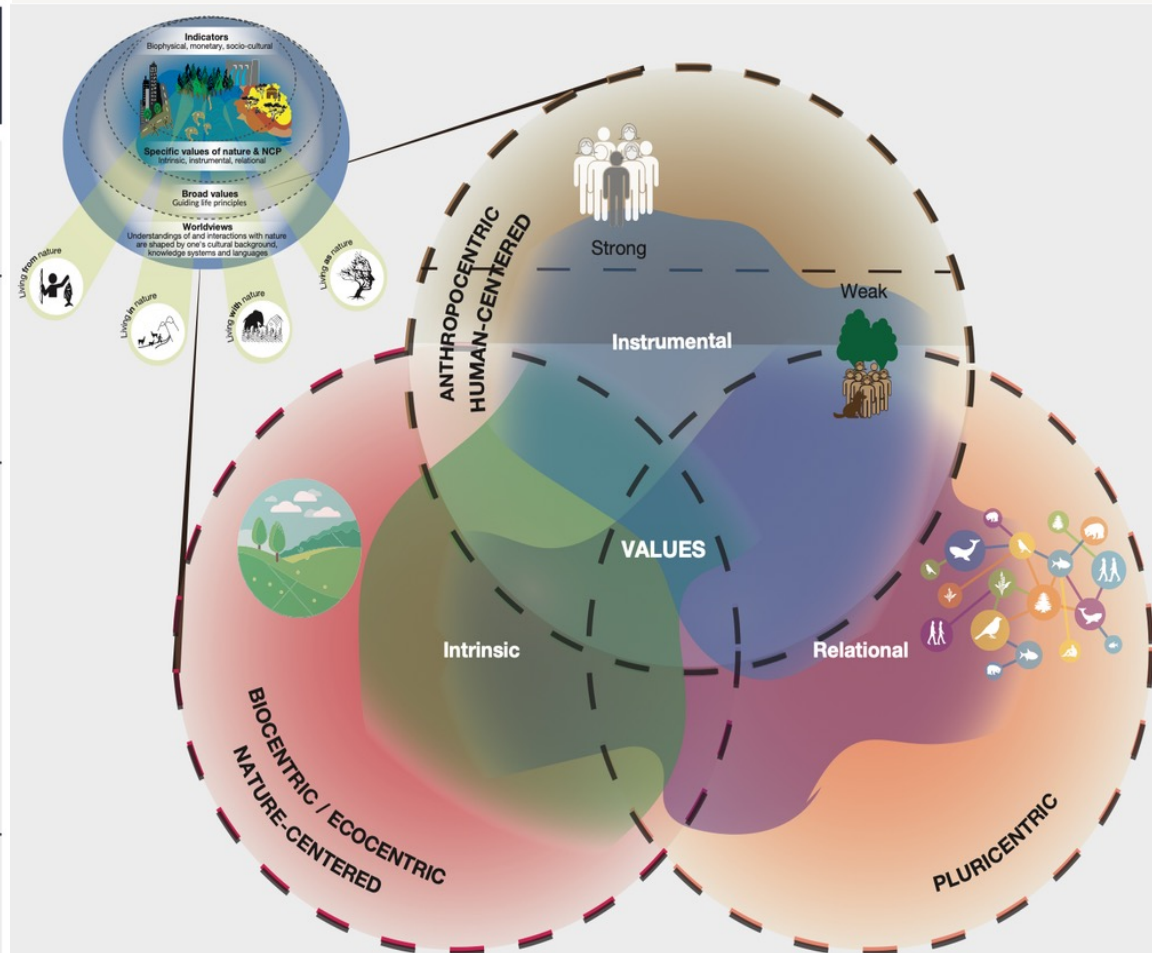


Figure 2 6 Worldviews and values.

Worldviews act as lenses through which humans perceive, conceive, inhabit and shape the natural world. Based on the literature, human-nature worldviews can be organized in three main types: anthropocentric worldviews (humans at the center); bio- or ecocentric worldviews (animals, plants and other beings, ecosystems and ecological processes at the center); and pluricentric worldviews (no center, the main focus is on relationships among human and non-human beings, elements and processes). These worldviews can overlap and may also be connected to broad and specific values of nature, driving human behaviour and policy-making (see 2.2.3).

Underlying Causes, Three Interwoven Dimensions of Transformative Changes and Principles

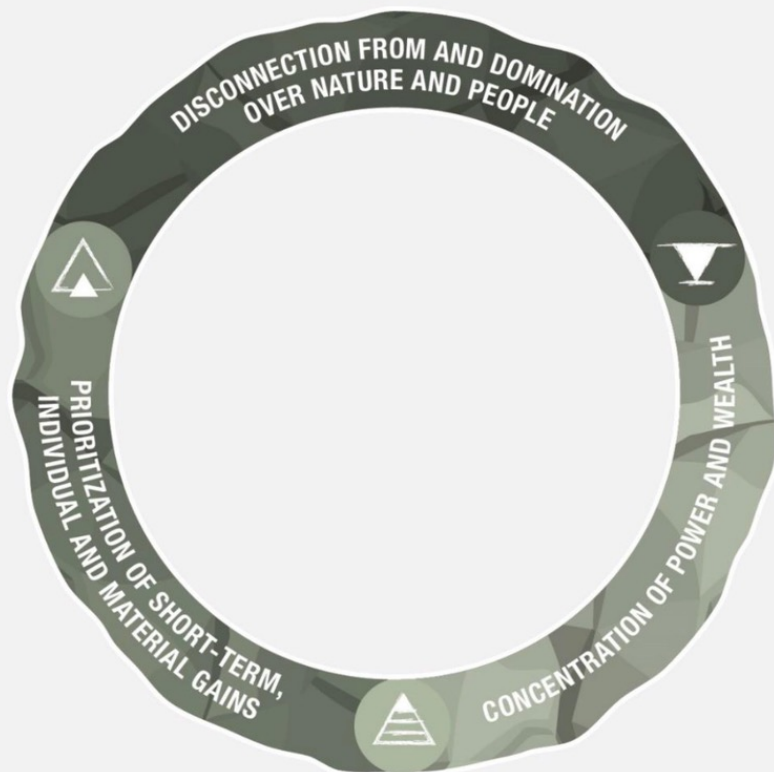


Figure 1.4. Underlying causes of biodiversity loss and nature's decline.

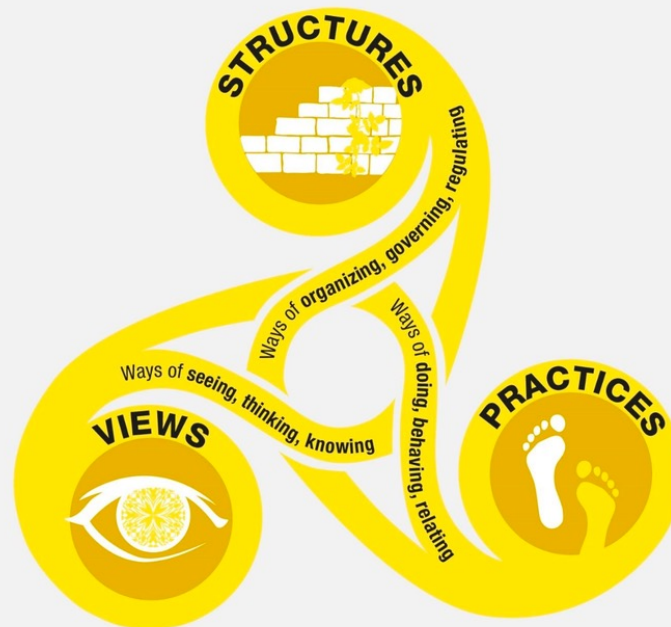


Figure 1.6. The three interwoven dimensions of transformative change: views, structures and practices. Each dimension can serve as an entry point to change, but for change to be truly transformative, shifts should occur across all three dimensions. Since all three dimensions are interconnected, starting with one dimension as an entry point, can lead to changes in the other dimensions. However, if changes in one dimension are not coordinated with changes in the other dimensions, fundamental system-wide change can be blocked.

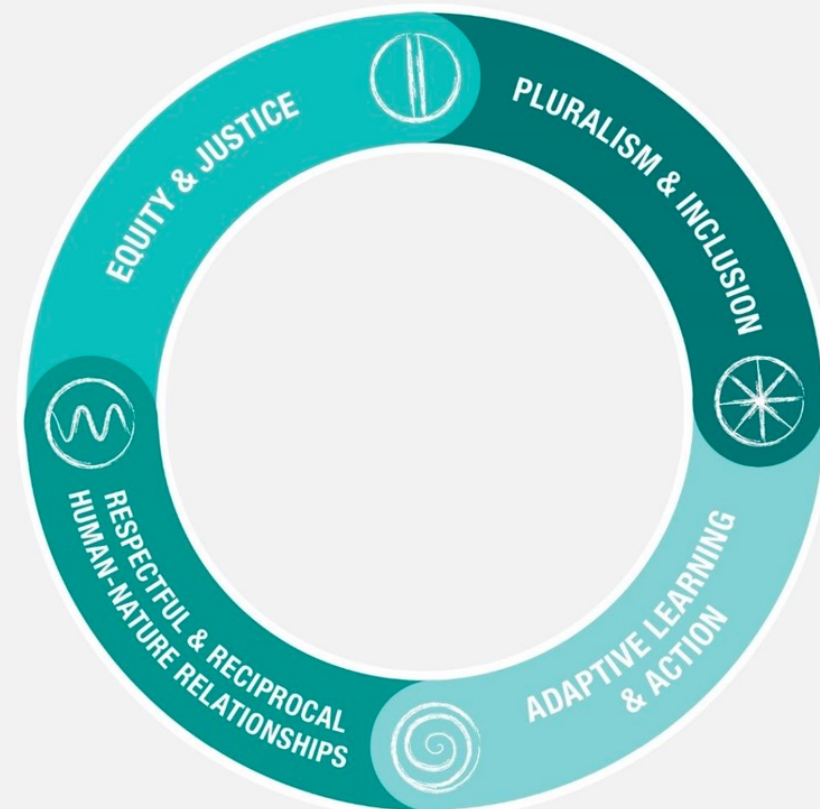
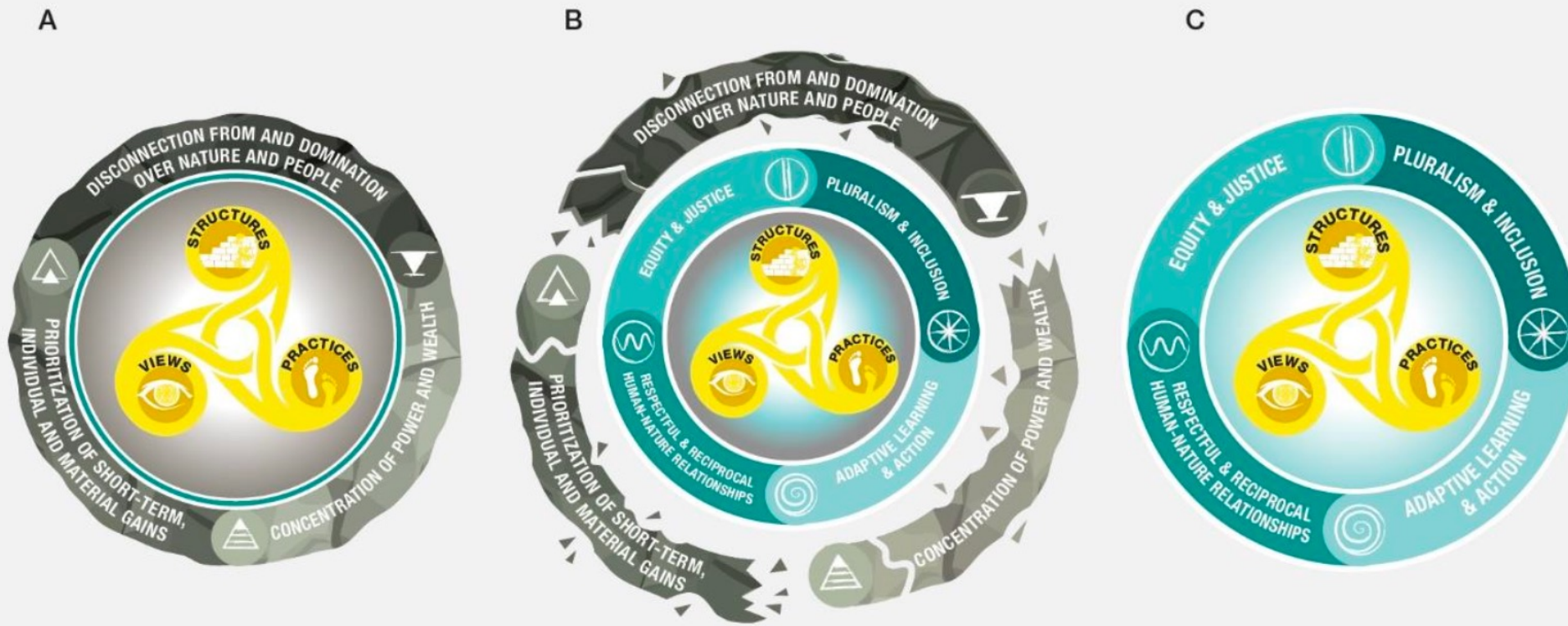


Figure 1.7. The principles of transformative change for a just and sustainable world. Deliberate transformative change that is grounded in and guided by these principles supports shifts across views, structures and practices occurring in ways that address the underlying causes of biodiversity loss and nature's decline and advance just and sustainable futures.



IPBES (2025),
Transformative
Change
Assessment, Chap
1, Page 33

Figure 1.8. The framework of transformative change for a just and sustainable world. **A)** indicates views, structures and practices (the inner golden spirals) being strongly shaped by the underlying causes of biodiversity loss and nature’s decline (solid grey ring). **B)** shows shifts in views, structures and practices breaking the influence of the underlying causes when they are guided by the four key principles of transformative change (blue ring). **C)** illustrates a just and sustainable world, with prevailing views, structures, and practices aligned with the principles of transformative change. This framework can be used by different actor groups to help identify where and how they can promote, accelerate and scale the process of transformative change towards a just and sustainable world.

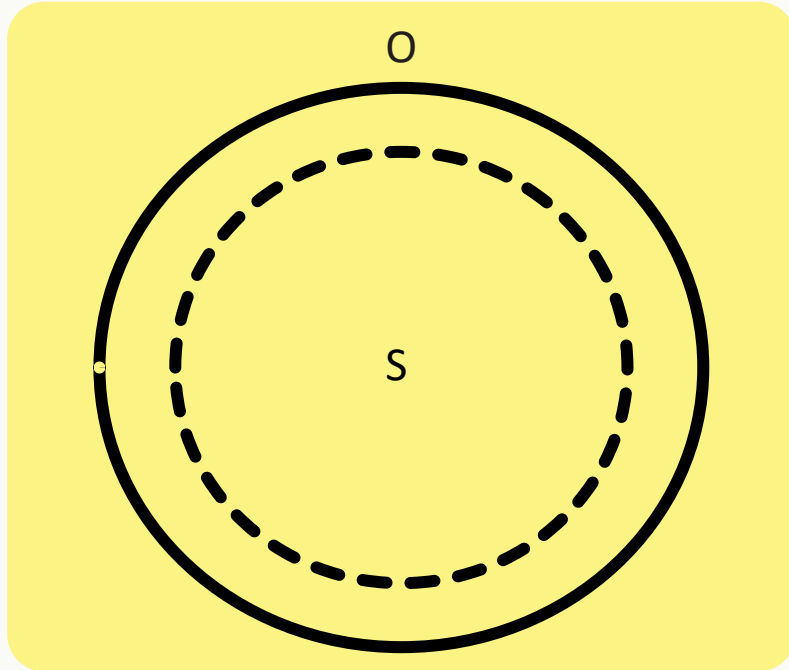
PENGETAHUAN

Relasi antara Subyek dan Obyek

(Nicolescu, 2012a)

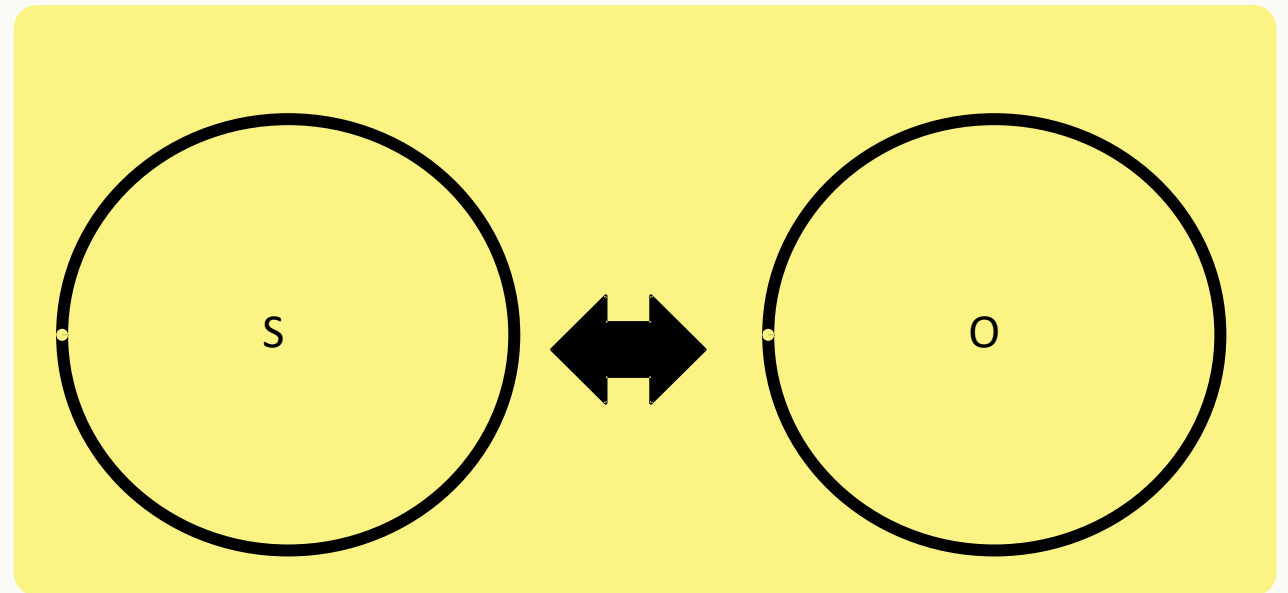
Modernitas

Subjek dan Objek sepenuhnya dipisahkan oleh suatu pemisahan epistemologis yang radikal, yang dengan demikian memungkinkan berkembangnya ilmu pengetahuan modern. Objek hanya dipandang sebagai sesuatu yang ada untuk diketahui, diuraikan, dikuasai, dan diubah.



Pra-Modernitas

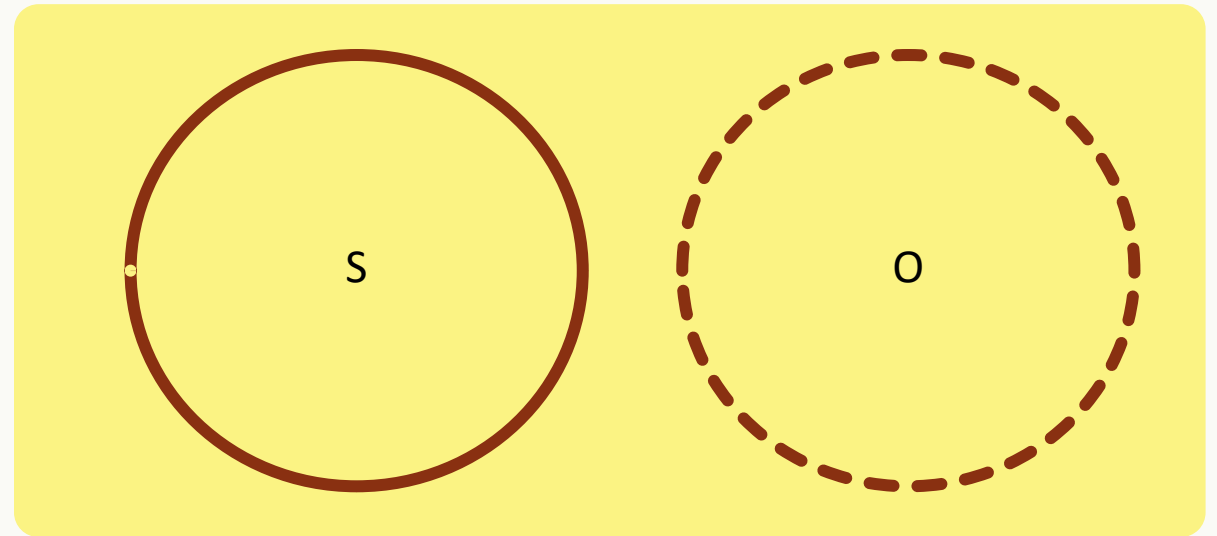
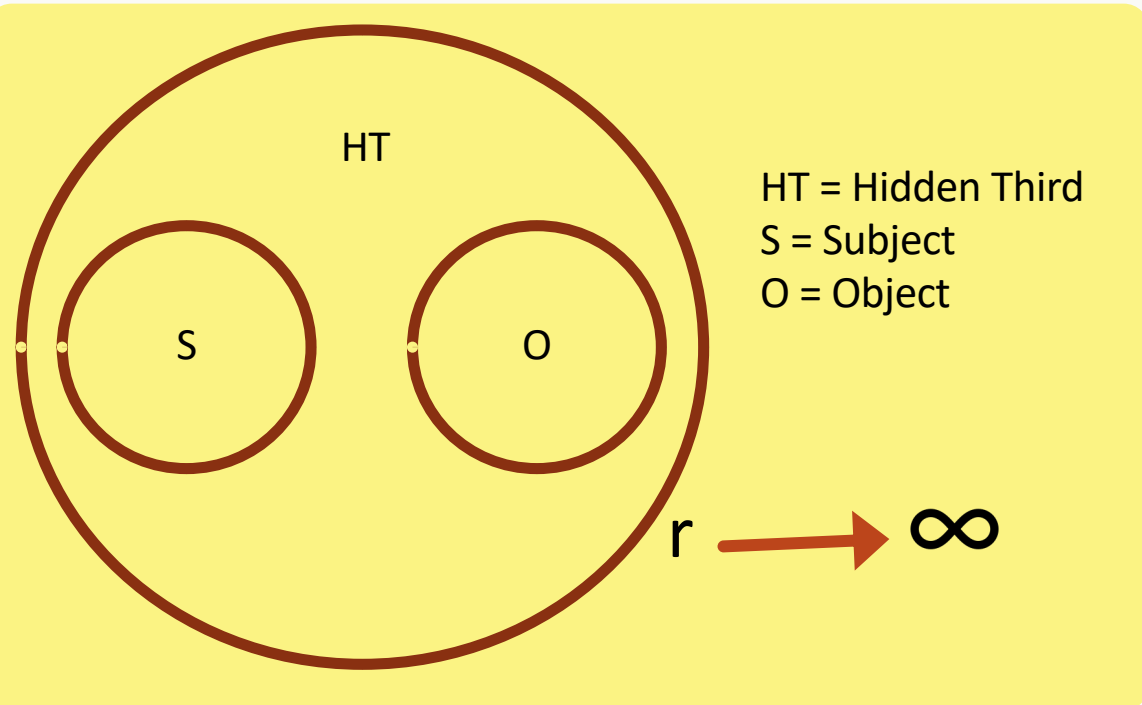
Subjek melebur ke dalam Objek. Segala sesuatu merupakan jejak, tanda dari suatu makna yang lebih tinggi.



Post-Modernitas

(Nicolescu, 2012a)

Peran Subjek dan Objek berubah dibandingkan dengan Modernitas, dan berbalik dibandingkan dengan Pra-Modernitas: Objek, yang masih dianggap berada di luar Subjek, namun dipahami sebagai konstruksi sosial. Objek tidak benar-benar “ada” secara independen. Objek lebih menyerupai pancaran atau perwujudan dari Subjek.



Transdisiplinaritas (3 Pilar)

- Aksioma **ontologis**: Dalam alam dan dalam pengetahuan kita tentang Alam, terdapat tingkat-tingkat realitas yang berbeda dari Objek dan, secara bersesuaian, tingkat-tingkat Realitas yang berbeda dari Subjek.
- Aksioma **logis**: Peralihan dari satu tingkat Realitas ke tingkat lainnya dimungkinkan melalui logika pihak ketiga yang terinklusi (*logic of the included middle*).
- Aksioma **epistemologis**: Struktur keseluruhan dari berbagai tingkat Realitas merupakan struktur yang kompleks: setiap tingkat adalah sebagaimana adanya karena semua tingkat tersebut ada secara bersamaan. (Nicolescu)

Realisme

(Nicolescu, 2012a)

Realisme Klasik

Pembagian Biner: Subjek vs. Objek

Pembagian Ternary: Subjek, Objek, dan Pihak Ketiga Tersembunyi Objek Transdisipliner

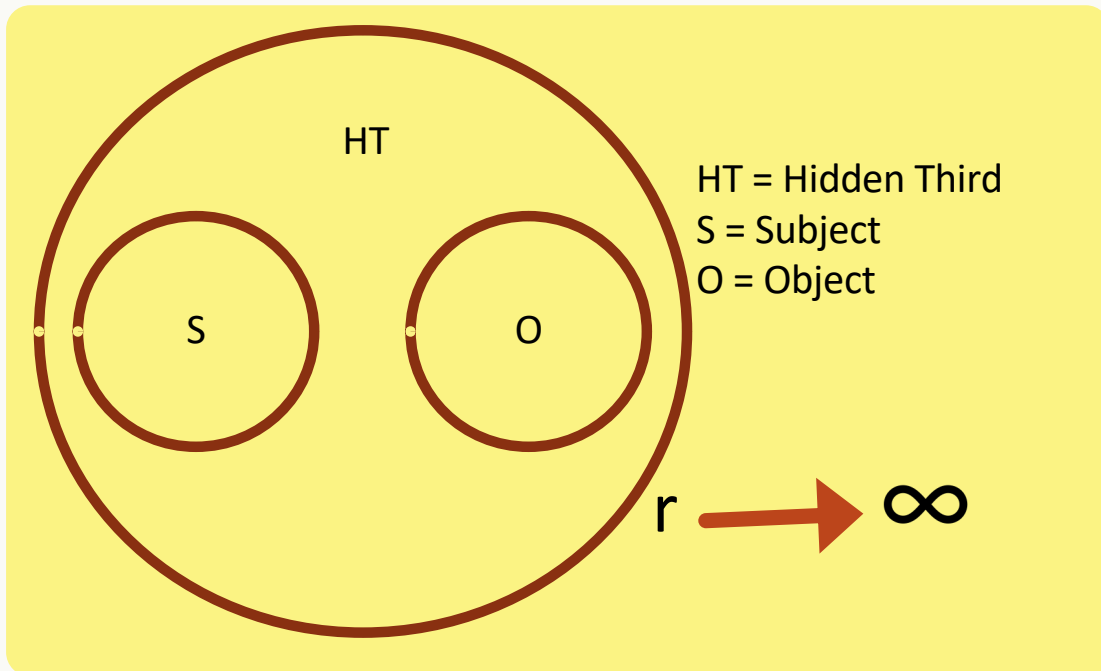
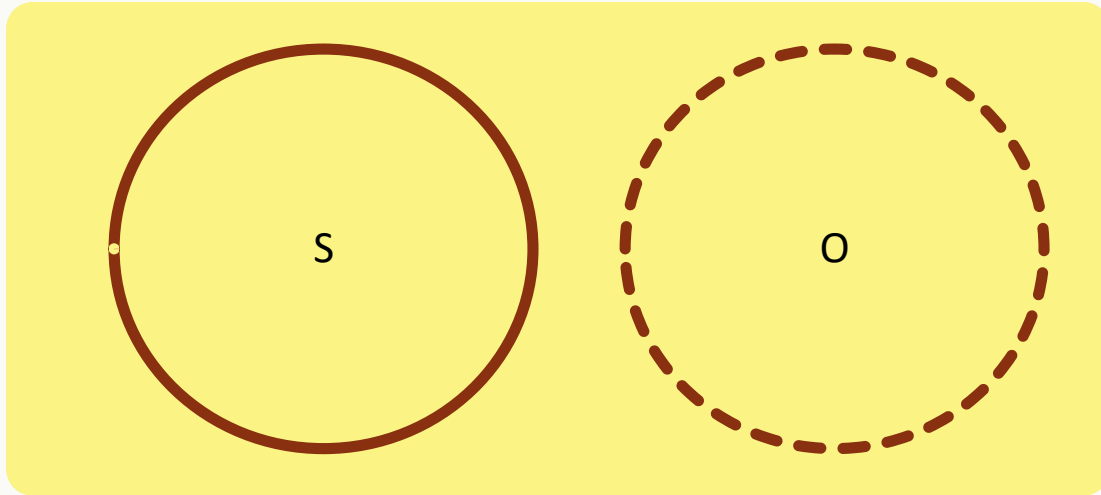
- Didefinisikan oleh kesatuan berbagai tingkat Realitas dari Objek
- Ditambah dengan zona komplementer non-resistensi

Subjek Transdisipliner

- Didefinisikan oleh kesatuan berbagai tingkat Realitas dari Subjek
- Ditambah dengan zona komplementer non-resistensi

Pihak Ketiga Tersembunyi (Hidden Third)

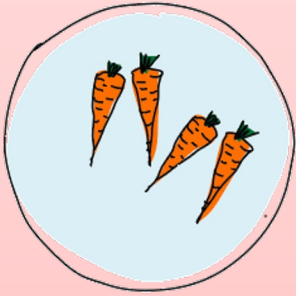
- Zona non-resistensi berperan sebagai “pihak ketiga” di antara Subjek dan Objek
- Berfungsi sebagai unsur interaksi yang menyatukan Subjek dan Objek transdisipliner



TRANSDISCIPLINARY

Transcending Beyond Discipline

Intradisciplinary



within one discipline

A single ingredient (aka, discipline)
— no mixing

Cross disciplinary



viewing one discipline from the perspective of another

a load of ingredients on their own...
[a pretty dull meal!]

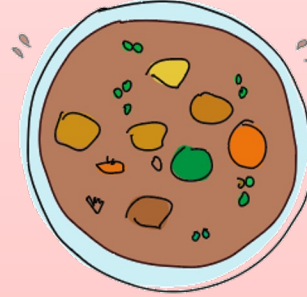
Multidisciplinary



several different disciplines, each providing different perspectives...

... a salad bowl — ingredients remain intact and distinguishable

Interdisciplinary



Integration of disciplinary contributions is required...

.. a stew!
ingredients mush into each other and are only partially distinguishable

Transdisciplinary



a unity of intellectual frameworks beyond disciplinary boundaries

... a CAKE!

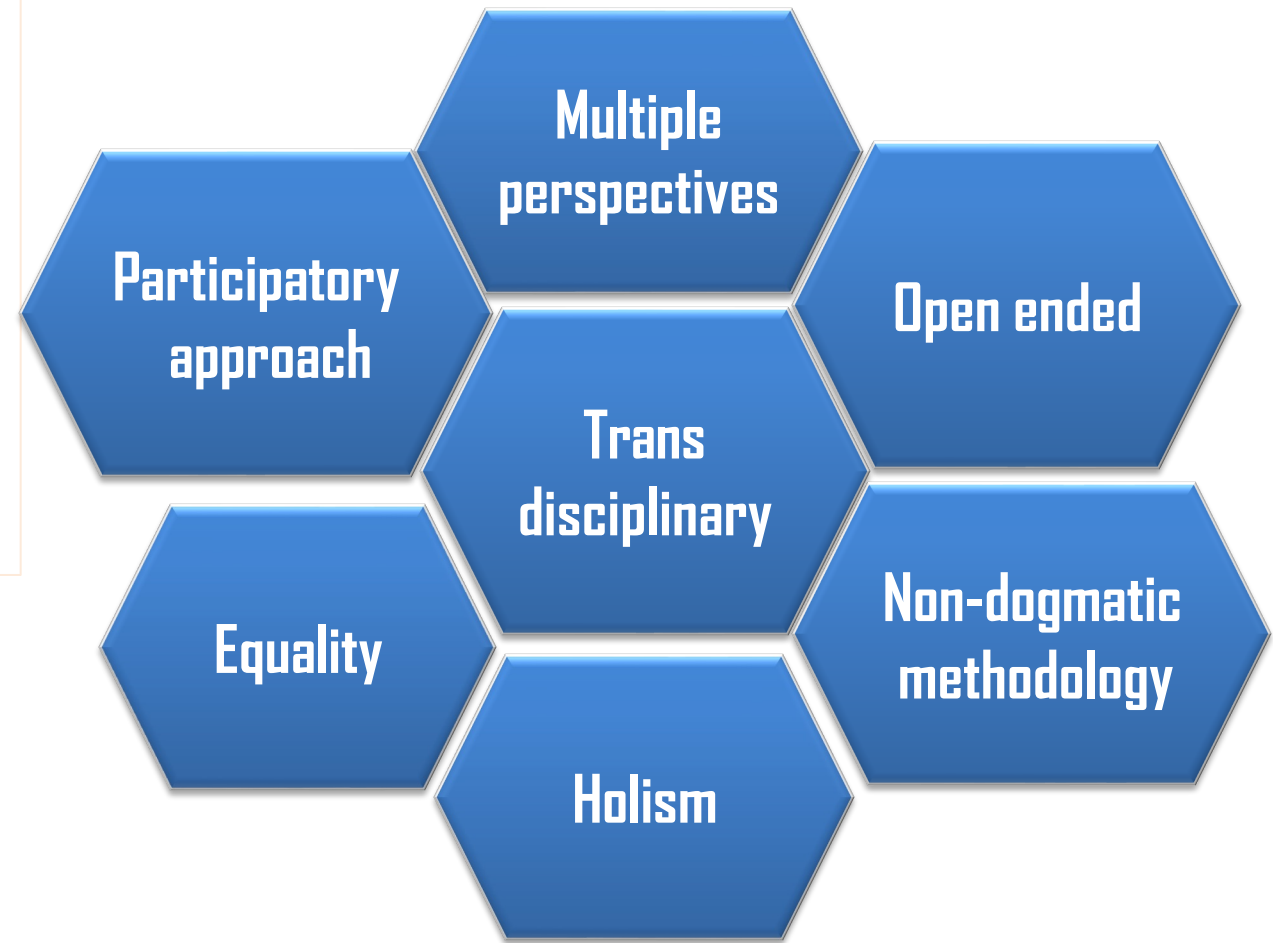
the ingredients are no longer distinguishable and the final 'product' is of a different kind

Between, Across, Beyond

Transdiscipline Attributes

- Non Resistance
- Openness
- Humility
- Reflective
- Reconsider core values
- Empathy

TRANSDISIPLIN: adalah pendekatan; cara kita untuk memahami realita bersama untuk mendapatkan joint problem solving
KUNCI: Pemahaman terhadap Realita



In summary

- ***Multidisciplinarity*** involves studying a research topic in not just one discipline but in several at the same time. Any topic will ultimately be enriched by the incorporation of the perspectives of several disciplines. The multidisciplinary approach overflows disciplinary boundaries, but its goal remains limited to the framework of disciplinary research.
- ***Interdisciplinarity*** concerns ***the transfer of methods from one discipline to another***. Like multidisciplinary, interdisciplinarity overflows disciplines, but its goal still remains within the framework of disciplinary research.
- ***Transdisciplinarity*** concerns that which is at once ***between*** the disciplines, ***across*** the different disciplines, and ***beyond*** all disciplines. Its goal is the understanding of the present world, of which one of the imperatives **is the unity of knowledge**.

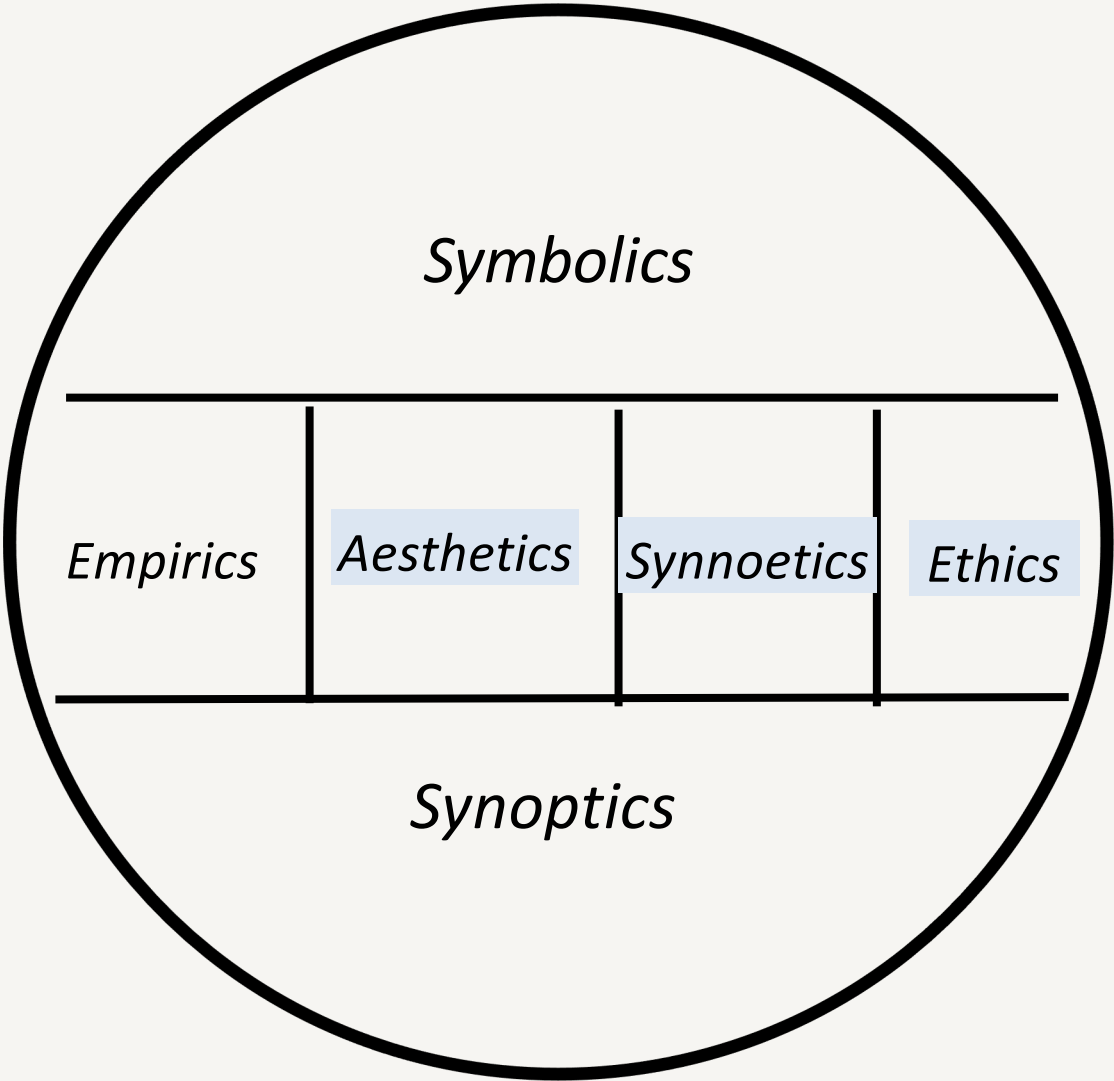
(Nicolescu, 2014)

ONTOLOGICAL AXIOM

Multiple Levels of Reality



**PENGETAHUAN
BERMAKNA,**



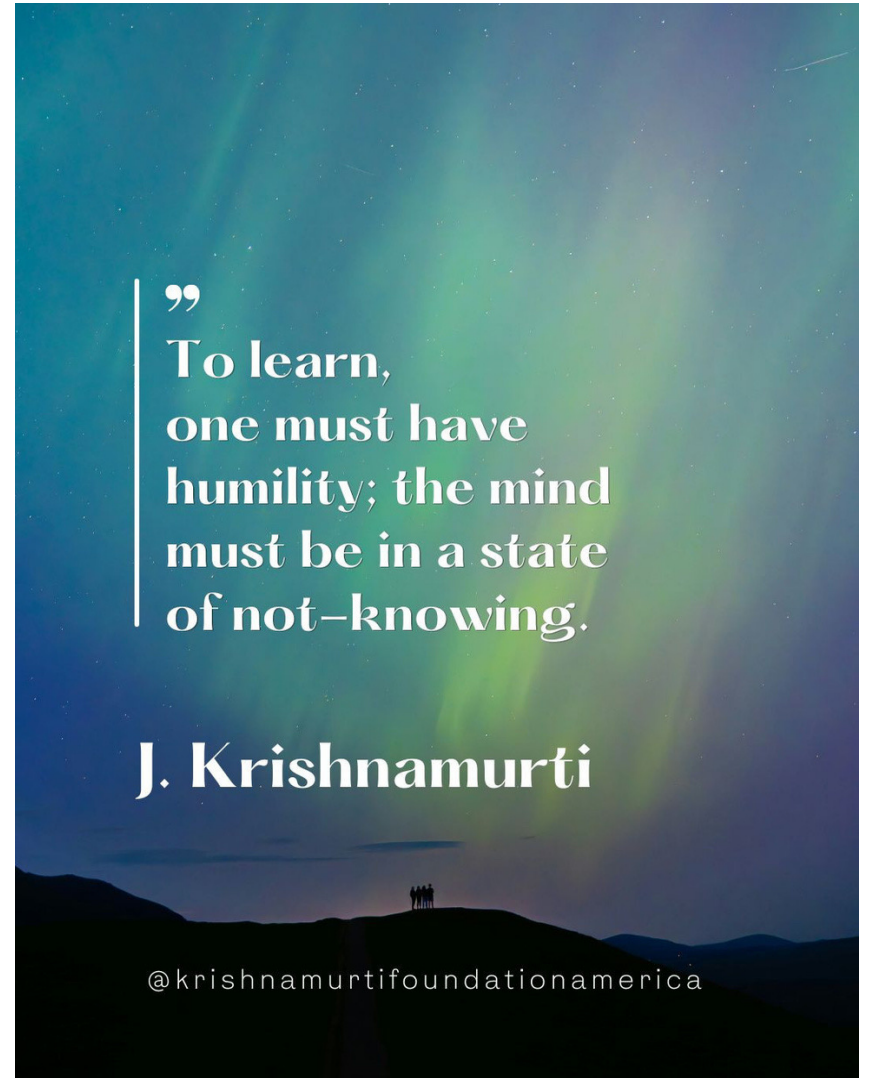
- Symbolics: Bahasa, matematika
- Empirics: Fisika, Biologi, Kimia
- Aesthetics: Music, art, sastra
- Synnoetics: personal knowledge/intersubjective understanding: drama, pembahasan film, cerita2
- Ethics: voluntary personal commitments to values
- Synoptics: Sejarah, filsafat, agama

Struktur Keenam Wilayah Makna Menurut Phenix

“If we are to live in harmony with ourselves and with nature, we need to be able to communicate freely in a creative movement in which no one permanently holds to or otherwise defends his own ideas.”



- Legendary Physicist David Bohm on the “Paradox of Communication”, the Crucial Difference Between Discussion and Dialogue, and What Is Keeping Us from Listening to One Another



KEADILAN EKOLOGIS: Creating New Narratives

- Different belief system are embraced.
- What is reality? Is our universe, as what we think we know it, real?
- Td attribute: humility, listening, reflexivity, non resistance, openness, empathy
- Opacity: the right not to be understood (Glissant)
 - Western import (transparency) that **obsessively sought to know, understand, and classify difference in order to acknowledge and accept it. → reduces difference** by needing to relate it to **a norm or standard from which to deal with it, rather than** respecting the existence of this difference on its own terms
- Lifelong and lifewide learning implies accepting the plurality of ways of knowing and the need for dialogue as the principal method for ensuring deep learning, and personal and collective growth- Sylvia Schmelkes (2023)



Courtesy Premana Premadi

HUMAN-NON HUMAN: A PERSONAL JOURNEY

Have I understood these elements and am I free of them?
Or I just say, 'I understand intellectually, I understand verbally,
but help me to go deeper'?

I can't; you have to do it yourself.

Jidhu Krishnamurti



Life is a balance of holding on and letting go.

