EYE OF EUROPE

The Knowledge of our Civilization in 2040

Workshop Report

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We sincerely thank all participants of the workshop whose insights, reflections and discussions have substantially contributed to the content of this report.

Participants: Effie Amanatidou, Yannick Bauer, Mit Borrás, Michel Croce, Bianca Dragomir, Rodrigo Fernández García, Radu Gheorghiu, Bruno Gransche, Orit Halpern, Harald Heinrichs, Laurens Hessels, Lacramioara Hristache, Karena Kalmbach, André Krebber, Oliver Lauenstein, Claudia Mendes, Pier Francesco Moretti, Roxana Roos, Siegfried Saerberg, Philipp Schorch, Martina Schraudner, Philipp Schrögel, Madeleine Schwinge.

Figure 1: Workshop participants at Berlin-Brandenburg Academy of Sciences and Humanities

Table 1 lists all workshop participants along with their respective institutions and area(s) of expertise.

Name	Institution	Field of Expertise
Effie Amanatidou	The University of Manchester	Participatory Knowledge Societies
Yannick Bauer	German U15	Science Communication
Mit Borrás	Independent Artist	Arts / Post-Human States of Consciousness
Michel Croce	University of Genoa	Epistemology / Post-Truth Conditions
Bianca Dragomir	Institutul de Prospectiva	Foresight
Rodrigo Fernández García	Copenhagen Institute for Futures Studies	Foresight / Anthropology
Radu Gheorghiu	Institutul de Prospectiva	Foresight

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Bruno Gransche	Karlsruhe Institute of Technology	Foresight / Philosophy
Orit Halpern	Dresden University of Technology	History of Science / Futures of Knowledge Production
Harald Heinrichs	Leuphana University of Lüneburg	Sustainability Studies
Laurens Hessels	Rathenau Instituut	Mechanisms of Knowledge Valorization
Lăcrămioara Hristache	Adecco	Human Resources
Karena Kalmbach	Futurium	Science and Technology Studies
André Krebber	University of Kassel	Human-Animal-Studies
Oliver Lauenstein	Federal Ministry of Labour and Social Affairs	Personality Psychology / Foresight
Claudia Mendes	University of Hamburg	Co-Creation / Participation
Pier Francesco Moretti	National Research Council of Italy	Physics / Foresight
Roxana Roos	University of Bergen	Indigenous Knowledge
Siegfried Saerberg	University of Münster	Disability Studies
Philipp Schorch	University of Munich	Ethnology / Indigenous Knowledge
Martina Schraudner	Fraunhofer CeRRI	Responsible Research and Innovation
Philipp Schrögel	Chemnitz University of Technology	Sociology / Science Communication
Madeleine Schwinge	re:future lab	Artistic Intelligence / Foresight

Table 1: Participant Overview

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Context

Knowledge practices are changing. Experiments, teaching or academic publishing are just some of the manifold aspects that change due to novel ways of organizing knowledge work, its institutions and instruments. The Eye of Europe Consortium wanted to understand how this change unfolds, what knowledge experts both expect and wish the future of knowledge to resemble and by what metaphors these expectations and wishes are driven. Having brought expert participants from a wide range of academic disciplines as well as artists and futurists from across Europe, the foresight workshop ***The Knowledge of our Civilization in 2040*** was conducted on 20th-21st of November 2025 at Berlin-Brandenburg Academy of Sciences and Humanities in Berlin, as part of the project *Eye of Europe*. As a Coordination and Support Action funded through Horizon Europe, the project aims to enhance the integration of foresight practices into Research and Innovation (R&I) policy making across Europe. Ultimately, *Eye of Europe* envisions a more **cohesive and influential R&I foresight community that contributes significantly, as a collective intelligence, to shaping and guiding policy decisions**.

Figure 2: View from the venue window across centuries and systems

The Foresight team of *Fraunhofer-Institute for Systems and Innovation Research* (ISI), consortium partner in the *Eye of Europe* project, hosted and led the workshop *The Knowledge of our Civilization in 2040* at the **Berlin-Brandenburg Academy of Sciences and Humanities.** This workshop was convened as part of a series of **11 foresight pilots** planned in the project. The goal of these pilots is to address topics that are relevant for the European Research Area and to experiment with innovative methodologies and diverse groups of participants, thus helping shape a new generation of foresight(ers).

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The design and structure of the workshop

At the heart of the two-day workshop was the open question of how future civilizations might define, create, harness, value, share, embed and apply knowledge. The workshop's aim was to explore both **conceivable and desirable alternative futures** for the knowledge of our civilization in Europe by the year 2040 by letting participants explore the theme of the knowledge of our civilization through a facilitated process consisting of three main stages, where, at a defined point in the process, participants changed their small working groups. To structure the foresight journey, a twofold Causal Layered Analysis (CLA) approach was employed. First, prevailing contemporary understandings of knowledge were systematically deconstructed by examining dominant narratives, underlying systemic structures, shared worldviews and deeply embedded cultural metaphors and myths. Subsequently, in a creative and reconstructive turn, desirable alternative futures of knowledge were developed on the basis of this preliminary analytical groundwork through the formulation of novel metaphors and myths, worldviews, socio-technical systems, and narratives, ultimately culminating in a transformed litany. The following sections describe this process in greater depth and detail.

Figure 3: Opening Presentation by Radu Gheorghiu, Eye of Europe Coordinator

Examining the present

The purpose of applying the CLA, a foresight method developed by Sohail Inayatullah[1] and often used in participatory, multi-stakeholder workshop settings, is to deepen the understanding of a selected topic by examining it across multiple layers of meaning and causality. This involves deconstructing dominant contemporary beliefs surrounding the topic and reconstructing alternative images of its possible futures. CLA helps to unpack complex issues by examining them across four interconnected layers of depth and ways of understanding, moving from surface-level symptoms and quick fixes to

[1] Inayatullah, Sohail (1998): Causal layered analysis. In: *Futures* 30 (8), S. 815–829. DOI: 10.1016/S0016-3287(98)00086-X.

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deep cultural narratives. Engaging with each layer provides a distinct type of insight and draws on different modes of knowing and imagining. These four layers are presented below in greater detail.

Litany / Headlines

This is the most visible and immediate layer, containing items typically found in media discourse, public opinion and common narratives. It includes headlines, statistics and simplified representations of a problem. It tends to describe issues in a reactive, often emotional way (e.g. “Loneliness is on the rise”, “Mental health crisis among youth”).

Systems / Structures

This level examines the institutional, economic, technological and policy systems that produce or sustain the litany. It invites analyses of power dynamics, physical infrastructure, behaviours and organizational norms (e.g. the design of social media platforms, education systems or urban planning).

Worldviews / Paradigms / Beliefs

Here, the focus shifts to the cultural values, ideologies and mental models that justify and maintain the systems above. They include broadly shared assumptions, identities or societal logics (e.g. “productivity defines worth”, “connection equals visibility”).

Metaphors / Myths

At the deepest level, CLA explores the archetypes, metaphors, myths and emotional narratives that shape our unconscious perception and understanding of reality. These are often symbolic and metaphorical (e.g. “the world is a marketplace”, “humans as machines”, “life is a race”).

Imagining desirable alternative futures

From the outset, workshop participants work in small groups to develop a multilayered understanding of the present before shifting their focus toward the future. Drawing on the CLA framework, these groups then engage in a process of creative reconstruction, introducing new metaphors, reimagined worldviews, revised beliefs and values, and redesigned systemic structures aimed at enabling more equitable, interconnected, and sustainable futures.

A *video tutorial* on the CLA approach, developed by Eye of Europe partner *Finland Futures Research Centre*, was shared with the workshop participants in advance to familiarize them with the method.

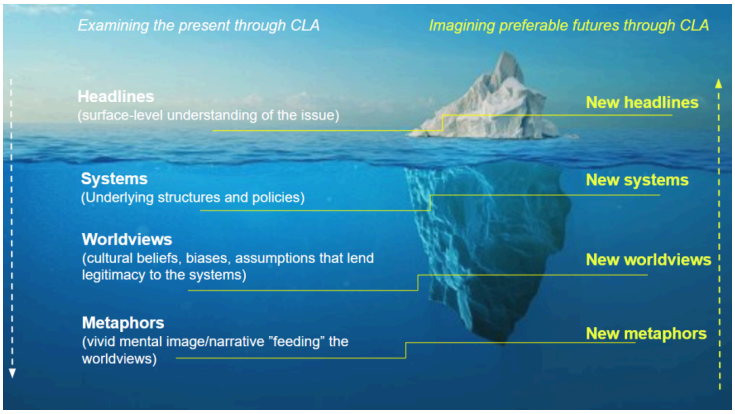

Figure 4: The CLA iceberg

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Workshop discussions and outcomes

Session 1: Finding and mapping the "troubles" of knowledge

After having kicked off with both an energizing positioning warm-up and a socializing icebreaker exercise, the workshop started by inviting participants to jointly review the **dominant perspectives, discourses and voices on what is currently happening to knowledge** in their respective fields of expertise. The discussions within the small working groups revolved around three main questions:

1) How is knowledge commonly defined as a concept?
2) What visible problems or symptoms are being discussed today in relation to how knowledge is generated, shared, transferred, communicated, used, applied, embedded, stored…?
3) What are the short-term concerns and immediate solutions ("quick fixes") being discussed?

After having clustered, within their small working groups, the differing voices and views on knowledge into emerging issues that require further investigation due to messy conditions, tensions, unquestioned assumptions, distorting biases or conflicting approaches to solutions, participants reconvened in plenary to consolidate their findings into their very own **map of troubles**.

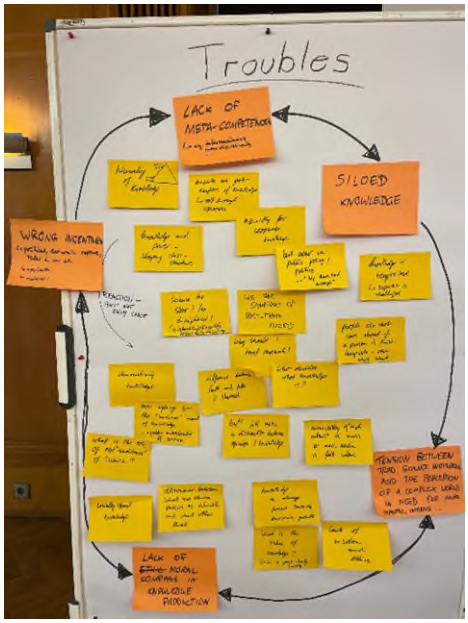

Figure 5: The workshop participants' very own map of trouble

At this point in the process and to kick off participants' CLA journeys, the notion of "trouble" was introduced, being interpreted in a positive way as an area of investigation and exploration where things are in deep flux. From that perspective, "**staying with the trouble**"[2] holds the promise of revealing alternative, potentially ambiguous future meanings of the concept of knowledge, whilst simultaneously resisting the temptation to jump to quick fixes.

[2] Haraway, Donna Jeanne (2016): Staying with the trouble. Making kin in the Chthulucene. Durham, London: Duke University Press (Experimental futures Technological lives, scientific arts, anthropological voices).

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Across four working groups, participants identified different key domains of trouble in the current state of knowledge by clustering and intersecting their group work results:

- **Having knowledge vs. doing knowledge**: Unclear relationship between knowledge, competencies and decision making.
- **Confusion around nature and forms of knowledge**: Tensions between the traditional science system and the complex world in need of (practical) orientation.
- **Unclear relation between knowledge and truth**: When and how can knowledge be challenged? Are we open to the diversity of knowledge and truths? If knowledge is multiple, how can we assess its validity? How can we design processes of bringing together multiple knowledge bases?
- **Missing moral compass**: Can knowledge be dissociated from morals and ethics? How can a certain knowledge become powerful? Who can know? What is the performativity of knowledge?

Figure 6: Presentation of group specific troubles by one workshop participant

Following this clustering exercise, new working groups were formed around the domain of trouble that resonated most strongly with each participant. These groups began their work by exploring and discussing concrete real-world experiences in which they had encountered friction, confusion, challenges, or ambiguity related to their chosen trouble. Ultimately, each group agreed on one specific aspect of that trouble to serve as an entry point for applying the CLA - an aspect that could be explored and engaged with from the participants' diverse perspectives and fields of expertise.

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Session 2: Going deep down the troubles, or: Deconstructing the present

Following the CLA structure, participants worked their way down from the "litany" layer through the underlying systems and the worldviews that sustain them, ultimately reaching the myths and metaphors embedded in each of these "troubling" domains. The main discussion points for each of these layers are presented below for all four working groups.

Group 1: Knowledge & Competencies

The topic "Knowledge & Competencies" is derived from the initial arena of trouble "Having knowledge vs. doing knowledge".

Litany / Headlines:

- **Coordinating action is a function of knowledge** – This aspect, which defines knowledge in terms of what it enables or 'does', reinforces the role of the knowledge holders as choreographers who determine where knowledge needs to be applied and who is best suited to meet that need.
- **Knowledge and employability in the Jobpocalypse** – With Artificial Intelligence inspiring the term 'jobpocalypse', the connection between knowledge and its application takes on a greater role in discussions of work and workers.
- **Empathy as a school subject –** Cases like Danish curriculum changes demonstrate new institutional recognition of other kinds of knowing.
- **Body takes part in knowing –** Indicating a shift toward understanding knowledge as more than a purely cognitive function, this part of the litany broadens how knowledge can be observed, studied and incorporated into epistemology.
- **Navigation and wayfinding –** Linked to corporeal knowledge, these activities are presented as a field of study that could provide evidence for knowledge as physio-cognitive in nature, reiterating the body's role in storing and using knowledge.
- **Knowledge and credentials –** Certifications and titles standing in for competence and capacities.
- **Decision preparations –** What is the status and the nature of the relationship between knowledge and decision-making? This relationship becomes particularly evident when individuals with decision-making power (CEOs, political actors, administrative leaders) are required to make decisions that affect areas of organisations or societies about which they possess little personal knowledge.

Systems / Structures:

- **Educational systems –** Tasked with disseminating knowledge and designed for knowledge that is primarily cognitive in nature, these systems play a central role in transforming knowledge (and what is recognized as such) into action through tutelage, repetition and practice.
- **Science and scientific institutions –** Long regarded as key producers of legitimate knowledge, their reputational strength has been eroded (e.g. through post-truth messaging) and their perceived value undermined (e.g. AI as both a source of knowledge and a producer of 'knowledge' through machine-learning generated materials).
- **Labor market –** The labor market has often been central to mediating the social value of different intersections of knowledge and application (action). The capacity to apply knowledge through action acquires a dynamic value through markets.

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- **Corporate education and think tanks –** As purveyors of niche knowledge for specific audiences, these types of institutions operate in the application and dissemination of knowledge within more narrowly defined contextual constraints. Knowledge is curated before it is transferred to powerful actors.
- **Scholar system –** The credentialization of knowledge holders (generally holders of cognitive, scientific knowledge) is mediated by the scholar system. As a traditionally powerful gatekeeper, this system has also been weakened by emerging forms of recognizing and promoting knowledge holders. A systemic shift toward cultivating competence and meta-skills reflects reactions to new types of recognition and valuation (e.g. micro-credentials and the systems that create and support them).
- **Precarity and equality as systemic issues -** As different types of knowledge application become devalued through automation, the potential consequences for knowledge holders (particularly regarding their ability to secure adequate compensation) are framed as systemic issues. For example: how will underemployed knowledge workers pay the rent?

Worldviews / Paradigms / Beliefs:

- **Humans as 'resources' –** If the valuation of knowledge through a holder's ability to apply it is negotiated primarily via the labor market, then individual knowledge workers become quantifiable and interchangeable. Viewed in this way, humans become replenishable resources rather than individuals with particular skills.
- **The second major worldview of 'Condition Human'** (marked by a return of humanism in education) – underscoring the unique individuality of knowledge holders and revaluing the cultural and contextual settings of applied knowledge. This stands in contrast to the Homo Economicus ideology that propels the 'human resources' perspective.

Metaphors / Myths:

- **Homo Economicus** – a myth that perpetuates, but also reifies, the role of knowledge at the individual level. This myth also hinges on the acceptance of the myth of private property and ownership, which establishes a material basis on which 'rational' decisions can be made.
- **Walking into the future while looking to the past** – a second myth/metaphor that emerged as symbolic of how knowledge and action are intertwined. This metaphor also emphasis cultural knowledge as well as other ways of knowing and transferring knowledge.
- **Linear vs. cyclical time -** these myths are also present and influence how knowledge may be perceived: either as progress (knowledge advancing 'forward') or cultural, flowing knowledge that is built within the individual. These myths create space for the concept of a 'hibernation of cultures, knowledges and practices' waiting to re-emerge when needed as knowledge paradigms shift.

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Figure 7: Iceberg of the present from Litany to Myth/Metaphor (Example Group 1: Knowledge & Competencies)

Group 2: Purpose of knowledge & Use/abuse of knowledge

The topic "Purpose of knowledge & Use/abuse of knowledge" is derived from the initial arena of trouble "Missing moral compass".

Litany / Headlines:

- **Knowledge is power! – Are you powerful? + Progress only for Elon and his friends? 4 billion people and nature keep on suffering** – two fictive news headlines that put emphasis on power as a condition for and purpose of knowledge, suggesting that knowledge is unevenly distributed in society**.**
- **Art is elitist knowledge** – suggesting public perceptions of art and knowledge as elitist.
- **Academics lack critical attitude + Naïve researchers share military tech secrets + Chemists as prostitutes of industry** - three news headlines that point towards the instrumentalization and capitalization of knowledge.
- **There is always a piece of knowledge to prove anything – What would you use it for?** – Assumed public belief that all knowledge is relative and that it is used for legitimizing the exercise of power.
- **Army colonizes our universities –** headline reflecting the observed increase of cooperations of the military with universities, changes of civil clauses and dual use restrictions at universities in times of conflict and war.

Systems / Structures:

- **Disciplinary structures of higher education –** hints at the strong disciplinary organization of science as one of the most pertinent structures at universities.
- **Patriarchy –** suggesting that men hold the power in knowledge production.

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- **Growth paradigm, capitalism is purpose of knowledge + Transfer from public to private sector + "oligarchical" control of knowledge for certain purposes –** participants discussed the transfer logics of science where knowledge is being cultivated as a public good at public universities but transferred into private property through IP rights as soon as there is money to be made with it.
- **Academic reward system is morally agnostic –** suggesting that the reward system (based on the accumulation of publications and grants) lacks moral orientation.
- **Global north (hegemony) – global south (marginalized) –** emphasis on unequal valorization of knowledge.
- **Nationalism and national competition** – participants discussed how nationally organized science and innovation systems find themselves in structural competition.
- **Diffusion of responsibility** – suggesting a lack of responsible research and innovation, that responsibilities over the consequences of knowledge often diffuse (between different levels: EU – national – regional – university – researcher).
- **Planetary changes –** hints towards changing purpose of knowledge in times of planetary change.

Worldviews / Paradigms / Beliefs:

- **Nature / culture separation –** highlights how European modernity has established a dichotomy that inscribes itself in knowledge.
- **Pleasure and desire** – suggesting that pleasure and desire constitute the fundamental paradigm behind the use and abuse of knowledge.
- **Conservatism + Meritocracy –** participants discussed how meritocratic beliefs guide much of our thinking about knowledge.
- **Efficiency (the tyranny of efficiency) + Control management and entrepreneurism –** suggesting that the purpose of knowledge is shaped by a deep-seated belief that more knowledge leads to greater efficiency, and that this efficiency can be controlled and directed toward growth — an ultimate, often unexamined goal (with R&I framed as a growth panacea) that results in a lack of humbleness.

Metaphors / Myths:

- **Life as fight for survival + Winner takes it all + Progress –** participants discussed how biological and sports metaphors shape our understanding of the purpose, use and abuse of knowledge as single individuals strive for domination.
- **Frankenstein + Taming Nature / Control –** this popular figure was selected as the underlying metaphor as it portrays and embodies progress, control over nature, culpability, individualism and a fight with consequences of knowledge.

Group 3: Challenging dominant knowledge

The topic "Challenging dominant knowledge" is derived from the initial arena of trouble "Unclear relation between knowledge and truth".

Litany / Headlines:

- **We need the green transition** – suggesting that some (Western) knowledge bases are privileged for the sake of advancing limited, partly highly normative views on, and solutions for pressing issues (such as climate change).

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- **We need more funds for R&D** – suggesting that a certain (academic / intellectual) way of knowing is financially privileged to the detriment of other, more marginalized ways of knowing (e.g. practical knowledge, indigenous knowledge…).
- **Migrants need to adjust to our cultural ideas (e.g. of Christmas)** – suggesting that there is a dominant knowledge that forces other, marginalized knowledges to contort themselves beyond recognition.
- **After blind man fell down the stairs in the train station: We need more arm rails** – suggesting that quick fixes are preferred over fundamental redesigns of our physical infrastructures based on other, different ways of knowing and experiencing the world.

Systems / Structures:

- **Discomfort with difference / we do not learn to stay with the trouble** – suggesting that our educational systems are not designed to hold space for substantially diverging, marginal knowledges, but perceive the idea of letting different knowledges coexist as potentially unnerving.
- **Different types of education** – suggesting that the structural differentiation of education systems originates from an attempt to avoid discomfort that might arise when people are sorted according to their different ways of knowing.
- **Schools are structured into mono-disciplines** – suggesting that schools treat knowledge as siloed, distinct fields of expertise that are not encouraged to interact with one another.
- **Systems of what is normal** – suggesting that dominant educational systems (e.g., schools, universities) determine which kinds of knowledge are recognized and regarded as normal or natural(ized).
- **Physical infrastructures are built according to what is "practical" for the majority** – suggesting that knowledge which is easier to handle or process is considered truer than knowledge that is more difficult to handle or process.
- **The relationship between dominant knowledge systems and marginal knowledges is shaped by an economic rationale** – suggesting that when marginal knowledges attract interest, attention tends to focus on their perceived deficits and supposedly "negative" aspects rather than on exploring the potential and opportunities they offer.
- **Epistemological responses to sustainability challenges are structured within hierarchical frameworks** – suggesting that human beings are considered superior to nature.
- **Indigenous knowledge is expected to adapt, essentially to contort its specific ways of knowing** – suggesting that local, indigenous and marginal knowledges are being "corrected" by forcing them to fit into scaled-up, technology-driven contexts.
- **Knowledge systems resemble dominant medical systems** – suggesting that all forms of impairment are treated as problems that must be solved so they can ultimately fit into, and function within the dominant systems.
- **Dominant research systems produce narrow research agendas** – suggesting that marginal or "defective" forms of knowledge are deliberately excluded from relevant research funding.

Worldviews / Paradigms / Beliefs:

- **The majority rules** – suggesting that only those forms of knowledge are considered true which quantitatively and hierarchically represent the majority.
- **We need to get the best value** – suggesting that what is valuable knowledge for the majority dictates what is valuable for society.

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- **Alternative knowledge is considered valuable only insofar as it can be "used" within the current dominant system (e.g. of innovation)** – suggesting that alternative or marginal knowledge is denied the right to exist on its own terms or for its intrinsic value.
- **The abnormal is the risk** – suggesting that marginal forms of knowledge (e.g. indigenous, disabled…) are perceived as capable of unsettling majority knowledge.
- **Knowledge resides in authority** – suggesting that hierarchical structures are intrinsic to it.
- **Knowledge is produced by an elite, and that's enough** – suggesting that knowledge is not viewed as limited or deficient as long as it is created by those in power.
- **Suffering hinders a meaningful (learning) experience** – suggesting that being in emotional, psychological or physical pain is seen as incompatible with building relevant knowledge.
- **Knowledge of minority groups is defective and contagious** – suggesting that marginal knowledge is seen not only as flawed, but also as having the potential to "infect" others, thereby undermining their knowledgeability.

Metaphors / Myths:

- **Procrustean bed** – suggesting that what doesn't fit (the majority) is made to fit.
- **Pontius Pilate asked: Barabbas or Jesus?** – suggesting that the majority chooses the option that would not lead to chaos.
- **Knowledge of marginalized groups is cancer** – suggesting that knowledge rooted in alternative epistemologies and minority communities is framed as a disease requiring eradication and, at worst, is regarded as something that could lead to the destruction of one's own identity or even existence.
- **Christian creation myth** – suggesting the existence of a single elite or leader who not only defines what is true but also holds the power to create truth itself. The group selected this myth as the one that best reflects the deeply rooted narrative underlying their specific arena of trouble ("Challenging dominant knowledge"), as it strongly conveys the idea that by producing knowledge, "we" simultaneously exclude other actor groups from doing so.

The group found it difficult to agree on a single metaphor that would best embody their chosen trouble of knowledge. Rather than forcing closure by selecting one metaphor without genuine consensus, they chose to keep the question open. In doing so, they treated the lack of agreement not as a deficit but as an expression of the very complexity and plurality they were seeking to articulate. They therefore decided to revisit the discussion at the beginning of workshop day 2 and to explore collectively which alternative metaphor(s) might emerge from their ongoing dialogue.

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Figure 8: Iceberg of the present from Litany to Myth/Metaphor (Example Group 3: Challenging dominant knowledge)

Group 4: Representation of Knowledge Forms in Discourses on Climate Change

The topic "Representation of Knowledge Forms in Discourses on Climate Change" is derived from the initial arena of trouble "Confusion around the nature and forms of knowledge".

Litany / Headlines:

- **"General trust in scientific research is plummeting"; "Data is corrupted"; "Everybody an expert"; "Knowledge is ideology/conspiracy"; "Wasting more money on research – we need solutions"; "I know best" (Trump)** – suggesting that a major problem within climate-change discourse lies in a declining trust in science, which in turn undermines the shared basis needed for fruitful discussion.
- **"Trump disbands education department"** - going one step further by implying that a broadly shared scientific foundation might even be politically undesirable.
- **"If we were to stop using oil and gas right now, we would all be starving and the economy would collapse" (Elon Musk)** – highlighting a narrative in which climate action is framed as too expensive.
- **"A magical technological solution will solve it"** – suggesting that in some discourses climate change is understood as a strictly technological problem that can and will be solved through (natural) scientific research.
- **"Politicians follow only short-term objectives"** – introducing the alternative viewpoint that climate change is also a problem of organization, governance and incentive structures.

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- **"Climate anxiety and fatigue"** – focusing on the psychological effects of climate change on people who feel powerless to stop it.

Systems / Structures:

- **"Social media virality of opinions"; "Information overload"; "Increased scale and complexity of knowledge"; "AI is sycophantic ↔ cognitive bias"** – locating part of the problem in new media environments, especially the rise of social media with its communication logics and economy of virality, which reward short, simple and extreme statements while offering little to no control over truthfulness. This also points to AI systems that tend to reinforce existing cognitive biases.
- **"False balance reporting"; "Free market of ideas"; "Demise of expertise"; "Structural disadvantage/ disassembly and inefficient public and policy voice of social sciences and humanities"** – highlighting that media discourses function differently from scientific ones, often leading to translation errors that range from misrepresenting consensus in some fields to completely marginalizing others.
- **"Knowledge is used for ideological purposes"; "Extreme neo-liberalism"** – suggesting that knowledge discourses are not always conducted to reach a common understanding or "truth" but are sometimes instrumentalized to shape public opinion and to consolidate power and economic interests.
- **"New place of corporations is social services/research"; "Changing public-private relations"** – focusing on the growing role of corporations within public discourse and research related to climate change.
- **"The only definition of knowledge we accept is that there is no one definition"** – introducing the idea that post-modern critiques of truth and objectivity may have influenced the current difficulty of establishing common ground in public debate.
- **"Acknowledging climate change involves accepting some cost"** – pointing out that admitting realities that imply necessary but undesirable actions is inherently uncomfortable.

Worldviews / Paradigms / Beliefs:

The group identified the multitude of discourses surrounding climate change, focusing on how these discourses construct the problem (or deny that a problem exists) and how they propose to address it.

- **"Mistrust in power"** – highlighting that a general rise in mistrust toward power also extends to experts and scientists.
- **"Scientism"; "Elitism in science"; "People should feel guilty"; "Abstract science vs. palpable action"** – pointing out that scientific communication can be perceived as patronizing, sometimes leading to the rejection of proposed ideas, solutions and requests.
- **"Religion (Evangelical)"; "Apocalypticism/millennialism"** – suggesting that evangelical Christianity, and its influence within American politics, contributes to the rejection of scientific knowledge.
- **"Nationalism/authoritarianism"** – focusing on rising authoritarian tendencies and their dismissal of knowledge and perspectives that do not serve to consolidate their power.
- **"Relativization of truth/post-modernism"; "Democratization of knowledge + critique"** – suggesting that post-modern critiques of singular truth, originally emerging from left-leaning intellectual spaces, have been co-opted to reject scientific consensus.

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- **"Techno-solutionism"; "Techno-determinism"; "Protectionism – we are separate from environment"** – addressing the discourses that frame technological development as both the source of and the solution to climate change, while neglecting its social and political dimensions.

Metaphors / Myths:

The group devoted considerable time to identifying a set of beliefs that recur across all the discourses mentioned. Eventually they agreed on the following:

- **Reductionism** – as a shared strategy for managing complexity.
- **Individualism** – understanding knowledge as something held by individuals in order to provide answers.

This led to the realization that, despite their differences, all the described discourses treat knowledge instrumentally. The resulting overarching metaphor is **Knowledge is a tool.**

Synthesis

Across all four groups and all CLA layers, the present knowledge regime is characterized by a deeply instrumental and hierarchical understanding of knowledge. Knowledge is predominantly valued for its ability to deliver control, efficiency, legitimacy and economic or political advantage, rather than for its intrinsic, relational or plural qualities. Dominant systems privilege certified, scientific and scalable forms of knowing while marginalizing embodied, experiential, indigenous, emotional and context-specific knowledge. Educational institutions, research, media and governance reinforce these hierarchies through disciplinary silos, market-oriented incentives and authority-based validation, resulting in a low tolerance for ambiguity, vulnerability and epistemic differences. At a deeper level, modernist worldviews - such as anthropocentrism, meritocracy and the belief that progress depends on mastery and optimization - shape how knowledge is produced and used. These worldviews are sustained by powerful myths of control, competition and fear of chaos, framing knowledge as a tool to impose order on a complex and threatening world. Consequently, contemporary crises around trust, sustainability, climate change, work and social cohesion emerge not merely as failures of information, but as symptoms of a deeply entrenched epistemological paradigm.

Table 2 summarizes the key similarities across the groups' reconstruction processes, highlighting shared thematic patterns across the different troubles of knowledge and providing illustrative expressions that substantiate them.

CLA Level	Shared Patterns Across All Groups	Illustrative Expressions from the Groups
1. Litany / Headlines	**Knowledge is framed as instrumental, scarce and crisis-driven:** Public narratives emphasize efficiency, power, crisis management and quick fixes. Trust in knowledge institutions is eroding, while simplified or technocratic solutions dominate the discourse.	• Knowledge as employability and credentials (G1) • "Knowledge is power" and elite benefit (G2) • "We need the green transition" privileging Western expertise (G3) • "Everybody an expert", "Magical technological solutions" in climate debates (G4)
	Dominance of specific knowledge forms: Academic, scientific, cognitive and	• Cognitive over embodied competencies (G1) • Elitist views of art and academia (G2)

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	technological knowledge are foregrounded, while experiential, embodied, indigenous, emotional and social knowledge is marginalized.	• R&D over practical or indigenous knowledge (G3) • Natural sciences over humanities in climate discourse (G4)
2. Systems / Structures	**Hierarchical and siloed knowledge systems:** Educational, scientific and media systems organize knowledge into disciplines, credentials and expert hierarchies that limit pluralism and cross-fertilization.	• Scholar and credential systems (G1) • Disciplinary university structures (G2) • Mono-disciplinary education systems (G3) • Media vs. science logics and "false balance" (G4)
	Economization and power alignment of knowledge: Knowledge production and recognition are strongly shaped by capitalism, growth imperatives, national competition and corporate or military interests.	• Labor market valuation of knowledge (G1) • Transfer of public knowledge into private property, military cooperation (G2) • Funding-driven research agendas (G3) • Corporate influence in climate research and discourse (G4)
	Institutional inability to deal with difference and complexity: Systems favor standardization, scalability and control over ambiguity, discomfort and diversity of knowing.	• Precarity through automation (G1) • Morally agnostic reward systems (G2) • Discomfort with difference in education (G3) • Social media virality and information overload (G4)
3. Worldviews / Paradigms / Beliefs	**Majority, authority or market define "valid" knowledge:** Truth and value are linked to dominance, efficiency and legitimacy rather than plurality or intrinsic worth.	• Humans as interchangeable resources (G1) • Meritocracy and efficiency beliefs (G2) • "The majority rules" (G3) • Popularity and relativized truth in public discourse (G4)
	Knowledge as a means of control and risk reduction: Knowledge is expected to stabilize systems, justify decisions and manage uncertainty rather than engage with complexity or vulnerability.	• Knowledge preparing decisions for distant decision-makers (G1) • Knowledge used to legitimize power (G2) • Marginal knowledge sees as dangerous or contagious (G3) • Climate knowledge politicized and instrumentalized (G4)
	Anthropocentric and modernist assumptions: Humans are positioned above nature; suffering, emotion and	• Homo Economicus vs. humanistic education (G1) • Nature–culture separation (G2)

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	dependency are treated as obstacles to "proper" knowing.	• Human superiority over nature (G3) • Techno-solutionism and environmental separation (G4)
4. Metaphors / Myths	**Knowledge as domination, control and competition:** Deep narratives frame knowledge as something that must win, fit or overpower alternatives to maintain order.	• Homo Economicus; linear progress (G1) • Winner takes all; Frankenstein (G2) • Procrustean bed; marginalized knowledge as disease (G3) • Reductionism; individualism (G4)
	Fear of chaos and loss of order. Plurality of knowledge is associated with instability, inefficiency, or existential threat.	• Precarity and devaluation of labor (G1) • Survival and progress myths (G2) • Exclusion to avoid chaos (G3) • Breakdown of shared truth in climate discourse (G4)

Table 2: Shared Patterns across CLA Deconstruction Layers

The session ended with a thought-provoking contribution by Dr. Lili Reyels, one of the curators, alongside historian Dan Diner, of the exhibition *"roads not taken. Or: Things could have turned out differently"* at the Deutsches Historisches Museum (German Historical Museum). The exhibition traces distinctive caesurae in German history, exploring the probabilities of unrealized histories by presenting pivotal moments where alternative outcomes were possible but ultimately prevented by accidents, derailed by misjudgments, hindered by shortcomings or thwarted by missed opportunities. By illustrating the inherent openness of historical trajectories, this perspective offers a powerful methodological lens for imagining alternative futures. It invites participants to recognize that history is not predetermined but shaped by contingent constellations of decisions, actions and omissions. Such an approach can inspire future-oriented thinking by encouraging us to envision multiple pathways ahead, fostering creativity and resilience in navigating uncertainty.

Workshop Day 1 concluded with a joint visit to the *"Futurium. The house of Futures"*, a museum dedicated to fostering debates on possible and desirable futures with diverse audiences. Participants were guided through the Futurium by Dr. Karena Kalmbach and her team from the Strategy and Content department. Thanks to an exclusive, well-thought-out tour, the group experienced the museum in a unique way – focusing on different modes of knowing. This included the unusual perspective of not being able to see the exhibition objects, but instead sensing the museum's landscape through other senses such as touch, smell and hearing.

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Figure 9: Impressions from the group work

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Session 3: Reframing the troubles, or: Reconstructing the future

Still inspired by Lili Reyel's talk and by the visit to the Futurium at the end of workshop day 1, participants on day 2 revisited their "Iceberg" and co-created alternative narratives about their troubles. Starting from more hopeful and constructive metaphors or myths, they worked upward through the worldviews and systems levels, ultimately creating a new litany with possible headlines for the envisioned future.

Central to reconstructing the new metaphor or myth was the requirement that it offers an alternative way of thinking about and addressing the chosen trouble — one that could lead to a pathway both thinkable and desirable, while encouraging a productive and energizing approach. In other words, the metaphor should be hopeful and motivating, but not naïve or escapist. It should not simply invert the old metaphor, nor replace "popular opinion" with a personal stance but instead reframe the trouble in a genuinely new way.

Group 1: Knowledge & Competencies

New Metaphors:

This group produced two new metaphors that could help communicate the desired shift in understanding the relationship between knowledge and competencies. Given the importance of the knowledge holder and their relationships with other actors and systems in deconstructing this aspect of the futures of knowledge, it is not surprising that the group's new metaphorical directions reframed these components.

- **"I am the River, The River is me.":** This new metaphor reconceptualizes the relationship between knowledge itself and the individual. In contrast to 'homo economicus', which frames knowledge as a thing to be owned (and applied in numerous competencies valued through market mechanisms), this metaphor positions individuals as inhabited by a flow of knowledges. In this metaphor, individuals are not expected to "own the mountain" of knowledge, but rather to understand and direct flows of knowledge toward values defined more by intrinsic motivations and by spaces of application within a much broader ecology (see second metaphor).
- **Symbiotic Cross-Pollination:** The second metaphor is meant to redefine the relationship between individuals as well as between fields of study and knowledge application. In contrast to competitive owners of knowledge who position themselves as "experts" in pursuit of greater market rewards, this metaphor views individuals as vessels through which knowledge (see metaphor 1) is transported across the broader ecology of human curiosity and desirable actions. Different types of knowledge (across specialized fields or contexts) are understood as symbiotic and regenerative, with knowledge being shared and experimented with across these contexts and fields for the improvement of both individuals and communities. Knowledge may be "stewarded" by an individual engaged in cross-pollination, while remaining open to new forms of knowledge and understanding.

New Worldviews / Paradigms / Beliefs:

- A new perspective on "human re**SOURCES OF INSPIRATION**" emerges that relocates the source of valuation to an individual's intrinsic motivations. These motivations may also be linked to external benefits (through symbiotic relationships), but valuing (and enabling) individuals' desires to learn and share becomes a critical repositioning in how knowledge and competencies are understood.

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- This is complemented by a centring of **'SELF- AND COLLECTIVE-REALIZATION'** with respect to what is valued – it is not the individual with applicable knowledge, but the individual's pursuit of self-discovery and their contributions to broader opportunities for (scientific, social or organizational) community growth that define value and justify requests for social and material support.
- A paradigm of both **RE-COMMONING** and **UN-COMMONING** defines the ecology of knowledge. Re-commoning is understood as opening access to knowledge that is controlled by private holders. At the same time, there is an orchestrated effort to un-learn commonly held "beliefs" that are passed off as knowledge, even when they constrain certain kinds of knowledge flows.
- **UBUNTU** – "I am because you are" is a new worldview that acknowledges the intrinsic values and interrelationships between individuals, both as multi-faceted humans and as stewards of knowledge.

New Systems / Structures:

- The labor market can be transformed into a **collegial ecosystem** of intrinsically motivated (and therefore valued) individuals and collectives.
- The pursuit of **meaning making**, as opposed to truth-seeking, defines these new colleague-based systems.
- These systems reinforce recognition of "the other" as valuable sources of diverse knowledge, and provides spaces, institutions and safeguards to **promote relationship-building between 'others'**.
- Educational institutions refocus on **basic and meta-skills** that support learning and transferring knowledge across contexts and communities, on discovering new ways to pursue and develop intrinsic motivations and on fostering relationships.
- Corporate and private institutions can be held to new standards regarding the **promotion of transversal learning** among their employees and are likely to benefit from these new knowledge (and application) ecologies that emerge.

New Litanies:

- Headline: Europe adopts a Happiness Index as a measure of societal valuation.
- Societal symbiosis inspired by nature.
- Headline: Volunteer rates reach their highest levels in decades!
- Lifelong learning driven by curiosity
- Headline: 60% of Germans report high job satisfaction.
- Belonging and connections
- Headline: 70% of Germans report increased happiness.

Group 2: Purpose of knowledge & Use/abuse of knowledge

New Metaphor:

- **The Soup of Knowledge** is a metaphor based on the allegory of the long spoons. This popular parable, which has become part of the folklore of several cultures and world religions, portrays a situation in which people have access to food, but the spoons are too unwieldy to use for feeding themselves. In hell, where people do not cooperate, they starve. In heaven, where they use the long spoons to feed one another across the table, people thrive. The Soup of Knowledge extends this idea. It describes a regenerative soup of knowledge that everyone

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sustains with diverse ingredients and shared responsibility, not only among humans but also in relation to non-human actors.

New Worldviews / Paradigms / Beliefs:

- A relational, solidary and empathic community that stands for care and diversity
- Balanced human and planetary flourishing
- Playfulness as a guiding quality

New Systems / Structures:

- Plural and diverse research economies consisting of cooperatives, FabLabs and open-source infrastructures, with plenty of distributed small “Futuriums” and third places
- Extended responsibilities in which where social and technical innovation are clearly connected
- Systems beyond gender hierarchies
- Transdisciplinarity and “Aexpertirience”, a hybrid of aesthetics, expertise and practice / experience

New Litanies:

- Sharing and caring: A new knowledge approach brings hope for the future
- New knowledge brings peace and happiness
- Progress for all people
- Caring for diversity: Societies embrace plural ways of living and knowing
- The Soup of Knowledge: Diverse wisdom traditions stir a new cultural renaissance

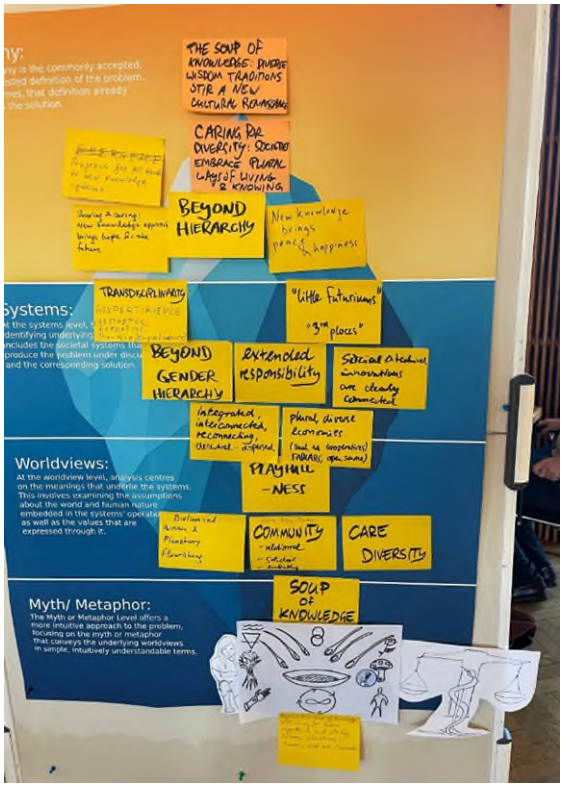

Figure 10: Iceberg of the future from New Myth/Metaphor to New Litany (Example Group 2: Purpose of knowledge & Use/abuse of knowledge)

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Group 3: Challenging dominant knowledge

New Metaphors:

Three different metaphors were discussed, each offering the potential to move beyond the stark divide between light and dark – or good and bad – implied by the Christian creation myth, toward a more inclusive, interdependent and interconnected understanding of knowledge.

- **Mycelium**: The mycelium metaphor was proposed to question dominant, hierarchical models of knowledge (production) by framing knowledge as distributed, relational and adaptive. Like mycelial networks, largely invisible yet essential, it highlights the hidden contributions of marginalized and local knowledge, the interdependence between actors and the capacity to regenerate and transform under changing conditions. It emphasizes quiet, grassroots forms of resistance and co-creation over centralized authority, inviting a shift from knowledge as static and proprietary to living, networked and mutually sustaining.
- **(Jazz) Symphony**: The metaphor of a symphony was put forward to challenge dominant knowledge models by illustrating how diverse forms of knowing can coexist without being forced into uniformity. Like different instruments contributing to a shared composition, the metaphor highlights the value of multiple epistemic voices, each with its own tone and logic, working together through attentive listening and mutual adjustment. It offers a way to imagine knowledge production as collaborative, dialogical and interdependent rather than hierarchical or standardized.
- **Ting**[3]: The metaphor of a Ting served to challenge dominant knowledge models by emphasizing collective, participatory, and decentralized approaches to decision-making in the production, sharing, and communication of knowledge. Like the historical assembly where community members gathered to deliberate and judge together, the Ting metaphor emphasizes knowledge as something shaped through dialogue, negotiation and the inclusion of multiple voices. It offers a way to envision knowledge production that is shared rather than centralized, and responsive to diverse perspectives rather than governed by a single authoritative source.

While the group had difficulties in agreeing on choosing one of the new metaphors, across the three metaphors, a shared critique of dominant, hierarchical knowledge systems becomes visible: each metaphor highlights the value of plurality, relationality and distributed forms of knowing. The mycelium emphasizes hidden, interconnected networks that sustain ecosystems; the symphony illustrates how diverse voices can coexist without being forced into uniformity; and the Ting foregrounds collective deliberation and shared authority. Together, they point toward knowledge practices that are collaborative rather than centralized, inclusive rather than exclusionary and grounded in mutual responsiveness rather than imposed hierarchy.

As a result of the group's difficulties in finding agreement on one metaphor, the subsequent layers of worldviews, paradigms and beliefs, systems and structures as well as litany and headlines could not be reconstructed in depth, but only briefly touched upon on a high level.

New Worldviews / Paradigms / Beliefs:

- Friction and discomfort are constitutive elements of the concept of knowledge.
- Art enables different ways of creating together without being corrected.
- The world can only be fully understood from a holistic perspective.

[3] A *Ting* (Old Norse: *þing*) is an early Germanic and Nordic public assembly where free members of a community met to deliberate legal matters, resolve disputes, and make collective political decisions. It functioned as a governing and judicial body, often presided over by a law speaker.

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- Knowledge is not solely human.
- Because knowledge is multiple, its multiplicity must be respected and given space.
- Knowledge does not exist outside of interdependence.

New Systems / Structures:

- The idea of the Ting serves as a Leitmotiv for rebuilding social systems and structures.
- Art plays a pivotal role in reimagining social systems and structures as it can help nature and non-humans to express themselves.
- The notion of memory impacts the reconfiguration of social systems and structures by shaping what is carried forward, what is forgotten and whose experiences and epistemologies remain present in collective understanding.

Group 4: Representation of Knowledge Forms in Discourses on Climate Change

New Metaphor:

This group decided on the following new metaphor:

- **Knowledge is a verb:** The former metaphor, **knowledge is a tool**, implies understanding knowledge as a noun. As a noun, knowledge can be held, transferred or withheld. Framed as a tool, knowledge takes on an instrumental character: it is valued not for its own sake, but for its capacity to solve specific problems. Within this logic, one must identify the "right" tool - the "right" form of knowledge - for a given problem. Consequently, while various climate change discourses all treat knowledge as a tool, they differ in the problems they seek to solve and in the types of knowledge they prioritize.
  The new metaphor, **knowledge is a verb**, emphasizes the processual nature of knowledge. Knowledge is no longer something possessed by a single individual, but something enacted by many. It is created through sharing, practicing and applying it. This metaphor suggests that knowledge does not exist separately from its discovery, circulation and use, but rather consists in these processes themselves.

New Worldviews / Paradigms / Beliefs:

- **"Knowledge is a discovery"** – highlighting that knowledge is not created out of nothing, but found through engagement with the physical world, while simultaneously emphasizing the processual nature of knowledge production.
- **"Knowledge stays falsifiable"; "Knowledge is not arbitrary**" – reiterating that uncertainty does not imply arbitrariness, and that the absence of absolute certainty should not lead to treating all claims as equally valid bases for societal decision-making.
- **"Knowledge is situated, contingent and contested"; "Knowledge is fluid"** – acknowledging that knowledge can and should change in response to new discoveries, perspectives and contextual conditions.
- **"Knowledge is a conversation"; "Co-creation"; "Knowledge is a commons"** – emphasizing the communal and intersubjective nature of all processes Involving knowledge.
- **"Living knowledge – people believing and aligning to it"; "Knowledge transforms, inspires people"** – underlining that knowledge has the capacity to shape values, guide action and transform individuals and societies.

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New Systems / Structures:

The group explored systems and structures that could embody the newly described worldview. Most of the proposed ideas are not entirely new; rather, they already exist in the present as potential seeds of change. In this context, however, they are envisioned as widely established and normalized.

- **"Transdisciplinary / Participatory Research"; "Systems: post-normal science, mode-2 science"** – focusing on alternative approaches to scientific knowledge production, particularly in relation to wicked problems, emphasizing transdisciplinarity and application-oriented research.
- **"Courage to failure"; "Sustainable and reliable funding für blue-skies research"; "Open knowledge – surplus/ abundance instead of limits and protectionism"** – envisioning a scientific landscape in which stable funding enables risk-taking, experimentation and the exploration of unconventional paths without fear of financial consequences.
- **"New metrics: I-Index; finance; efficiency/cost/admin"** – critiquing today's "publish or perish" paradigm and exploring alternative metrics for evaluating scientific work and its impact.
- **"Citizen Science"; "Discursive/co-creation decision and advisory bodies: citizen & expert panels, consensus conferences"** – aiming to bring science closer to the public by directly involving citizens in research processes as well as in decision-making and advisory structures.
- **"The Futurium, Deutsche Hygiene Museum"** – serving as examples of experience-based approaches to science communication.
- **"Incentive structure for long-term thinking"** – focusing on aligning individual and institutional incentives with long-term human well-being, particularly within political and economic systems.
- **"Liquid democracy"** – promoting deeper forms of participation by involving people more directly in decisions that affect them, not only in science but also in politics.
- **"Inspiring vision for humanity"** – emphasizing the importance of a shared, positive vision capable of mobilizing collective engagement.

New Litanies

- **"Finance minister declares universities 'best bang for the buck'"** – imagining a world in which education and research receive the resources and recognition they deserve.
- **"Chief science advisor admits mistake – not forced to resign and encouraged to do better"; "ESA blows up Ariane 9 again – they will try a 7th time"; "Scientist completes 30-year project with no results"** – expressing (perhaps somewhat overenthusiastically) an ideal of open science in which failure is accepted as an integral part of knowledge production, sometimes leading to extraordinary success and sometimes to spectacular failure.
- **"H-Index banned from use"** – focusing on alternative metrics for evaluating scientists and scientific contributions.
- **"AI maps what citizens want to be researched"; "Meteo-like reports on the evolution of shared aspirations across Europe"** – aiming to take public interests and collective aspirations toward science more seriously and to integrate them systematically into research agendas.

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- **“Civil society-led research center fully funded!”; “Rural citizen scientists develop new resistant crop from grandparents’ diary”** – going one step further by envisioning widespread opportunities for citizens to actively conduct and shape research.
- **“Different opinions matter! 150th public dialogue: do vaccines cause autism?”** – emphasizing, somewhat cheekily, a radical commitment to inclusivity and the visibility of diverse voices.
- **“Visionary workshop group from 2025 awarded prestigious prize!”** – the group giving themselves a small pat on the back for finally having solved the problem of the *nature of knowledge* once and for all.

Figure 11: Iceberg of the future from New Myth/Metaphor to New Litany (Example Group 4: Representation of Knowledge Forms in Discourses on Climate Change)

Synthesis

Across all four groups and all CLA layers, a coherent direction of transformation becomes visible. Collectively, the reconstructions move away from an understanding of knowledge as possession - embedded in hierarchy, authority, market-based valuation and static models of truth - and toward a conception of knowledge as a relational and processual phenomenon. In this emerging paradigm, knowledge is enacted rather than owned, sustained through shared stewardship, grounded in plurality and co-creation and valued in terms of meaning, well-being and collective flourishing. Democratic, participatory and regenerative knowledge ecologies replace centralized and competitive systems. Importantly, the main differences between the groups do not lie in the direction of change, but in where they anchor transformation: some emphasize epistemic critique and the dismantling of hierarchical power structures; others foreground ethical-cultural regeneration centered on care and solidarity; others focus on reshaping valuation regimes,

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labor systems and intrinsic motivation; and still others prioritize institutional reform in science, including new metrics, governance models and participatory mechanisms.

Table 3 contrasts the groups' old (deconstructed) metaphors, which represent their respective troubles of knowledge under present conditions, with the new (reconstructed) metaphors that propose alternative, more activating and preferred visions of these knowledge troubles under transformed conditions.

Group	Old Metaphor(s)	New Metaphor(s)
1	**Homo Economicus** – a myth that frames knowledge as individual property guiding rational, ownership-based decisions. **Walking into the future while looking to the past** – symbolizes the entanglement of knowledge and action. **Linear vs. cyclical time** — portrays knowledge as either linear progress or cyclical.	**"I am the River, The River is me."** – reframes the individual as part of flowing knowledge, emphasizing understanding and directing knowledge toward intrinsic values rather than owning it. **Symbiotic Cross-Pollination** – views individuals and knowledge fields as vessels for sharing and regenerating knowledge across contexts, fostering collaboration, experimentation and community benefit.
2	**Life as fight for survival + Winner takes it all + Progress** – biological and sports metaphors framing knowledge as a competitive struggle for dominance among individuals. **Frankenstein + Taming Nature / Control** – progress through mastery of nature, marked by the unintended consequences of knowledge.	**The Soup of Knowledge** – a regenerative metaphor where knowledge, like a shared soup, thrives through cooperation, diverse contributions, and responsibility among humans and non-human actors.
3	**Procrustean bed** – what does not fit the dominant norm is forced to fit. **Pontius Pilate asked: Barabbas or Jesus?** – the majority chooses what seems to preserve order over disruption. **Knowledge of marginalized groups is cancer** – alternative and minority epistemologies are framed as pathological threats to identity or survival. **Christian creation myth** – a single authority defines and creates truth, excluding others from knowledge production.	**Mycelium** – frames knowledge as distributed, relational and adaptive, highlighting hidden contributions, interdependence and regenerative, networked co-creation over centralized authority. **(Jazz) Symphony** – portrays knowledge as collaborative and dialogical, where diverse epistemic voices coexist and contribute to a shared, interdependent composition. **Ting** – emphasizes collective, participatory, and decentralized knowledge production shaped through dialogue, negotiation and inclusion of multiple perspectives.

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4	**Knowledge is a tool** – treats knowledge instrumentally.	**Knowledge is a verb** – shifts from seeing knowledge as a static tool to understanding it as a dynamic, shared process. Knowledge is enacted through discovery, practice, and application, existing in its circulation and use rather than as a possession of individuals.

Table 3: Old vs. New Metaphors: From Current Knowledge Troubles to Preferred Knowledge Futures

Table 4 summarizes the central results of the groups' reconstruction process by highlighting the main convergences and divergences in their imagining of alternative preferred futures of knowledge in 2040.

CLA Level	Central Convergences across all Groups	Central Divergences (by Group)
1. New Metaphor(s) / Myth(s)	**Relational turn in knowledge**: Knowledge is understood as relational, distributed and processual rather than static, owned or hierarchical. All groups reject centralized and proprietary models of knowledge and emphasize interdependence, regeneration, and plurality.	**Different entry points into transformation**: Identity- and motivation-centered ecological flows of knowledge (G1); moral-cooperative and regenerative framing (G2); political-deliberative reconfiguration of knowledge governance (G3); epistemological shift toward process ontology ("knowledge as verb") (Gi4).
2. New Worldviews / Paradigms / Beliefs	**Plural and situated epistemologies**: Knowledge is plural, situated, relational and co-created. There is a shared move away from absolutist truth claims and purely market-driven valuation toward interdependence, commons-orientation and embeddedness in social and ecological contexts.	**Variation in normative emphasis**: Intrinsic motivation, self- and collective realization, re-/un-commoning, Ubuntu (G1); ethical focus on care, solidarity, planetary balance and playfulness (G2); emphasis on friction, multiplicity and post-human dimensions (G3); philosophy-of-science grounding in falsifiability, non-arbitrariness and epistemic standards (G4).
3. New Systems / Structures	**Democratic knowledge infrastructures**: Broad call for democratization and decentralization of knowledge systems. Strong critique of "publish or perish" logics and narrow performance metrics. Support for participatory, transdisciplinary and commons-oriented institutional arrangements.	**Different degrees of institutional concreteness**: Transformation of labor markets, education systems and valuation regimes toward meaning-making (G1); plural research economies and hybrid expertise formats (G2); symbolic-cultural restructuring through art, memory and deliberative assemblies (G3); systemic institutional reform including new metrics, citizen science, participatory governance and incentive redesign (G4).
4. New Litanies	**Well-being-oriented knowledge futures**: Knowledge futures are linked to well-being, inclusion, participation and long-	**Varying tones**: Happiness, belonging and job satisfaction as valuation indicators (G1); harmonizing and renaissance-oriented optimism (G2); limited

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	term societal flourishing. A cultural shift toward cooperation, intrinsic motivation and collective engagement is visible across groups.	elaboration at litany level (G3); provocative and science-policy focused narratives emphasizing failure culture and metric reform (G4).

Table 4: Convergences and Divergences across CLA Reconstruction Layers

Session 3 ended with group presentations summarizing the key outcomes of their deconstruction and reconstruction work, followed by a focused feedback round. The discussion centered on the elements that resonated most: newly gained insights and perspectives, conceptual shifts, methodological reflections and ideas for what could be carried forward.

Figure 12: Sharing the reconstructed iceberg in plenary

The second and last day of the workshop eventually concluded with an exclusive guided tour of the archives of the Berlin-Brandenburg Academy of Sciences and Humanities. Led by the head of the Academy's archives, the tour focused on the Academy's founding and early years, while also examining what an archive is and the roles it serves. In line with the workshop theme, the visit highlighted the processes of documenting, preserving, protecting, managing, sharing and communicating knowledge and drew connections to the future. One key question discussed was how an archive with such extensive historical holdings can be digitized to become more future proof, particularly regarding critical issues such as accessibility and long-term preservation.

Concluding remarks

The workshop set out to explore how future civilizations might define, create, value and apply knowledge in 2040. Across four distinct "troubles of knowledge," the groups revealed that debates about knowledge are never merely technical; they are deeply political, ethical and cultural. What emerged is not a single vision of "the knowledge of our civilization," but a

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shared sense that current knowledge regimes are under strain and that their transformation is both necessary and imaginable.

A first key point concerns **power and hierarchy**. Several groups identified dominant knowledge systems as exclusionary, privileging majority perspectives, elite institutions, economic rationalities and instrumental forms of validation. Whether framed as the "Procrustean bed", "Homo Economicus" or "Knowledge is a tool", current regimes were repeatedly associated with ownership, control, competition and narrow agendas. Knowledge appears concentrated in authorities, filtered through disciplinary silos, shaped by growth paradigms and increasingly entangled with private and geopolitical interests. In climate discourses, declining trust, relativization of truth and ideological instrumentalization further destabilize shared epistemic ground. Across groups, the controversy is clear: Who defines what counts as knowledge, and for whom?

A second key controversy concerns the **purpose of knowledge**. Is knowledge primarily a means to efficiency, growth and competitive advantage? Or does it serve collective flourishing, planetary well-being and meaningful human development? Group 1 pointed to the reduction of humans to "resources," valued according to marketable competencies. Group 2 highlighted the moral ambiguity of contemporary reward systems and the diffusion of responsibility in research and innovation. Group 4 underscored how instrumental framings of knowledge as a problem-solving tool obscure its ethical, social and communicative dimensions. The underlying tension runs between knowledge as power and knowledge as care; between optimization and orientation; between short-term solutions and long-term responsibility.

Yet the reconstruction phase across all groups articulated a remarkably coherent horizon of hope. Knowledge in 2040 was widely reimagined as **relational, processual and shared**. The metaphors shifted accordingly: from creation myths and domination narratives toward mycelium networks, symphonies, assemblies (Ting), shared soups, flowing rivers and verbs. Knowledge was no longer seen as a static possession but as something enacted in relationships – circulating, regenerating, co-created. Plurality was not framed as threat but as generative friction. Discomfort, uncertainty and even failure were recognized as constitutive elements of meaningful knowledge production.

This transformation also implies a shift in valuation. Instead of equating value with market success or elite recognition, the groups envisioned systems that reward intrinsic motivation, collective realization and long-term well-being. Proposals ranged from re-commoning knowledge and redefining metrics of scientific excellence to citizen participation, transdisciplinarity, and new incentive structures aligned with planetary flourishing. Education was imagined as cultivating meta-skills, empathy and relational capacities rather than merely transmitting cognitive content. The labor market was reconceived as a collegial ecosystem rather than a competitive sorting mechanism. In these futures, headlines celebrate cooperation, volunteerism, happiness indices and publicly funded civil-society research centers.

Importantly, the differences between the groups do not lie in the direction of change, but in where they anchor transformation. Some focus on epistemic critique and the dismantling of hierarchies; others on moral regeneration and solidarity; others on valuation systems and labor structures; still others on institutional reform, metrics and participatory governance. Together, however, they converge on a broader reorientation: **from knowledge as possession to knowledge as relationship; from authority to dialogue; from scarcity to regenerative abundance; from control to stewardship**.

The knowledge of our civilization in 2040, as envisioned in this workshop, is therefore less about mastering complexity and more about inhabiting it responsibly. It is less about producing ever more information and more about cultivating shared meaning. It is less about winning the race and more about sustaining the web. The hopes articulated by the groups

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suggest that a future knowledge civilization will not be defined solely by technological sophistication, but by its capacity to hold plurality, distribute voice, accept uncertainty and align knowledge practices with collective and planetary well-being.

Whether such a transformation unfolds will depend not only on institutional reforms, but on the metaphors that guide our imagination. As the workshop demonstrated, changing how we speak about knowledge may be one of the most powerful steps toward changing how we imagine and eventually live it.

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