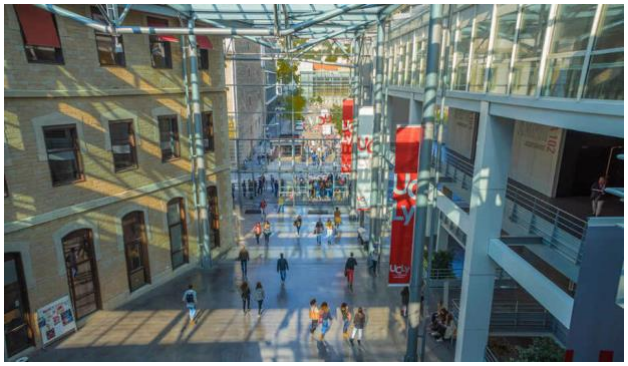
NHNAI Project Newsletter 4

NEWSLETTER 4 (September 2025)

1. The NHNAI Project in a Nutshell



The NHNAI project (New Humanism in the Time of Neurosciences and Artificial Intelligence) explores what it means to be human in the face of radical technological advances. Coordinated by the Confluence: Sciences and Humanities Research Center at Lyon Catholic University, under the aegis of the International Federation of Catholic Universities (IFCU), the project spans 9 countries and brings together over 70 academic experts.

Launched in 2022, NHNAI involves a dynamic and participatory approach: face-to-face workshops, online debates, and synthesis reports have collectively shaped a new understanding of AI and neuroscience's impact on human freedom, education, health, and democracy.

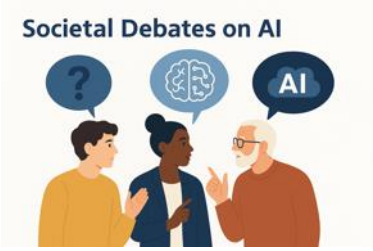
2. First wave of societal debates (2022-2023)

The first wave of face-to-face and digital discussions with social actors allowed to identify a series of **nexuses of complexity**. Indeed, being human in the time of artificial intelligence and neurosciences implies to carefully explore nexuses of complexity where **valid ideas are nonetheless in tension**, manifesting subtleties and challenges one should not overlook.

That is why, following the first wave of discussions, NHNAI team members synthesized the results obtained by highlighting the nexuses of complexity identified in the global and local syntheses and in the various themes addressed (education, health, democracy and transversal). The tensions between ideas that arose in the collective discussions are underlined and completed by an insight from the project's networks of researchers to better apprehend them.

All the synthesized results from the first wave are publicly available on the project website: https://nhnai.org/2023-results/

3. Second wave of societal debates (2024-2025): New Ideas & Complexities



The second wave of societal discussions (2024–2025) has added new depth to NHNAI's reflections. Participants from diverse cultural contexts have explored new areas of tension, where seemingly valid ideas clash and reveal new "nexuses of complexity" central to our future. Below are some new ideas described.

HEALTH: New Ideas

Avoid self-medication

Given the ever-improving accessibility and efficiency of AI systems, it's certainly easier today to find information and make a diagnosis yourself using AI, rather than taking the time to get an appointment and a conversation with a doctor. As

a result, participants in Chile raise the risk of self-diagnosis with AI, which could well be harmful because of the risk of misinterpretation and inappropriate treatments. What's more, it could also undermine medical authority as well as trust between patients and doctors. For these reasons, participants emphasized the importance of human control in patient care and decision-making. They also stress the importance of considering AI systems as complementary tools to the work of professionals, rather than as "independent experts".

Datasets that reproduce Inequalities

AI systems contain many biases. Participants in Kenya raise the risk of having inadequate AI tools, particularly in healthcare, due to an under-represented culture or population in the learning databases of AI systems. In addition to the risk of being useless for under-represented groups, these systems may also perpetuate discrimination.

Personalized medicine and individualism

Thanks to AI techniques, we can now predict potential future illnesses or potential health problems, and do so in every individual, thanks to their personal data. This is what is known as "personalized medicine", where each patient has his or her own health profile and is able to know the probability of having a certain disease. This individual, personalized service enabled by AI could actually prove detrimental to the current healthcare system, which is based on a principle of solidarity. Indeed, as participants in the French debate have pointed out, it's questionable whether there's any point in having a collective, public health insurance system when we can know, in advance, what's going to happen to us.

HEALTH - New complexity

Preserving human interactions while using AI to prevent social isolation

It is highly recognized by participants that certain AI tools (such as robot companions, chatbots…) can alleviate and prevent social isolation as it can interact with people by mimicking the human interaction. Those tools can bring a feeling of contact and affection to people who are lonely. Moreover, robot companions can be really helpful for healthcare professionals who don't have the time to talk with every patient, or places where there are not enough healthcare professionals. Finally, robots can be used as mediators to help better communicate with others, as it is the case for autistic children. However, at the same time, participants raise the importance of preserving human interactions which seem to be at the core of healthcare. They highlight that human contact cannot be replaced by any AI tool… On top of that, they emphasize the risk of

developing overdependence on those tools, which can lead to trigger or increase social isolation. This complexity invites reflection on how AI tools can help preserve or facilitate contact and speech without replacing or erasing human interaction.

DEMOCRACY – New ideas

Questioning the economic model behind technologies…

In France, participants questioned the cost-free business model that became a widespread norm for digital services. Free services have deleterious consequences for employment. One the one hand, people who lived from providing similar services cannot sell them anymore. On the other hand, the cost-free model is based on data collection and leads to skills and intelligence exfiltration (allowing for task automation). In addition, participants questioned the legitimacy of training AIs free of charge on publicly accessible data, even if the authors or producers of this data had not envisaged this type of use and had not given their direct consent (should they be remunerated? By whom? …). Finally, participants worry about the fact that such socio-economic settings favor the concentration of data (and thereby of power) within the hands of a few giant companies, raising the question of techno-colonialism.

… and tech values

Speaking of colonialism, participants in US highlight that giant tech industries (notably from the Silicon Valley) have a lot of power nowadays in the world and they can impose tech values as if they are universal, but at the detriment of local cultures who might have different values.

Fighting the sense of powerlessness

Regulating new technologies can be a very difficult task, especially in the face of tech behemoths imposing their vision of the world, but that doesn't mean that citizens are powerless. Participants in France emphasized the power of individual and collective action to influence technological and political choices, notably through the legal system, but also through consumer choices. For example, we can choose to favor local and specialized AI models, or more frugal ones, rather than the generic AI models developed by the tech giants. We must believe in human free will and in our collective ability to exert influence.

DEMOCRACY – New complexity

Defending human uniqueness in the age of human-mimicking machines

Participants highlight the importance of preserving certain values and features that are unique to humanness, like spirituality, wisdom, emotionality, creativity, autonomy, critical thinking, imagination, consciousness, empathy… and others. Some of these abilities are key within our democratic and legal systems and cannot be genuinely reproduced by machines. It is for instance the case of empathy and listening when difficulties and complexity appear during a court or in a difficult legal situation.

> Nevertheless, participants worry about the growing challenge of distinguishing between humans and machines, as well as between real and fake digital content (such including AI generated content presented as human made). Even if legal regulation would impose to inform citizens when they interact with AI systems or AI generated content, it might become difficult to preserve and defend our human uniqueness if the human-mimicking abilities of machines continue to grow. The problem seems already there concerning creativity.

WHAT DO YOU THINK?

Should we ban AI from politics?

Among the new ideas in the field of democracy was the idea of banning the use of AI in politics. Participants from Portugal and Kenya raise the high risk of manipulation and disinformation during political events (such as election campaigns, etc...) and, more generally, the potential destruction of the smooth running of democratic life.

Should we ban the use of AI during election campaigns, and how?

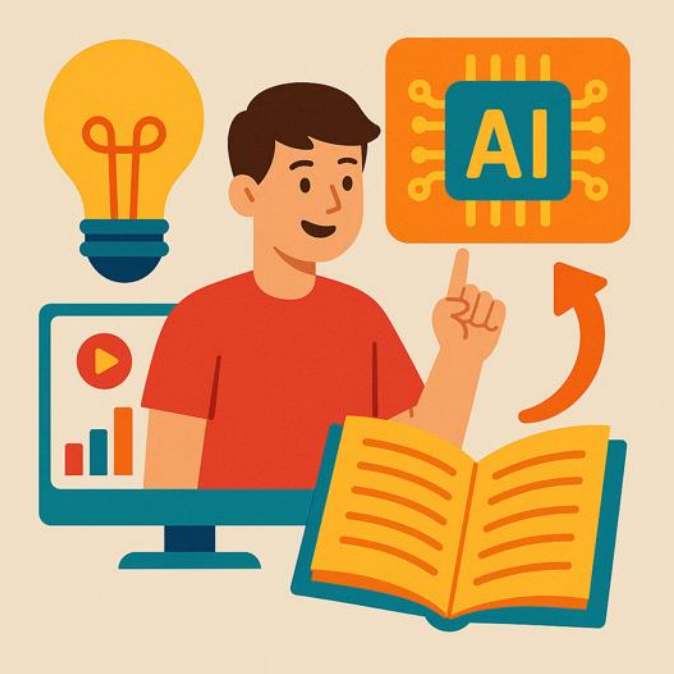
Should we opt for regulation or banning?

EDUCATION – New complexities

What is the purpose of education?

Participants acknowledged that AI and NS can help us improve our (cognitive) performance and become more efficient and productive. AI can also support us in, or

release us from, the most boring and tedious tasks, possibly freeing time for more meaningful or agreeable activities. AI also deeply transforms the educational reality with the difficult questions related to the assessments processes and of homework assignments, but also with stimulating opportunities for new ways of teaching and learning (personalized learning, AI tutoring, assistance to self-testing …). Participants thus largely recognize that education should adapt to these new realities within educational institutions and more broadly in society at large. Pedagogical approaches need accounting for new possibilities offered by technology to children and students (the negative as well as the positive ones). Education ought to prepare them for the future socio-economic context they will live in.



However, many participants suggest that merely adapting is not enough. For instance, one could wonder about what motivates judgments about what we should go on learning or not. Such judgments should of course respond to new technological possibilities, but they also reflect the manner jobs are valued and recognized, which can also be questioned.

> More broadly, discussions point out that education should prepare our children and students to face and address the deep and complex challenges humanity encounters. In this perspective, merely adapting to the evolution of digital technology could even prove extremely dangerous. Participants notably worry about the importance of opposing some technological trajectories such as those threatening people's autonomy (e.g. when fostering motivation of children and students through surveillance or gamification, or with AI taking too much space in people's life when recommending information and actions). Education should thus also foster the development of autonomy and critical thinking. It should also support children and young people in finding their own path and reflecting upon the meaning of life. It should not be reduced to knowledge and skill acquisition (enabling one to ensure a function in society) but should also be about how to deal with emotions and social relationships, or about values, ethics and moral decision-making.

Finding the right balance between helping children and students to adapt to the future society they will live in and supporting them in their ability to question and transform it is a key question and challenge education needs to confront with.

Does AI impoverish or reinforce creativity?

Participants highlight the importance of preserving creativity, an ability largely perceived as unique to humans, sometimes emerging from relationships or practice.

WHAT DO YOU THINK?

An excessive use of AI in education may threaten creativity, for instance with the use of ChatGPT to obtain answers and homeworks already done. Overreliance and overdependency on AI could compromise childrens' critical thinking and creative abilities, notably by reinforcing laziness and procrastination. Moreover, AI might also contribute to impoverish creativity by easily generating products that are similar to human artists, reducing the willing of artists and students to commit to creative jobs or studies.

However, some of the participants highlight that AI and notably Generative AI can be useful to stimulate creativity, find inspiration and news ideas, etc. Even finding the right prompts to write can be considered as a creative task…

Does AI impoverish or reinforce creativity?

ECOLOGY – New complexity

Is AI an opportunity or a disaster for the ecological transition?

Discussions manifest a deep point of tension concerning the relationships between AI and ecological transition or environmental questions. On one hand, AI technologies can be used to adapt and combat global warming. For instance, AI is efficient to forecast future climate disasters, thus ensuring the security of inhabitants. In addition, AI can reduce pollution and greenhouse gas emissions, and monitor the health of ecosystems, to prevent illegal and dangerous activities for the preservation of environment and biodiversity.

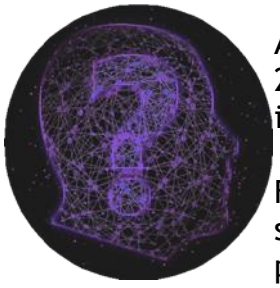
WHAT DO YOU THINK?

However, AI technologies may present an important impact on the environment and biodiversity. The rapid and excessive development of AI technologies does not seem compatible with the ecological transition as it uses a lot of resources (metals, water, energy…) and increases global warming by augmenting the greenhouse gas emissions, and this is particularly the case for GenAI.

Should we still use AI to preserve biodiversity and environment?

Is "AI for green" possible?

A global concern: impoverishment of human intelligence



A major global concern raised in the discussions of 2023 and 2024 is the risk of loss of autonomy and impoverishment of individual and collective intelligence.

Firstly, excessive use of AI and technologies in general can seriously impact cognitive development, particularly in young people, by capturing their attention, and creating dependency, rendering them unable to think or do things for themselves. Secondly, relying too much on technology can impact our cognitive abilities, as we no longer mobilize the brain areas involved in carrying out certain tasks[1]. What's more, AI-induced personalization in education could also lead to providing fewer and fewer new opportunities to learn skills that enable learners to adapt to a variety of new experiences. Learning requires cognitive and personal effort, which technologies, including AI, are increasingly reducing, in favor of "least effort", which promotes physical and intellectual laziness.

Alongside this, AI could well also compromise the smooth running of democratic life, not least because of the high risk of misinformation and manipulation of public opinion (especially during election campaigns). The risks to democratic life are further heightened by the use of AI to manage and editorialize information flows. Recommendation algorithms tend to create cognitive bubbles in which everyone is locked into their own beliefs and representations of the world. This reinforces the polarization of opinions, compromising societal and political debate, a fundamental component of the common good and the viability of a democratic society.

[1] Some studies have demonstrated the potential impact of excessive use of technology on our cognitive abilities: Abbas, M., Jam, F. A., & Khan, T. I. (2024). Is it harmful or helpful? Examining the causes and consequences of generative AI usage among university students. *International Journal of Educational Technology in Higher Education*, *21*(1), 10 ; Dahmani, L., & Bohbot, V. D. (2020). Habitual use of GPS negatively impacts spatial memory during self-guided navigation. *Scientific reports*, *10*(1), 6310.

4. Selected Highlights from the Digital Discussions

FIELD	KEY MESSAGES				
HEALTH	Self-diagnosis through AI tools raises risks of misinterpretation and undermines trust in doctors	Health-related AI may perpetuate bias when datasets under-represent certain populations	Personalized medicine challenges solidarity-based healthcare systems	Robot companions may reduce isolation but risk replacing genuine human interaction	AI tools must remain complementary to medical professionals, not replacements
DEMOCRACY	Free digital services fuel data exploitation and tech monopolies	Tech giants impose values globally, threatening local cultural diversity	Citizens can resist digital hegemony through legal action and mindful consumer choices	Citizens can counterbalance tech dominance by supporting local or frugal AI models	AI-generated content challenges our ability to distinguish real from artificial
EDUCATION	AI use in schools may reduce students' creativity and critical thinking	Education must balance technological adaptation with promoting autonomy and ethics	AI use can dilute creativity, encouraging passive consumption over active discovery	Preparing for the future means fostering critical thinking, not just technical skills	Emotional, ethical, and relational dimensions should remain central to educational missions
ECOLOGY	AI can help forecast climate risks and manage ecosystems more efficiently	At the same time, GenAI is energy-intensive and exacerbates environmental degradation	The life cycle of AI poses long-term ecological challenges	AI for green" must avoid becoming a greenwashing slogan without systemic changes	
GLOBAL	Overuse of AI may hinder cognitive development, especially in youth	The "least effort" dynamic encouraged by AI fosters dependency and passivity	Personalized AI can reduce exposure to new challenges, limiting learning opportunities	Public opinion manipulation through AI threatens the foundations of collective decision-making	AI overuse may weaken personal autonomy and democratic deliberation

5. Conference Proceedings Now Online!

We are pleased to announce the publication of the NHNAI Conference Proceedings, held in Rome on 2–5 September 2024 at LUMSA University, Rome, Italy.

Title: ***Human Freedom at the Test of AI and Neuroscience***
Publisher: 2024 Contemporary Humanism Open Access Annals

Also includes the Contemporary Humanism Annual Seminar and the LUMSA Conference on Trust (Feb 2025)

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