KT4D
Knowledge Technologies
for Democracy

Culture's Role in Navigating Technological Change:

The KT4D perspective on recent developments in European AI policy

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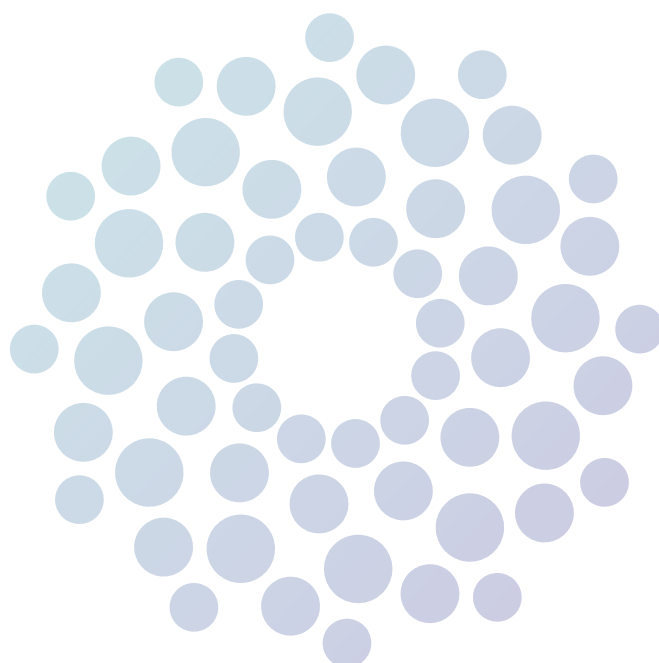**Beyond the Horizon**

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1.0 Introduction

Examining culture allows us to discern exist-*ing strengths and resistance patterns rather than solely fixating on risks*. Societies and their inhabitants possess agency in navigating AI advancement, or any novel technology, by relying on collective and personal cultural approaches to adapt to these transformations. However, it can be tempting to think of technology choices, in particular in relation to the new but opaque developments driven by Artificial Intelligence (AI) and Big Data, as disconnected individual or institutional decisions. As a society we have often become accustomed to viewing technologies as products we buy (even when they are free of cost), rather than doors into complex ecosystems of data collection and processing that have an impact far beyond our personal view of system function. While this framing has proven effective for driving technology innovation and adoption, it obscures the wider communal impact of these systems, and the manner in which our individual decisions affect our perceptions, and ultimately the lives, of those others with whom we are interdependent, sharing our communities and natural resources.

The *rapid progress of technology* is in this way surpassing the capacity of individuals, societies, and democracies to assimilate them. The resulting damage to collective sense-making occurs largely on the level of culture, the mostly tacit, but vital, web of values, practices, beliefs and norms that underpin stable and productive individual and shared identities. Due to this incursion into cultural sensemaking not just by technologies, but by the corporate interests that profit from them, democratic processes and civic engagement have come increasingly under threat as these technologies seamlessly integrate into our daily lives, families, and social networks, bringing with them filter bubbles, disinformation and polarisation.

Culture may be more varied and sensitive than critical systems that are more visible (such as water mains or medical records), yet it still merits and requires protection from threats such as hacking or manipulation. Protecting the cultural dimension from potential AI harms will require a

> *"Examining culture allows us to discern existing strengths and resistance patterns rather than solely fixating on risks."*

proactive policy approach that not only addresses the evolving landscape of technology, but also seeks to foster a harmonious relationship between technological advancements and the preservation of democratic principles and civic participation. Adopting a culture-centric approach offers a more comprehensive understanding of societal responses to AI development, moving beyond the narrow focus on risks advocated by the AI Act. As Lisa Gitelman writes: "new media are less points of epistemic rupture than they are socially embedded sites for the ongoing negotiation of meaning" (2006:6). These cultural responses must be acknowledged, supported, and protected by policymakers in their regulatory effort, not just because this is the ethical thing to do, but also because they are invaluable tools in developing effective and fair regulations.

This policy brief, created by the **Knowledge Technologies for Democracy (KT4D) project**, illustrates some of the current gaps in the policy landscape with regards to technology and cultural risk, and suggests some preliminary measures to be taken to address them.

1.1 The KT4D Project

The **Knowledge Technologies for Democracy (KT4D)** project offers a distinctive approach to the growing tensions between AI and big data technologies, and democratic processes. We do this by placing cultural values and identity formation at the heart of our understanding.

The project recognises that AI and Big Data have become fundamentally interwoven into our societies, our culture/s and indeed into our expectations and conceptions of democratic governance and exchange. However they can also contribute

to an environment for citizens that is distinctly anti-democratic. KT4D harnesses the benefits of a conceptualisation of these as - **Knowledge Technologies** - changing not just how we access goods and services, but how we know the world and ourselves. This approach aims to foster more inclusive civic participation in line with democratic principles**.** Our work is underpinned by the understanding that to fully address the costs to social and fundamental rights of AI and big data, we need more than just technological fixes: we need to address the underlying cultural influences and barriers. We do this through an integrated set of activities developing tools, guidelines, and a Digital Democracy Lab Demonstrator platform, with our specifications and results being validated across three user needs scenarios in four European cities. KT4D contributes to a revitalised vision of technology development and adoption in Europe. Under this new model, KT4D will be able to capitalise on the many benefits advanced knowledge technologies can bring in terms of community empowerment, social integration, individual agency, and trust in both institutions and technological instruments, while confidently mitigating potential ethical, legal and cultural risks.

The insights that follow arise from the project's first year of work, which has featured both fundamental research and the first meeting of our four Use Case meetings in Brussels, Madrid, Warsaw, and Dublin. These sessions brought together citizens, policymakers, and technology developers, devising a multi-perspective dialogue on the repercussions of knowledge technologies such as AI on democracy and civic engagement, laying the groundwork for the further exploration and development of practical, culturally aware, and ethical AI tools.

2.0 KT4D Perspective on Recent Developments

2.1 Recent European regulatory developments

The European Union has been leading the way in the regulation of knowledge technologies through initiatives including the Digital Market Act (DMA), the Digital Services Act (DSA), and the Artificial Intelligence Act (AI Act). From the point of view of cultural and collective identities, there are at least two significant and potentially problematic gaps left open in this framework, namely **the lack of consideration given to culture generally, and the absence of recognition of cultural risk factors specifically.** Each of these will need to be addressed if the AI Act, DMA and DSA are not to accelerate, rather than ameliorate, processes of polarisation, division, and disinformation that are already threatening our democracies from the cultural foundations upward.

2.2 Cultural blindspots in the current regulatory discourse

While the AI Act does not discuss 'culture' or 'identity' explicitly, it does express the importance of protecting individuals from cognitive behavioural manipulation. KT4D contends that even with these protections in place, self-interested coercion by anti-democratic forces is still granted a free hand to manipulate wider cultural trends by filtering and gating public discourse and cultural participation. Furthermore, the weak discourse on values within the regulations similarly open them up to a focus on economic and technical aspects, rather than social and cultural ones. Culture, its specificities

> *"The AI Act establishes a risk-based classification, dividing the use of AI into the categories of "unacceptable, high, and limited or minimal risks," however the contents of these categories deserve further scrutiny."*

and variances, as well as its ability to unite and divide, is, after all, implicit in many of the key terms central to the policy discussions surrounding AI and big data. Whenever it does mention values, however the language of the AI Act speaks only of undefined 'Union values' which remain undefined, except for broad gestures toward human rights.

Concepts of trust, trustworthiness and responsibility are culturally determined, as is our understanding of the limits of personal freedoms, and the line between the private and public spheres. The few implicit definitions of culture and values that can be distilled from the AI Act are not encouraging in this context. For example, there seems to be a conflation of values as a reflection of culture, and ethics. Ethics is a part of culture, but by no means all of it. Similarly, cultural diversity is recognised as a specific desirable only when it comes to hiring decisions within software development teams. Such a narrow view of the role of culture can misrepresent its pervasive quality, and imply that hiring policies can automatically make software align with human-centric values. The cultural positioning of the users of a technology, and the manner in which this shapes their perceptions and actions, are not taken into consideration.

3.0 The Concept of Cultural Risk

The AI Act establishes a risk-based classification, dividing the use of AI into the categories of "unacceptable, high, and limited or minimal risks," as per the graphic in Figure 1.

UNACCEPTABLE RISK

Social scoring, facial recognition, dark pattern AI, manipulation

HIGH RISK

Transportation systems, safety, employment, education access, border control, justice systems

LIMITED RISK

AI systems with specific transparency requirements such as chatbots, emotion recognition systems

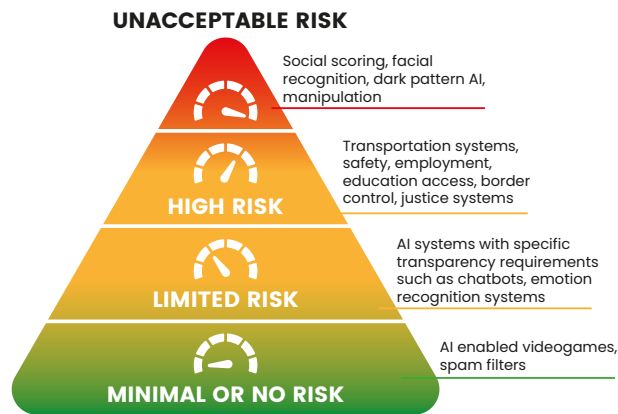**MINIMAL OR NO RISK**

AI enabled videogames, spam filters

Figure 1 - Risk Assessment Hierarchy

This risk assessment framework greatly underestimates the cultural and societal impacts of AI technologies. *Application areas such as recommender systems transcend both the commercial sphere and the realm of individual consumer choice, influencing cultural participation, perceptions of shared values and community identities, and controlling access to knowledge on online platforms.* As such, in their current forms, they shape individual cognition and collective sense-making significantly. Another example is *video games, a sector that is deemed as low risk, but in which AI integration can introduce opaque decision-making that can shape young minds without clear accountability.*

3.1 Why might cultural risk be underestimated?

Culture is a challenging concept to work with as its role and impact, while pervasive, is subtle and differentiated between regions, languages, communities, and indeed individuals. On complex issues, not everyone will agree on a single 'correct' culturally-aligned position or definition: this *diversity is one of Europe's greatest strengths, but it is also a constant reminder not to draw conclusions too quickly about the universality of certain culturally loaded assumptions.*

Culture also frustrates some of technology development's vested interests, however. Evgeny Morozov has warned us of the dangers of 'techno-solutionism' by which we seek to solve problems wrought by technology with more technology. The arrogance that leads certain powerful interests to adhere to this notion also brings us the apparent fallacy that we should not hinder innovation for fear of social costs. The truism states that "The US innovates, China imitates, and Europe hesitates," but what is the evidence that questioning the value of technological development in this way does not in fact lead to new and better innovation paradigms? We know from Facebook's so-called 'emotional contagion' experiment that companies give little heed to the care that should be taken when intervening in the self-determination and autonomy of users.

This situation is reminiscent of the pharma industry in the 1960s, when a few prominent whistle-blowers were able to bring about massive changes in the regulation of an ethically unacceptable regime of human subject research. It cannot be said that this has in any way harmed or destroyed the pharma industry. In fact, one can make the counter argument that a socio-cultural awareness in fact has created new business models and innovation opportunities that balance off the power-monopolies of the dominating Big Tech companies.

KT4D user group meetings have shown that while software developers are becoming more comfortable with the language of intersectionality, other aspects of culture (such as varying national and regional value alignments) remain outside of the frame of consideration when bringing software systems online. Culture and the identities that emerge from it continue to be understood as individual traits, not relational or communal ones.

4.0 Future Steps and Recommendations

E urope is a world-leader in regulating AI - but we can do more. *The appearance of culture within the regulatory frameworks must be refined, clarified and strengthened, a process to which the following mechanisms could contribute.*

4.1 Incorporate culture into the concept of risk

As discussed above, the current conceptualisation of risk that has pervaded EU technology regulation encourages us to consider tangible, economic and infrastructural risks, but not the systemic changes being enacted upon the manner in which people think, feel, relate and participate. From a cultural perspective, we therefore propose the creation of a second, inverted form of the current risk pyramid, which would highlight more subtle but equally significant cultural impacts.

Adopting the inverted pyramid model aligns with the KT4D project's focus on integrating culture-led perspectives in AI policy, and underscores the necessity of incorporating cultural identity, values, and civic engagement into AI governance, promoting policies that reflect and respect cultural diversity.

The model suggests that safety issues in AI should extend beyond immediate physical risks to consider long-term societal norms for interaction. It recognises that *AI impacts knowledge dissemination and identity formation, which are pivotal to democratic processes.* Thus, the inverted pyramid framework not only assesses technical risks but also serves as a structure for a democratic, cultur-
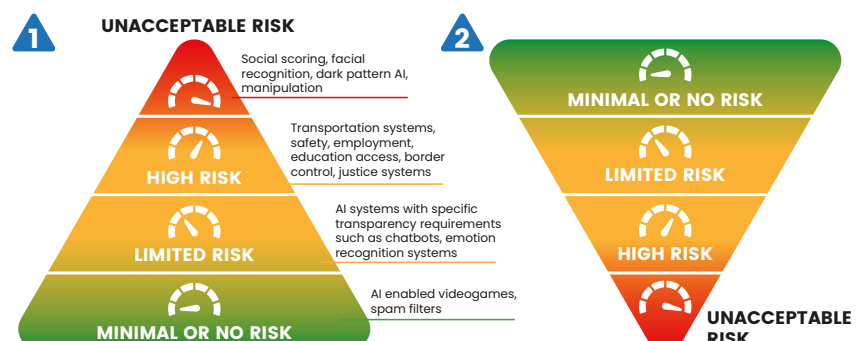
Embracing the inverted pyramid model resonates with the KT4D project's emphasis on integrating cultural perspectives into AI policy, highlighting the imperative of integrating cultural identity, values, and civic engagement into AI governance.

ally informed approach to AI policy.

Adopting the inverted pyramid model aligns with the KT4D Policy Brief's focus on culture-led perspectives in AI policy. It calls for a revision of the risk-based approach to include a culturally contextual assessment of AI technologies. *This model champions a participatory policy development process, ensuring diverse cultural inputs are considered. It underscores the necessity of incorporating cultural identity, values, and civic engagement into AI governance, promoting policies that reflect and respect cultural diversity.*
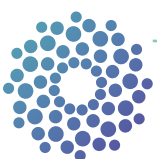
Recognizing AI's long-term societal impacts on knowledge dissemination and identity formation, the inverted pyramid framework extends beyond technical risks, fostering a democratic, culturally informed approach to AI policy. Regulators are urged to consider AI's integration into the cultural fabric, ensuring policies encompass both societal influences and safety concerns. This is not to say we do not agree that the currently identified risks are indeed dangerous, merely that the areas currently noted as risk-free may indeed also be seeding significant long term negative impact.

Figure 2 - The Inverted Risk Pyramid

1 UNACCEPTABLE RISK — Social scoring, facial recognition, dark pattern AI, manipulation

HIGH RISK — Transportation systems, safety, employment, education access, border control, justice systems

LIMITED RISK — AI systems with specific transparency requirements such as chatbots, emotion recognition systems

MINIMAL OR NO RISK — AI enabled videogames, spam filters

2 MINIMAL OR NO RISK

LIMITED RISK

HIGH RISK

UNACCEPTABLE RISK

4.2 Foster collective thinking in policy and personal decision-making

4.2.1 Civic participation in AI policy development

If individuals continue to be encouraged to see only the solitary benefits and disbenefits of their technology adoption, the cultural frame of consideration will continue to be minimised, even when we may know that these platforms do not necessarily have the best interests of our children, our neighbours, or our colleagues at their heart. Encouragement to take into account wider aspects of eg. sustainability, community goods, personal agency and self-determination, values alignment, intergenerational solidarity etc. requires a wider consideration of one's identity and place in the social ecosystem. Such *a paradigm shift will be able to encourage critical digital literacy and critical thinking, but also support community bonds and rebuild trust in expertise through new approaches to policy development.* This mechanism should be deployed with caution, as echo chambers can represent a distorted form of collective sense-making. However, collective approaches like citizen assemblies, wide consultations, and town halls can be powerful tools for decision-making that serves broader interests.

4.2.2 Education

Education must also play a part in this shift. Teaching young people to code is not enough, *we need to be teaching all people to be critical about technology choices and to consider their cultural and civic participation alongside their consumption decisions.* This will require sensitivity, however: when

looking at the many tools currently available and tasked with improving AI literacy and supporting ethical approaches to AI development and implementation, the vast majority of tools are available only in the English language. This developmental bias overlooks not only the many Europeans who do not speak English, but also the manner in which culture and language can also be drivers for trust and engagement.

4.2.3 Computer science and software development

In addition, *the general lack of attention to ethics, not to mention culture, in computer science and software development* should be addressed as a matter of urgency. Simply adding a few additional modules to existing training programmes will not enact this shift: *the culture of coding itself has a strong set of values, processes, and norms which do not align very comfortably with wider considerations of the diversity and needs of their users.* In addition, many creators of software code are now coming out of self-taught or non-holistic training programmes. The lack of widespread regimes of accreditation for software development is a gap here, as is the way in which many software developers wouldn't necessarily know exactly what weaknesses might lie in code they have reused. The EU's pioneering "ethics by design" approach represents a positive step forward. Unlike traditional approaches that often treat ethics in development as a mere checklist or compliance exercise, ethics by design aims for a more comprehensive and holistic integration of ethical considerations. However 'by-design' must not be allowed to permit anyone to take biased positions and develop a complacency toward the integration of fairness and sensitivity in software development.

5.0 Conclusion and Next Steps

Contrary to the AI Act's emphasis on risk assessment, surveys indicate that public concerns and acceptance of AI vary across applications and contexts, such as the impact on jobs, cultural heritage, and political opinions. Qualitative research becomes crucial for understanding trade-offs between benefits and concerns. Initiatives like the KT4D project facilitate this by analysing how citizens' and developers' concerns align or deviate from policy-level questions, emphasising the need for a cultural perspective.

Looking at culture can give us a sense of what strengths and patterns of resistance are in place, instead of only focusing on risks. Societies and their citizens are not powerless in the face of AI development – or of any new technology – but they rely on shared and individual cultural strategies to respond to these changes.

> *"AI impacts knowledge dissemination and identity formation, which are pivotal to democratic processes."*

The KT4D project is committed to contributing to putting this shift into practice, encouraging the move toward a more culturally aligned perception of human-centred AI, in particular as pertains to cultural and civic participation. We look forward to receiving feedback related to this policy brief from policy-makers, citizens and industry leaders as to how this might be delivered.

Want to comment on this policy brief? You can do so here

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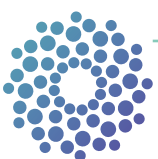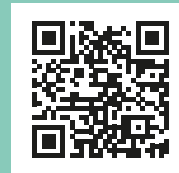
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