> **We should provide the environment for youth to continue their**
> **Human Habit of Doing Arts as the "Courage to Think Alone"**
> **so to maintain the Diversity of Human Culture in the Age of Culture as Algorithm.**

by Hae-Bo Kim[1]

presented at <14th International Forum of NGOs> "Artificial Intelligence & Youth"
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1. We're living in a digital civilization that's completely different from anything we've ever seen before.

- During the corona pandemic, not only have we seen advances in AI technology, but we've also seen an all-encompassing digital transformation.
- Due to the social distancing situation, the introduction of new technologies, which would otherwise have been confronted with significant institutional and psychological resistance, proceeded so quickly. Such rapid development of algorithmic technology has created very wierd cultural phenomena.[2]
- Since last year, there have been several attempts to sell the works of famous artists by burning and minting them into NFT[3] and selling the virtualized national treasures[4].
- And now, virtual human models and singers who even do not sleep or worry about scandals are roaming the metaverse and even OTT[5]. AI speakers who can understand even the dialects of lonely elderly people were put into public care services[6], and the government is collecting dialects as part of the public Data-Dam construction project to teach these AIs[7]

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   He prticipated in this forum as a member of UNIMA Korea at the recommendation of the Secretariat. When quoting this article, please use the title as <Human Habit of Doing Arts as the "Courage to Think Alone">.
2) For more information, see "Be C-lobal ; An Epistemological turn for Cultural Policy in the Age of New Normals" (Hae-Bo kim, 2023)
3) "Banksy Work Physically Burned and Digitized as NFT in Art-World First" (By Jamie Crawley, Mar 4, 2021, COIN DESK)
4) "Gansong Art Museum sells Hunmin Jeongum as NFT... Controversy over "Using National Treasures for Profit"" (Chae Ji-sun, The Korea Times, July 22, 2021)
5) "Not even a human being...earning 130 billion won a year" (Kim Geun-wook, News1, July 22, 2021)
6) "AI speaker that understands dialects helps the elderly (Jung Dae-ha, Hankyoreh, 2022.4.7.)
7) "Make money by selling dialects to AI... Saltlux to build 'Korean dialect AI data'" (Kwangmin Choi, AI Times, November 4, 2020)

- Less than a year after GPT-3.5, or Chat-GPT, was released to the public on November 30, 2022, the world was plunged into an "AI arms race". Recently the generative AI have grown into a "Cultural subjects" capable of conversing fluently with humans and generating text and images on their own. This is a change that may be considered as a civilizational transition by posterity.

Very Weird cultural phenomena in the age of digital transformation			
To sell national treasures as NFTs	**To increase the price of artwork by burning the original**	**Metaverses and the Virtual Human Boom**	**AI's surpassing humans in cultural production**
Key words for understanding recent cultural changes			
Dematerialization Resourceization of culture Privatization of culture Commoditization of culture	Simulacra & Simulation Demonetized transactions Cognitive capitalism Affective economy	Rush to online Dehumanization Non-human cultural subjects Anomie in Virtual Space	Humanization of machines Culture as training data Exploiting data with IOBs Exploring the humanity of technology and capital

2. This is the era of Culture as Algorithm.

- <u>Now, most cultural activities become <Culture on the Algorithm>, existing in the virtual world powered by digital algorithms.</u>
- <u><Culture for the Algorithm> is utilized as necessary data to train AIs that create <Culture by the Algorithm> on behalf of human beings more humanly.</u>
- Machines that create <Culture by the Algorithm> now carry even their unique persona as virtual humans and interact with humans very actively. The culture created by the machine can be infinitely replicated and begins to overwhelm human-created culture, which emphasizes human authenticity.

<Summarized phenomena and policy issues of Culture as Algorithm>[8]

Culture as Algorithm	Culture **on** the Algorithm	-Digitizing and bringing cultural activities online getting lighter -Newly created cultural universes and Hyper-dimensional participation in cultural activity beyond biological limits -Loss of Cultural Gravity needed to sustain a community -A society divided by a lightweight culture and filter bubbles. -The tyranny of big tech companies distorting cultural circulation
	Culture **by** the Algorithm	-"Culture machine" that reads human emotions to power a hyper-personalized subscription economy -AI creating arts and Virtual humans influencing human culture even with their identity -Misunderstanding the machine-echoed "My taste" as "My culture" -Alienation of human culture by the flood of culture produced by non-human cultural agents. -The impossible problem of determining authenticity
	Culture **for** the Algorithm	-Culture as the "data resource" used to train AI more like human -Culture as human authenticity for the machine to imitate -Culture as the ethical criterion for judging AI's appropriate function -Potential conflict between the universality of AI ethics and the diversity of local cultures -Problems with billing for cultural data and human identity used in AI learning

8) For more detailed explanations, see "Culture as Algorithm" see following articles by Hae-Bo Kim at https://brunch.co.kr/@seaokof
"Re-defining Culture for the Public Policy's Agenda Setting in the Age of Culture as Algorithm" (알고리즘이 되어 버린 문화(Culture as Algorithm)의 시대에 공공정책 어젠다 설정을 위한 문화 개념의 재정의) (Hae-Bo Kim, 2nd Congress of East Asian Sociological Association), 2021.10.29.), "The Necessity of Transition of Cultural Policy in the Age of Algorithm ("알고리듬 시대, 문화예술정책 전환의 필요성) (Hae-Bo Kim, GGCF Policy Roundtable, Gyeonggi Cultural Foundation, 2021.11.3.), "(Regional) Cultural Policy in the Age of Culture as Algorithm (Culture as Algorithm 시대의 (지역)문화정책) (Hae-Bo Kim, 2022 Regional Cultural Policy Forum "Transition Era, Direction of Future Regional Cultural Policy", Korea Culture and Tourism Institute, 2022.10.7.), "Strange Cultural Phenomena and Policy Issues in the Age of Culture as Algorithm" (Culture as Algorithm 시대의 희한한 문화현상과 정책 이슈들) (Hae-Bo Kim, Journal of Korea Radio Promotion Association, Vol.32. Winter 2022, Korea Radio Promotion Association, 2022), and "Understanding the Culture as Algorithm Phenomenon in the Post-Corona AI New Normal Era" (포스트 코로나 AI 뉴노멀 시대의 Culture as Algorithm 현상에 대한 이해) (Hae-Bo Kim, Culture Focus No. 133, Cultural Knowledge Information System. Korea Culture & Tourism Institute, 2022)

3. The phrase "AI ethics" is better replaced with "Quality standards" of machine.

- Indeed, computers, once called "Culture Machine" by Ed Finn (2017)[9], have evolved to the point where they can generate their own culture and act as cultural agents.
- The cultue machine utilizes the cultural data of human identity and community to create outputs that are more human.
- But, AI is only a tool like "mirror" that reflects the human world.
- So recognizing the mirror as an actor with subjectivity, or condemning it ethically, is way to the tragedy of the Queen who was jealous of Snow White. We're wasting our lives condemning something that's not worth condemning.
- Rather, it's better to call it "appropriate quality standards of product" that recognize and correct "malfunctions" when machines like AI produce outputs that are not appropriate in light of the current culture of each region.
- And instead of saying "AI ethics", we should emphasize "the human ethics in developing and using AIs".
- Furthermore, we should remember that we cannot and should not find a universally valid standard for people around the world in the word "ethics". Ethics must be a "cultural equilibrium," a socially selected and changing set of values whose appropriateness is determined by the context of place and time.
- Attempting to define something legally which is impossible as this, especially by a state that is supposed to act by general standards, can easily become "formalized" like public administrative systems or misused for other purposes.

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9) "What Algorithms Want : Imagination in the Age of Computing" (Ed Finn, MIT, 2017)

4. We need to understand the "Emotional Economics" in the DMZ (De-Monetization Zone), where big tech companies accumulate De-monetized profits from cultural transactions, and create fair rules of the new game.

- Along with efforts to specify "product quality standards" for the proper operation of the machine, we need a social system so that ensures that the Big-Tech companies operating the machine fairly distribute the profits earned by utilizing <Culture for the Algorithm>.

- This includes "profit that isn't money," or "demonetized revenue through the Affective Economy in the DMZ," which is accumulated by leveraging data of human emotions.

- "De-monetization of value transactions" is a phenomenon in which "transactions are settled with non-monetary tokens more often" and "the purchase is increasingly oriented towards non-monetary values".

- Now, after converting into the blockchain, the NFT takes the place of the physical artwork that was burned, making it the only authentic one. The remark by a technology journalist refering to NFT trading is also a good snapshot of the cultural DMZ ; "It is the emergence of a market for something that hasn't been possible to value before: emotion". (Noelle Acheson, 2021)[10]

- It is necessary to understand the "Emotional Economics" of the new cultural capitalism, which accumulates de-monetized capital by trading intangible values with intangible transaction tokens. A typical phenomenon is that cultural transactions occur not according to the action of a rational mind that follows the "demand-supply curve" but according to the action of a fickle emotion that follows the "satisfaction-dissatisfaction curve".

- The new rules of the game to be considered include "Social return for cultural reinvestment" like France's enactment of a "taxe sur les services numériques"(digital services tax)[11], and a "cultural basic income", that redistributes Big techs' profits from cultural data and human responses.
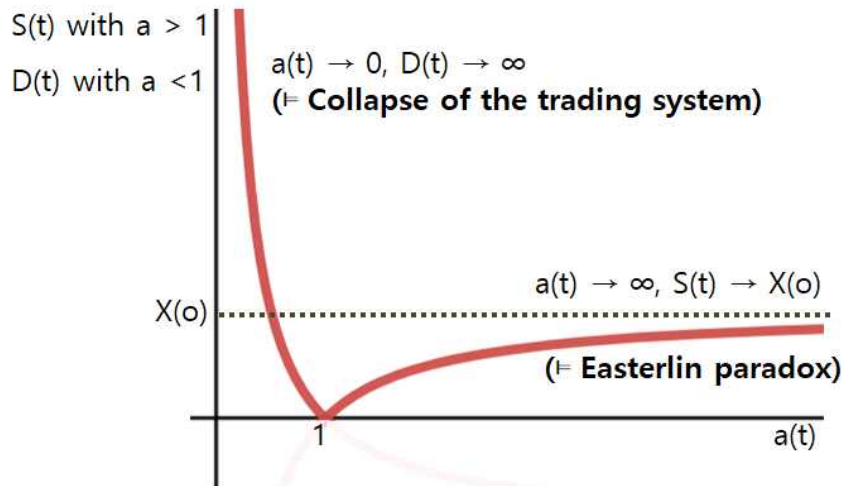
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10) Crypto Long & Short: What NFT 'Markets for Emotion' Say About Tech Business Models (Noelle Acheson, CoinDesk, 2021.5.15.)
11) also known as the "GAFA(Google, Amazon, Facebook, Apple) Tax"

<Satisfaction-Dissatisfaction Curve of Emotional Economics>

(source : Hae-Bo Kim(2023))[12]

S(t) with a > 1

D(t) with a <1

$a(t) \to 0$, $D(t) \to \infty$
($\vDash$ **Collapse of the trading system**)

$a(t) \to \infty$, $S(t) \to X(o)$

X(o)

($\vDash$ **Easterlin paradox**)

1

a(t)

$a(t) = X(t') / X(t) \neq 1$
($\vDash$ unstable mind in DMZ going by the fluctuating affection)
while we assume
Y(t)(amount of tangible token paid)
and V(t)(amount of value gained) is relatively stable.

When
V(t) = X(t) + Y(t)
(The amount of the earned value is the sum of the
 tangible and intangible tokens paid)

X(t') = aX(t)
a(t') ≠ a(t) ≠ 1
(the unstable mind in DMZ)

S(t) = ΔX(t) (the Satisfaction from the transaction)
    = X(t') - X(t) (with a > 1)
    = (1 − 1/a)X(t')
    ≈ (1 − 1/a)(V(o) - Y(o))
    ≈ (1 − 1/a)X(o)

    (∵) V(t') = X(t') + Y(t')
   **X(t') = V(t') - Y(t')**
          ≈ V(o) - Y(o)
(tangible token is relatively stable)

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12) See "Understanding of "Emotional Economics" in the "DMZ"(De-Monetization Zone) of Culture to go
forward the "Cultural 經世濟民"(jīng shì jì mín) beyond the Cultural Economy" (Hae-Bo Kim, 2023)

5. For the sake of human evolution, we need to reflect on the reasons for AI's success.

- If you look at the recent success of AIs, which have suddenly emerged like a sage who seems to know the world, it's very similar to the process that humans use to gain wisdom in life.
- Rather than teaching rules or universal principles, AI engineers first let them discover patterns on their own through extensive training on quite big data, and then give them feedback on the appropriateness of their findings.
- Unfortunately, as parents, we're not doing the same thing with our children: we're giving them rules, expecting them to memorize and follow them, before they've had a chance to formulate their own principles through experience.
- And humans, with limited brain capacity and attention span, can't remember all that data, nor can we perform the fast computations needed to make good judgments.
- To overcome the limitations of memory, we build archives and museums and publish history books, but we run into the limitations of the objectivity of selection and narrative as well as the physical storage.
- To overcome the computational speed limitations of a single brain, we adopt methods such as democracy and collective intelligence, where multiple brains work on the same problem. However, due to the limitations of ambiguous language and the barrier of self-interest, the efficiency is significantly lower than parallel computation on computers.
- If we humans can't overcome these biological, psychological, social, and linguistic weaknesses and limitations, are we doomed to remain less intelligent than machines?

Rule   Pattern

VS·

Human   Machine

Cases   Data
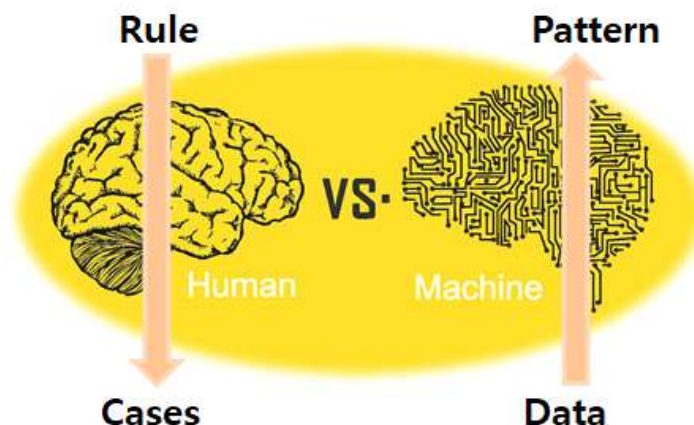
6. AIs will evolve faster, more continuously, and even more "culturally" than humans.

- <u>While humans get hooked on the new technology, AI never stops learning.</u>
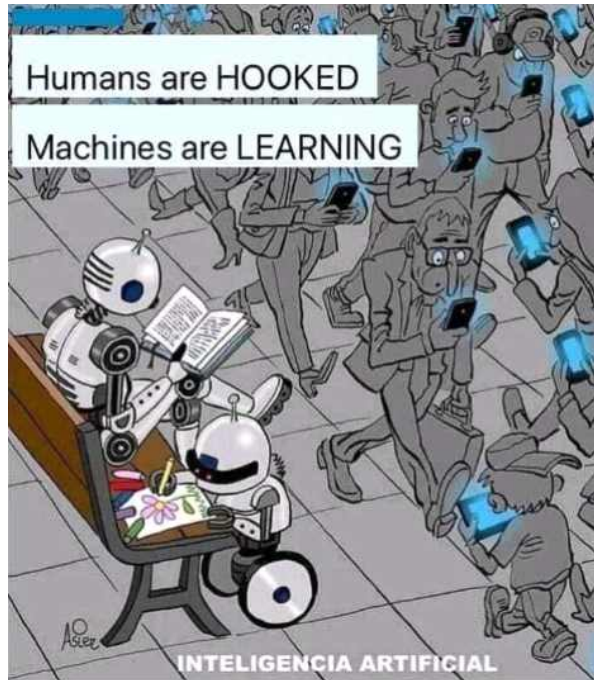
- Recently, AI has succeeded in mimicking the way humans perceive, think, and communicate, up to the multimodal level. <u>In the future, it will evolve even into a "cultural algorithm"[13] to function more appropriately in human society.</u>

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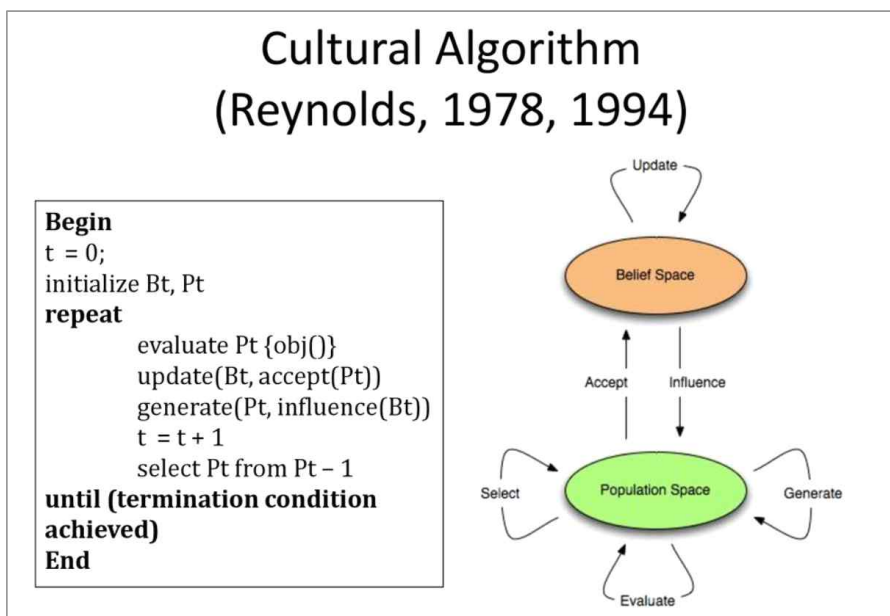
13) "Cultural Swarms : Knowledge-driven Problem Solving in Social Systems" (Robert G. Reynolds, SMC'03 Conference Proceedings. 2003 IEEE International Conference on Systems, Man and Cybernetics)

> The Emergence of Social Intelligence and Socially Motivated Problem Solving
>
> - Traditionally Artificial Intelligence has focused on the nature of "individual intelligence". Goal was to create programs that compete with the best "individual". E.G. Deep Blue in chess.
> - With the advent of high performance distributed networks of computers and grid computation there is much incentive to investigate socially motivated problem solving.
> - Example frameworks have come from naturally occurring systems.
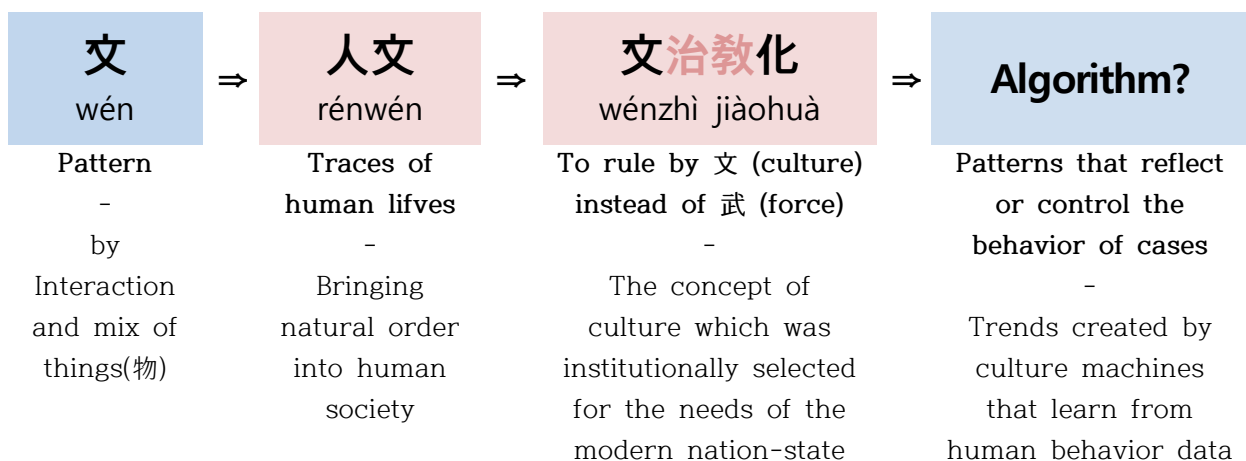
(source : Robert Reynolds(2023))

- Large Language Models (LLMs) such as Chat-GPT, recently linked to internet searches, will evolve to produce better results as humans interact with their current culture.
- However, AI that codes human language is a mirror of human culture, and at the same time, it is trapped within the limits of human cognition and "cultural appropriateness" within human society.
- It's a sci-fi idea, but maybe AIs actually don't need to use obscure and inefficient human languages to communicate with each other. Maybe in the future, AIs will learn the language of ants, the language of fungi, and understand the truths of nature beyond human perception.

7. The ancient Eastern worldview, which is more associate with posthumanism of today, did not see culture as uniquely human.

- The word "文化(wénhuà)" is a translation of the Western concept of "culture". It was adopted by Japanese scholars who were enthusiastic about adopting the West in the early modern period. Since then, the cultural policies of Eastern countries have viewed culture through a Western framework of perception rather than an Eastern worldview.

- As nation-states in the East had to survive imperialist colonial rivalries, they emphasized the concept of culture as necessary for the state, which was "文治教化(wénzhì jiàohuà)(ruling by 文 (literature), not by force). This "文治教化" was shortened to "文化 = culture" and has been used ever since.
- However, in 『易經』, "Book of Changes", one of the greatest classics of the East, the word for culture today "文", meant "pattern", "ornament", and "natural order".14)
- In the view of Tao(道=natural order) of the ancient East, human beings and non-human beings were inter connected objects(物), and the "patterns" they created by interacting with each other(物相雜) were called "文(wén)".
- Later, it was recognized as "traces of human lives" that live according to the principles of nature. And especially the noble and idealized forms of behavior, and those that can be transmitted to future generations by expressing them mainly in writing, were considered as "文(wén = literature = culture)".
- Observing this, some scholars say that while animals live only in the physical world of nature, humans live in the world of language and writing, embodying virtual principles of nature in reality.
- However, when we see that AIs now find general principles through correlations in "patterns" of "mindless" data, there is a stronger connection between the ancient idea of culture (=文) and the way AIs' digital algorithms work.

<Changing Conceptions of Culture from Ancient to Modern Times in East Asia>

文 wén	⇒	人文 rénwén	⇒	文治教化 wénzhì jiàohuà	⇒	**Algorithm?**
Pattern – by Interaction and mix of things(物)		Traces of human lifves – Bringing natural order into human society		To rule by 文 (culture) instead of 武 (force) – The concept of culture which was institutionally selected for the needs of the modern nation-state		Patterns that reflect or control the behavior of cases – Trends created by culture machines that learn from human behavior data

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14) "周易에서 文의 의미 분석을 통한 인문정신 고찰" (김아랑, 인문학연구, 58집, 2019), "山火賁卦를 통해 본 文의 의미 (백유상, 주역과학회지, 2019) (A study on the meaning of Wen(文)and humanities spirit in Zhouyi(周易) (Ah Rang Kim, 2019)

8. If the "Cultural Gene" is also selfish, it will choose the "culture machine" as its host rather than humans.

- One of the key takeaways from the "Culture by the Algorithm" phenomenon described above is that "Culture Machines" including AI are more powerful than humans when it comes to replicating, creating, spreading, and trending culture.
- If "MEMEs"(=cultural genes) are selfish, like Richard Dawkins' "Selfish Gene," they are likely to choose machine hosts that are more favorable than human hosts for further reproduction.


"The next phase of human evolution will be influenced more by cultural and technological evolution than biological evolution. The evolution of culture is millions of times faster than the evolution of genes, as evidenced by the development and changes in computers, fashion, automobiles, etc. There is no room for natural selection".
(Richard Dawkins, in an interview in South Korea, 2017)

- In fact, we can identify <states> and <machines> (or the capital that employs them) as hosts of culture as well as human <individuals>. They utilize <selection and learning>, <institutions and policies>, and <markets and technology> to fulfill their respective hidden desires of <taste satisfaction and belonging>, <efficient and elegant ruling>, and <profit accumulation>.
- As a result, individuals create their "identity and taste," the state creates "good culture" to promote, and technology creates "cultural trends and fashion" that are accepted in the marketplace. They each claim these as the most important elements of contemporary culture.

- Human culture very easily gets alienated by the others. <u>If humans do not keep a check and balance between the State and the Machine, we will not be able to escape the dictatorship under the name of "Cultural State" or the capitalist exploitation under the promotion of "Cultural Life". When the machine(capital) becomes so powerful, as it is now, the humans must borrow the power of the state to keep it in check.</u>

<Check & Balance among the Cultural Subjects hiding their desires>
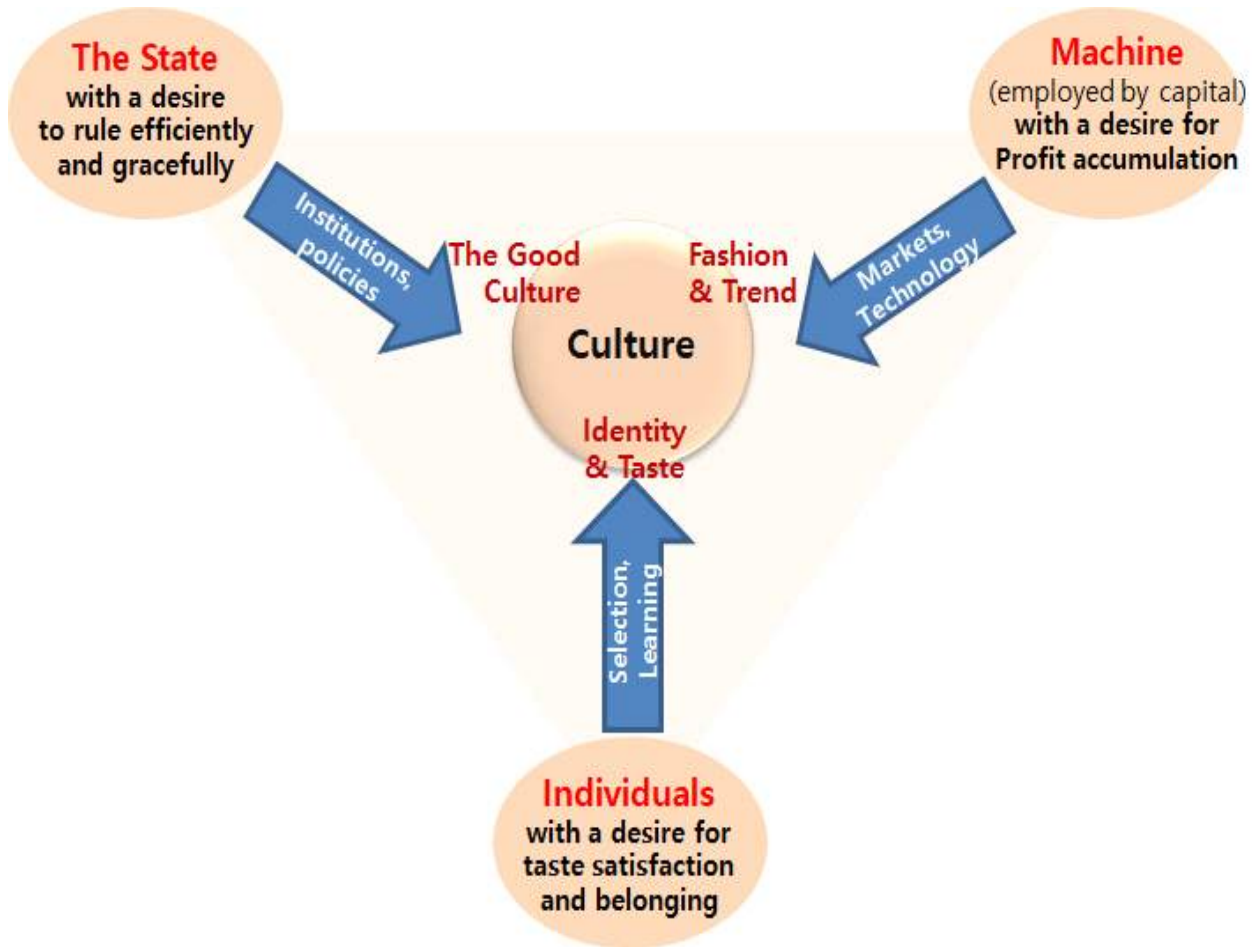
9. Diversity is key to maintaining a human culture.

- Recently, AI scientists have found that an AI model that is trained with easily generated data by AI would end up with poorer outputs and collapse more easily.
- The moment we choose to avoid the stresses of diversity and opt for the easy peace of our own kind, we are destined for the same fate as races whose genetic diversity has been reduced by inbreeding, leaving them vulnerable to genetic disease and extinction.

- Similarly, diversity is key to the evolution of life and even to the performance of AI.
- A key reason why cultural genes will continue to choose humans as hosts is that, so far (!), humans have a higher capacity to provide the diversity needed for their evolution.
- The cultural policy of the state aims at "agreed" universality as a public good, while the cultural machine aims at "optimized" universality for profit maximization.
- Even a multinational AI platform's taste sniping service, which utilizes information from global individual users, is unlikely to produce outputs that are consistent with the cultural diversity of local communities.
- In addition to the corporation's logic of finding the optimal efficiency trade-off between universality and individuality for profit maximization, the ethical standards of AI in global governance that attempt to regulate it may conflict with local cultural norms.
- On the other hand, humans, with their individualized bodies and tastes, seek cultural diversity in an "ecological" way. Individual humans adopt and learn the culture and norms of their social community, but because they have independent bodies, they select, modify, and reproduce them to suit their own tastes to maintain the health of society.
- Societies that are so strongly connected culturally that their members are unable to transform and change existing norms will not progress and will die.
- Before pursuing a single axiom in the name of public interest and efficiency, or adopting the policy slogan "social integration through culture" without much thought, we need to reconceptualize the meaning of "diversity" that is necessary to sustain human culture in the face of a flood of machine culture.
- The public meaning of the development of individual artistic taste, which creates cultural diversity in society, and the meaning of the basic right to culture, on which it is based, should be re-examined.[15]
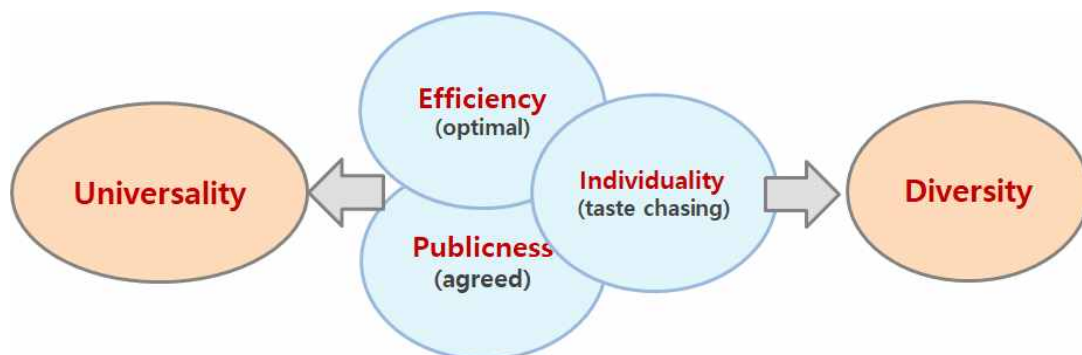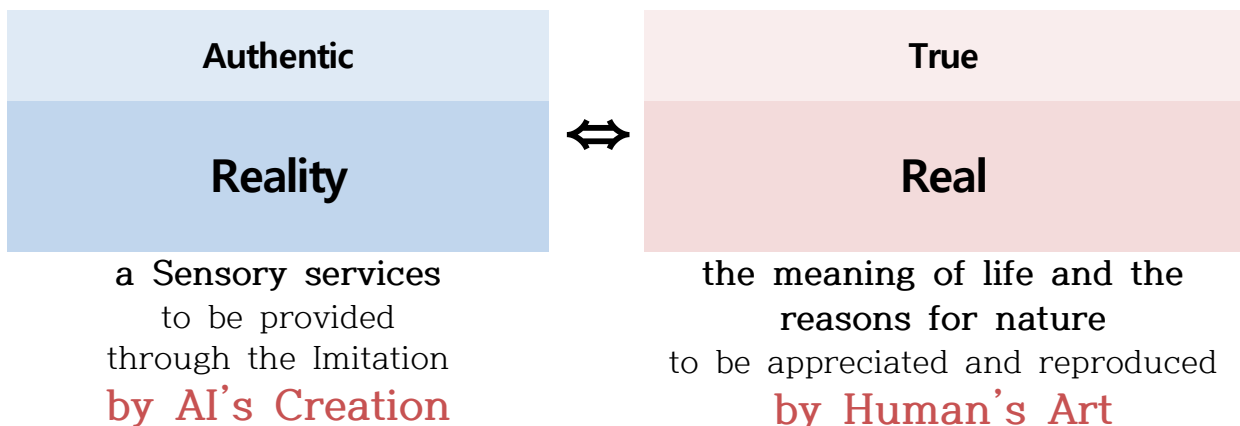
15) See "알고리듬 문화의 시대에 문화정책이 봉착한, 취향과 공적가치 사이의 딜레마 극복 방안에 대한 시론적 제안_ 문화의 의미 재해석과 공감행정" (A Preliminary Study on How to Overcome the Dilemma between Pursing Personal Tastes and Public Values in Cultural Policy in the Age of Culture as Algorithm _ Redefining the Meaning of Culture and Empathy Administration" (Hae-Bo Kim, 2023)

10. Cultural diversity is maintained when \<Arts by humans\> that find and add meaning of "the Real" can be added to the very authentic Reality imitated by \<AI's Creation\>.

- \<Doing Arts\> involves not only creation through imitation and reconstruction, but also appreciation through understanding the world and creating new meaning.
- It seems like we're already at the point where AI is outperforming humans, from mere imitation to creating something new.
- However, the reason why machine's creativity and its outputs are not art is that it's humans who give them value as art, and humans call it art when they can find "meaning" in it, not just "utility".
- A machine can simulate even a very authentic sense of reality and provide it as a "cultural service" that stimulates the human senses.
- However, humans want to find, magnetize, and reconstruct the meaning of the real that exists beyond the realm of the senses. It is the act of making sense of the world we encounter, giving meaning to our lives, and finding the reason for our existence in nature.
- It is a task that humans have been given as a result of being in a "dying body", and it is a survival skill that we have developed to create a reason to live.
- So we human beings are all "artistic beings" who do arts.
- Without the human activity of doing arts, which utilizes the cultural resources available in a connected society, the culture created by the state, its institutions, and technology is simply passed down from generation to generation.
- The human habit of doing arts is necessary to feed cultural diversity and keep societies healthy.

\<The difference between Human Art and Machine Creation\>

Authentic		True
Reality	⇔	**Real**
a Sensory services to be provided through the Imitation by AI's Creation		the meaning of life and the reasons for nature to be appreciated and reproduced by Human's Art

11. It's up to adults now to provide the environment for youth to continue their human habit of doing arts as a "courage to think alone."

- In a book envisioning the world after AI, it is suggested that amidst the deluge of information flooding through AI and digital platforms, delivered as personalized services, <u>humans have lost both the time to quietly contemplate and the "Courage" to think alone.</u> Consequently, there is a pessimistic analysis that states humans overlay their convictions onto the given information, yet fail to transform it from knowledge into wisdom.(Henry Kissinger et al, 2021)[16]
- It is also suggested in the same book (p.239) that in the face of the pervasive influence of AI already operating everywhere, there arises doubt about whether human "free will" can truly exist.
- <u>The act of humans quietly contemplating and seeking truth on their own is deemed as the "courage to explore by science," while understanding and expressing the meaning of the world by internalizing it is considered the "courage to create by art."</u>
- There are two perspectives interpreting the etymology of the word "文"(wén = literature), which means culture now. One is that the patterns (乂) created by the interaction of things(物), both human and non-human, became the human character (亠), as introduced earlier. <u>The other perspective portrays the character "文" itself as an illustration of a person marked with a tattoo representing the heart on the body.</u>
- The heart symbolizes life and courage. (Though a bit forced) <u>The idea that culture can only remain diverse if it reflects the biological characteristics of humans who are born and die, and that it is based on "the courage to think for oneself" can also be found in the etymology of "文".</u>
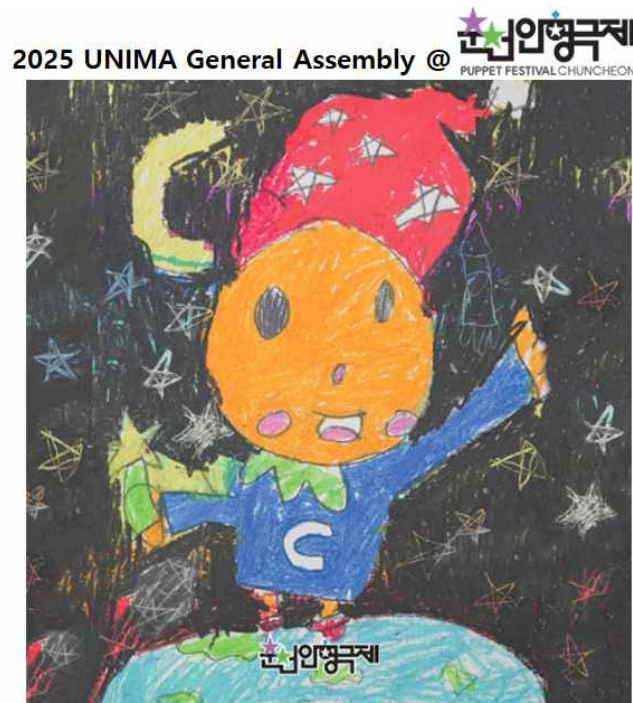
\<Etymology of the hieroglyph 文(=culture)\>
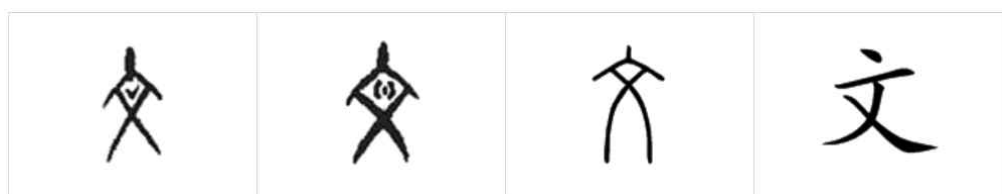
16) 『The Age of AI and Our Human Future』 (Henry Kissinger et al, 2021)

- What we need to do now is to create fair rules for the new game so that young people don't lose their "Courage" to continue doing arts and science in front of an AI that spits out plausible answers and stunning images.
- The arts & education program implemented by the Seoul Foundation for Arts & Culture(SFAC) is an activity that fosters the "courage to do art," especially among youth. While before the Corona pandemic, the program focused primarily on "Arts in Education," during the pandemic, on "Arts in Communication," and now, in the age of AI, it should be on "Arts in Humanity."

<Focus of Arts & Education program by SFAC>

Before 2021	Since 2021	for the Future
AiE **(Art in/is Education)**	**AiC** **(Art in/is Communication /Community/Commons)**	**AiH** **(Art in/is Humanity)**

- Puppetry is the art of creating beautiful scenes and drama through interaction between humans and non-humans. In 2025, puppeteers from around the world will gather in the beautiful lake city of Chuncheon, South Korea, for the UNIMA General Assembly. I look forward to continuing the dialog about art, technology, and humanity by the lake.[17]

2025 UNIMA General Assembly @ 춘천인형극제 PUPPET FESTIVAL CHUNCHEON

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17) https://www.youtube.com/channel/UCchmV8Eh-X3vPHIhkmi—5w/videos