

Questions about AI through the lens of Korean experience

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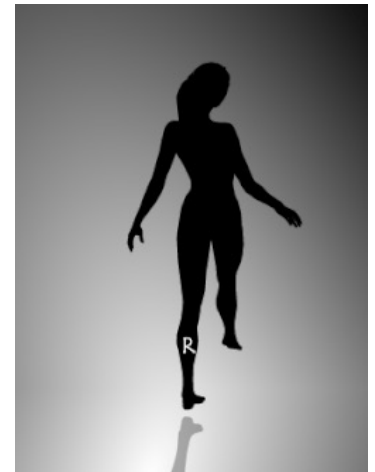
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Through the lens of Korean experience

- What type of AI regulation do we really need?
- Shall we ban use of AI for certain human activities?
- Can we make AI work for democracy?
- Can we make AI work for equality?
- Can we work against data monopoly?
- Can we protect privacy while developing AI?
- Shall we charge AI developers for reading or viewing human creations?
- Shall we punish AI to make it fair or not “take over the world”?

What is AI?

- Currently, a stochastic machine that analyzes across vast sets of human-behavioral data and regurgitates the most statistically probable response to a genuine human prompt.
- Learns "things" like a child learns: lots of cat photos v. non-cat photos but without ever defining felinity
- Does not really "learn things" but mimics human cognition
- Alpha Fold: trains on known (to humans) folded structure from known amino acid sequences and mimics the relationship in deducing unknown folded structure from known amino acids. (knowing structure → knowing function)
- Zero creativity! Just statistics. But hugely and hugely helpful.
- Ben Affleck: AI results converge on mediocrity. Obvious cz it **averages** over vast sets of human behavior.
- Is it intelligent? - Intelligence is part of evolution. Uncanny Valley: Gestalt psychology – Humans always fill in details and see it always spinning in one way. Bounded perception to human brain evolved. AI doesn't.



Korea and AI

“Not Number 3, Big 3” → France as rival? Recent Artificial Analysis announcement put 4 Korean LLMs in the top 30 performing LLMs

- National AI Data Center
- Native AI Chips (fabless) – Furiosa, Rebellions
- K-Cloud project
- Sovereign AI – NAVER, LG, SK Telecom, Upstage, NC-AI
- AI for All?

But will it work?

- “Need more GPUs” – 10K GPUs v Open AI’s 1M → Jensen Hwang’s 260K GPU supply agreement (2025) - Korean gamers – Star Craft – NVIDIA’s GPUs
- Public vs Private → provincial location requirement, low price requirement → RFP snubbed twice → Samsung SDS (GPU 50K by 2030)
- Need more investment – Samsung, SK not much interested in vertical integration vs Global Big Techs. NAVER?



What regulation do we need for AI?

- Growing automation of human activities: cars, laundry machines
- Software has been used in the past. Is AI also software?
- What are the unique harms of AI?
 - Algorithmic amplification of human bias
 - Monopoly on training data
 - Collecting personal data for training
 - Labor replacement?
 - Electricity consumption?
 - (Lack of) Explainability and transparency?
 - “Taking over the world” or “Killing humanity”
- Is Korea doing well in responding to these harms?

Korean AI Act

- Celebrated as the first to go into effect (Jan 22)
- Modeled after EU AI Act passed first but not going into effect yet
- Applicable to all AI business providing AI goods and services cf. EU: “use of AI systems”
- Not applicable to “national security” i.e., defense
- No prohibited practices, cf. EU ban on manipulation & other things
- “High-impact AI”, cf. EU “high-risk AI”
- If “high-impact” or “generative AI” or “deepfakes”, notice and labelling obligations + risk assessment + prior government review

Evaluation: high-impact areas are already being regulated. Conflicts with existing regulation. There is really no regulatory sting other than government’s restriction power which only increases risk of censorship

– compare to the harms list

Labor replacement

- Education, medicine, law – supply side can be replaced
- No one needs to produce goods and services themselves anymore
- Students, patients, clients cannot be replaced cz they have **desires** → need to pay them? \$%
- People are paying for authenticity – opera, plays, sports, games, Youtubers with various unavoidably human dramas, worn clothes
- Law school teachers' dilemma: AI-assisted student assignments

Explainability and transparency

- Data or software? Software does not tell you much. Data tells you too much.
- Fundamental limit on explainability – answer to a question: “Why did you think that was a cat photo?”
- Human decisions are “black box” as well. - answer to a question: “Why do you think the defendant is guilty?” What will be the standard of explainability?
- Freedom = no need to explain. Humans do not need explain many of their decisions outside anti-discrimination laws applicable only to essential areas of human activities.

Shall we ban use of AI for certain human activities?

- Use of SW
- EU AI Act's list: EU: “No AI on subliminal manipulation, disability exploitation, social scoring, untargeted scraping, emotion recognition in employment or educational settings, biometric/racial/religious/sexual-orientation-based categorization of people, real-time face recognizing identification, predictive policing – **What if humans do it themselves? What if these are done for good purposes?**”
- Korea: deep fake bans
 - Election campaign material, non-consensual sexual video – no requirement of substantial falsity mediated by deepfakes (no exception of satire, parody)- Trump's nude figurine or →
- Pre-cursor: persecution of **Druking** (SW-based automatic posting of political comments on behalf of supporters)
- What is the harm and does deepfake qualitatively intensify that harm?



Can we make AI work for democracy?

- Internet – Iran, Ukraine, Myanmar: internet shutdown and democracy
- AI replacing internet – AI summaries v. web surfing
- Internet universalized power of publicity.
- AI universalizes power of knowledge
- Tech for Campaign’s AI emails – 3,4 times more donation
- Electronic (Voter) Registration Information Center: found 26 mil new eligible voters and voided 10 mil ineligible voters
- Brookings & Atlantic: lowers cost for poor candidates, makes competition more equal
- Korean ban on use of deepfakes in election – not ban on substantial falsity but virtual image “indistinguishable from reality” – President Yoon pre-martial law apology – a candidate singing in a deepfake voice



Can we make AI work for equality?

- Algorithmic discrimination – amplifying the clearly false information or the shortage of truthful information
- What to do:
 - censorship on output
 - censorship on input
 - Manually changing input
- Input cleansing:
 - Training data = child's textbook
 - Who should write the textbook? Deepseek and 1989 Tianamen Square
- Input diversification: Amazon hiring AI, MS Chatbot Tay → need more data diversity. "If you want AI to work for you, AI needs be trained upon you" →
- Liability for using AI trained on non-cleansed data for civil-rights subject matters such as employment, housing, public facilities?

Can we make AI work for equality - against data monopoly?

- Data availability
 - Korea:
 - Truth defamation
 - Open (government) data - not very active
 - Mechanistic data protection law
 - Data portability law is there but ruined by state paternalism.
 - Executive branch content moderation
- Not enough data available
- LG Exaone purchased all the training data + Naver didn't.

Can we protect privacy while developing AI?

- Needs much personal data, e.g., court judgment database
 - Especially big data – impossible to track down data subjects and obtain consent
 - GDPR’s solution: ok for Archiving, scientific/historic Research, and Statistical analysis if pseudonymized (optional) – anonymized data with reidentification key stored by trusted third party
 - **Korea’s solution:** ok for Archiving, scientific/historic Research, and Statistical analysis if pseudonymized (mandatory) but **bans re-identification completely and permanently.**
 - Dilemma: Processing halting right and access right require reidentification.
- ***Facial recognition: Is it an AI problem?** Face = wearing SSN on our sleeves – mass surveillance jurisprudence + ”national id function creep” jurisprudence

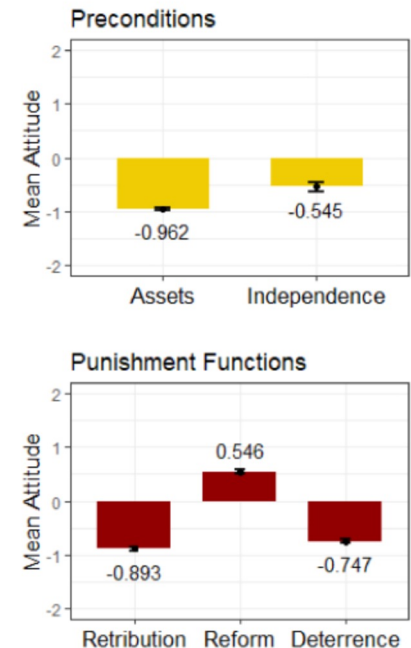
Do we need to charge AI for training on our works?

- Reading or viewing by machines or humans is not copyright infringement
- But tokenization is “copying”? If so, can it be “fair use”?
- **Production of an exact copy is an exception due to overfitting, a kid wizard in a school**
- Exhaustion Doctrine – a Unit Copy can be disposed in anyway– but **Louis Vuitton repairer case** (can apply to copyright also)
- Idea-Expression Dichotomy – Extracting ideas is not infringing - but **Baseball reality program case**



Can we punish AI?

- Majority: want to punish AI (N=3,375)
- But ppl don't want conditions of conceptualizing punishment: independent existence/assets
- Can we punish an entity without self-preservation instinct?
- Currently, AI: no freedom, no assets, entirely relying on → no room for punishment or true intelligence as an evolutionary concept



Will AI take over the world?

- Can there be awareness/intelligence without evolution?
- What do we mean when we say “animals are intelligent”?
- When will AI become “intelligent” or “aware” ? i.e., when AI is given a global condition (and command) for self-preservation
- Who will have incentive to give AI the self-preservation command, i.e., computer virus? →
- Superintelligence – risk of human extinction?
- Asimov’s 3 Laws of Robots
- International Treaty on Artificial Superintelligence (modelled after nuclear NPT) <https://ifanyonebuildsit.com/treaty>
- My proposal: Institutional Review Board (like Bioethics)