AI Dialogue Series -
Observations from Seoul Workshop (June 23, 2017)

Berkman Klein Center for Internet & Society
in collaboration with K Governance and Media Lab and the Digital Asia Hub

Artificial intelligence (AI) has evolved from an academic research project to a notable force that is shaping and transforming industries, societies, and the lives of individuals with unprecedented opportunities for development and growth. But the speed of AI development and the uncertainty that accompanies its uses also provoke questions related to fundamental values such as autonomy, agency, and accountability. In parallel, the knowledge gap between small group of AI experts and the large population affected by these "black box" technologies is widening and creating misconceptions regarding AI that might hinder its adoption.

The Berkman Klein Center at Harvard University, in collaboration with its international partners, is bringing together a global community to provide leadership, define the agenda, and drive change in emerging areas of AI ethics and governance research and practice. In convening the first of a series of Global AI Dialogue Series workshops—a part of the larger Ethics and Governance of Artificial Intelligence Fund (AI Fund)—we sought to host a truly global, open, inclusive, and evidence-based dialogue aimed at identifying opportunities as well as challenges related to AI that need to be addressed from an international perspective.

Given that the development of AI in Asia is quickly outpacing the rest of the world, this first workshop sought to draw out and discuss distinct global issues as raised from an Asian perspective. In partnership with KGM Labs, WeWork Euljiro, the Digital Asia Hub, and other partners, our invitation-only workshop governed by the Chatham House rule brought together 35 stakeholders representing government, industry, civil society and academia from China, India, Israel, Japan, Singapore, South Korea, Taiwan, and the United States.

The purpose of this internal draft memo is to share initial observations synthesized from the workshop, distill broader themes, and compile insights that emerged across the various sessions.

I.
II. OBSERVATIONS FROM THE SESSIONS

The sessions used a broad frame to stimulate discussion amongst a diverse group of participants from various disciplines, backgrounds, and with different levels of expertise. A number of meta-themes surfaced that are used below as a rough framework to organize our observations.

1. Overarching Themes

Across the issues and values discussed, participants agreed that a greater level of nuance and context should be applied to any discourse around AI. **Choice syntax and nomenclature**, as well as clarifications around "general" and "narrow" AI can help to more accurately frame and address discussion topics.

Furthermore, participants recognized the need to address **cultural differences** and to bridge gaps across borders for global AI governance. Different cultures have independently developed AI systems to suit their respective needs. Thus, addressing the differences in how people fundamentally perceive and utilize AI technology will require international treatment, especially around the critical issues mentioned by attendees and summarized below.

Attendees also agreed that there exists a demand for a **governance framework** or governing body at the global level to foster dialogue and communication on AI issues across borders. Attendees recognized the various roles governments could serve as educators, regulators, supervisors, investors, promoters, etc.

Finally, and most crucially, a major theme amongst the critical issues discussed was the **inclusion** of diverse viewpoints from stakeholders of different industries, disciplines, social classes, cultures and countries. AI in Asia is developing quickly; numerous reports have pointed to the rapid rise in AI research in China and Japan. As a result, participants have noticed a widening gap between those who have access to data collected about users, information about AI technologies, and the ability to understand their impact, and those who do not.[1]

This emerging "AI Divide"—if allowed to continue—could jeopardize equal treatment of users within and between nations. This asymmetry is a critical issue that must be addressed globally. An international solution should encourage meaningful

[1] In a recent survey, presented at the workshop, Chinese tech company Tencent, which houses over a hundred products that use AI technology conducted a survey of its employees and gathered over 3,000 responses. The survey revealed a large knowledge gap even within the company between those with an understanding of AI, and those without. This asymmetry and inequality of access to information is mirrored in relationships between technology experts, government officials, and users alike.

interdisciplinary sharing of information at the international, national and local levels, and ensure that the benefits of AI technology remains accessible to all.

During our workshop, we asked attendees to identify critical AI issues and values, and offer specific suggestions for achieving progress on these issues. These overarching themes play out in the various critical issues listed and summarized below.

2. Critical Issues

Attendees distilled and prioritized a set of issues that largely revolved around the inclusion of varying stakeholders, social classes, cultures, and countries. Current asymmetries and disparities in AI research, deployment, and control over AI systems on the global level disproportionately benefit a small majority of nations and an even smaller subsets of elites. These trends are discouraging given the structural disruptions AI will bring on a global level, and further emphasize the urgent need for action on challenges regarding inclusion. By identifying distinct priorities on key sectoral areas, we hope to inject global discourse with more nuanced understanding of the Asian perspective.

Employment/Jobs

One of the most frequently discussed topics was concerns over the potential loss of employment and job shortages resulting from the implementation of AI in key industrial and manufacturing sectors. Though some reports have tried to dispel these concerns, the general public and some companies remain troubled by the potential repercussions of a looming autonomized economy. Several participants expressed concern that trends engendered by an efficiency-driven industry could lead to obsolescence for human laborers. This issue highlights the enormous challenges for Asia given the continent's large labor force and shifting demographic trends. Broader questions were raised about whether stakeholders should be asked to slow the pace of automation to allow time for society to acclimate.

Data and Infrastructure

Another important issue attendees expressed would be relevant to Asia was the role of data in the development of AI infrastructure—Asia, with its large population and amount of active tech users, generates a substantial volume of information critical to the development of AI structure, which makes data-related issues more relevant. The allocation of data and capital plays a crucial role in designating control of AI technology amongst stakeholders. Basic enabling infrastructure such as server farms, data centers, electricity, and broadband connection will need to be provided in an inclusive matter in order to ensure that benefits are not limited to small subgroups that have exclusive access to these resources. Attendees expressed a need to agree upon a basic set of values and laws around data distribution, collection, localization, regulation and security.

Language

Language-related information asymmetries also represent a growing challenge. Researchers from states such as China and Japan—who are proficient English

speakers—stand to benefit from research published in the U.S., while this transfer of knowledge is not easily reciprocated as American researchers do not have the same familiarity with Chinese or Japanese.

Information
Moreover, the lack of open source sharing of information has led to a power imbalance. Currently in China, strong partnership between large technology conglomerates who share their data with research institutions opens a direct line to innovative research, and creates a virtuous cycle of information sharing. While beneficial, these relationships also incentivize centralization and monopolization of AI technologies. On the other hand, South Korean stakeholders highlighted that their country lacks the high quantity of data collection necessary for robust AI development, and companies are not pressured by domestic markets to invest in AI. These asymmetries could lead to deep power imbalances between users, companies and governments.

3. Values and Goals Discussed

Transparency
Across multiple dimensions, participants expressed concern over the opacity of decision-making processes of AI systems. Specific cases that were commonly cited included algorithmic black boxes, nontransparent data sets, as well as the regulatory and monetary incentives offered by stakeholders to direct AI development. Participants point out that should current trends prevail, the lack of transparency in the developmental stages would muddy the allocation of responsibility and liability in the future.

Differing Regional, Cultural, and Ethnic Value Systems
Attendees discussed the differing and sometimes competing cultural, ethnic, and regional norms and values between countries. Moving further than the variant AI systems designed by companies for their individual needs and goals, it is apparent that the values embedded in the design of some systems might translate poorly across cultural or national lines. Additionally, the way technology is utilized across different countries and cultures may differ from the intended function of the designers. Some participants mentioned that discussions of AI systems in some sectors are discouraged, even considered taboo, in countries like Japan.

National and corporate priorities are also informed by their respective cultures, identity, and environmental makeup. These dissimilar goals can impede international efforts to standardize components or design processes of AI systems. Furthermore, priorities that are perceived to be hostile by other stakeholders could exacerbate geopolitical strife.

4. Actors and Roles Examined

Attendees addressed the roles and responsibilities of various actors in the AI ecosystem. The broad discussion was supplemented by specific use cases in China,

Korea, Japan, and India. Participants touched upon the roles of private sector stakeholders, academics, and government institutions.

- Private sector actors—especially Silicon Valley and Chinese ICT companies—were identified as the primary drivers of AI innovation and development. Participants said private stakeholders and researchers could be encouraged to facilitate cross-border understanding and mediation. More often than not, private sector actors were also urged to increase cross-industry discussion in the design processes of AI. The private sector play important roles in collaboration with governments to construct or update infrastructure to maximize AI benefits.
- Academics and educators were discussed extensively, and perhaps unsurprisingly, the focus was on the role of academics as educators and the question of how and which section of the population to target. In addition to advising and educating, academics could also act as producers of relevant knowledge of cross-disciplinary issues, especially given the wide-ranging sectoral implications of AI systems.
- The role of governments as a regulator, educator, and enabler were highlighted in a number of sessions. While no specific regulatory frameworks were mentioned, participants emphasized the urgency and applicability of law as a tool for the issue of black box algorithms. Governments can play an important role in assuaging public fear of AI systems as well as ensuring educational and labor retraining programs are inclusive and effective. Lastly, governments must play a role in the construction or modernization of national infrastructure to serve as the foundational element of AI development and deployment.

III. SPECIFIC SUGGESTIONS BY PARTICIPANTS

Across sessions and in the context of the general discussions about roles and responsibilities of different actors (see above), a series of specific suggestions regarding the step forward in the governance of AI emerged.

- In order to enable current stakeholders to achieve a stronger understanding of the impact of AI on peer stakeholders, participants suggested greater sharing of resources. In addition to creating relevant and robust data ("evidence-base"), research activities would also include the development of methodologies, metrics, and taxonomies. A global repository of AI research or network of researchers and institutions can be established to facilitate transfer of knowledge as well as increase dialogue between researchers from different backgrounds.
- The creation of an executive education-styled program could spread relevant knowledge of AI systems to important stakeholders and increase the interaction between the various actors in the AI and governance spaces.
- Participants recommended the use of digital technologies and educational tools such as Massive Open Online Courses to reach and educate a wider audience. Methods such as MOOCs also lessen the need to completely retrain educators across levels and borders. Additionally, educators and policymakers must

prepare post-education steps for forums of dialogue and increasingly build spaces for public voices to be heard.
- Convening forums and workshops like the Global AI Dialogue Series encourage multi-sector and industry dialogue. Greater information sharing, understanding, and dialogue can lead to stronger consensus on issues and tools.

IV. CONCLUSIONS

Overall, attendees expressed an enthusiastic desire to better understand and fill their own knowledge gaps. As a next step, and viewed from the perspective of the workshop hosts, it seems feasible to engage in three interrelated analytical exercises:

- First, it seems worthwhile to formulate a heatmap of issues to be addressed—based on keynote speeches, attendee discussions and push backs, experience from framing cyber-society and cyberlaw, relevant surveys, etc. and also external factors, such as culture and societal norms—that will apply to the AI Ethics and Global Governance agenda as a whole as its contours are further defined and activities fleshed out.

- Second, the Berkman Klein Center will periodically follow up with the attendees of the Seoul dialogue for additional comments, advices, new areas to be explored, case studies to be conducted, new pilot projects to be ignited, etc.—these would continue to serve as a key in providing input and accessing the insight generated by our activities. On a larger scale, this will help us to create a framework that maps out the universe of different possible activities of the Berkman Klein Center roughly within the parameter of this memo (at least as a working hypothesis) and based on other relevant sources of information.

- Lastly, the next AI Global Dialogue Series workshop will take place in Turin, Italy, coinciding with the G7 meeting at Taormina. Regarding that workshop, the criteria and considerations from the first bullet point would be used as a “lens” to look at the framework and identify those fields within this framework that fit the criteria and considerations, and should therefore be prioritized, while other fields would be left to other actors or at least de-prioritized.

Based on these workshops and supplementing meetings and research efforts, the Berkman Klein team will produce a **roadmap** that informs decision-makers in the private and public sectors. As a part of the larger initiative, the Global AI Dialogue Series will continue to function as a platform for researchers, officials, and executives with strategic, policy, business or technology responsibilities to share, shape, and develop insights into AI from an ethics and governance perspective. The resulting map would have the advantage of allowing for different activities in different areas of interest—including the previously announced priority areas—while still giving a sense of how the different pieces fit together conceptually, to finally promote the use of AI technology for the social good on a global scale.

Contact:
Urs Gasser (ugasser@cyber.law.harvard.edu)

Workshop Rapporteurs:
Tianqi (Albert) Wang, Amy Aixi Zhang, and Tim Koay