The 7ᵗʰ Digital Belt and Road Conference
([DBAR 2023](#))

Monday to Wednesday, 4 to 6 September 2023
Beijing International Convention Center (BICC), Beijing, China

Session Agenda
In-person and Virtual
Monday Afternoon 4 September 2023; 15:30 to 17:30 Beijing Time (UTC+8)
Registration link for online participation

Submitted on behalf of CODATA's (the International Science Council, Committee on Data)
International Data Policy Committee (IDPC)
and
European Open Science Cloud – Future (EOSC-Future) & Research Data Alliance (RDA)
Artificial Intelligence and Data Visitation Working Group (AIDV-WG)

Session Title

The Role of Legal Frameworks and Ethics for AI in Support of Data Sharing within the Digital Belt and Road Infrastructure for Sustainable Development

Session Participants

Perihan Elif Ekmekci, Francis P. Crawley

Session Description

Introduction

In the era of the Digital Belt and Road (DBAR) initiative, where technology plays a transformative role in advancing sustainable development, this session explores the critical aspects of data sharing, ethics, and legal frameworks in realizing the full potential of the DBAR infrastructure. The DBAR initiative seeks to connect countries and regions through cutting-edge digital infrastructure, promoting economic growth, knowledge exchange, and sustainable development. In this session, experts from diverse backgrounds such as legal, technology, and ethics will convene to discuss the complex challenges and opportunities presented by data sharing and AI within this ambitious initiative.

The session will emphasize the pivotal role of legal frameworks in facilitating data sharing while safeguarding privacy, intellectual property rights, and cross-border data flows. Based on the results of the project, participants will explore best practices for developing robust data sharing agreements and policies that ensure equitable access to data, promote responsible data use, and foster international cooperation within the DBAR framework.

AI and DV are rapidly developing technologies that have the potential to dramatically facilitate DBAR's work across wide and diverse datasets, both within disciplines and across disciplines.

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They are fundamentally transforming data management, data curation, data and data tools interoperability, and data exchange. Until recently, the focus has been on data sharing (DS), which generally requires a preliminary movement of data to a central repository or a central system of repositories prior to being able to perform an analysis across the disparate datasets. DV introduces the ability to query and perform data analysis across disparate datasets, perhaps even with differing operating, management, and stewardship systems among the various datasets.

The conventional DS approach is time consuming and expensive, usually requiring a considerable amount of data reformatting and editing. DS also creates large databases that impose centralized formatting and management, while also potentially containing large amounts of duplicate or redundant data. Moreover, there are issues regarding data synchronization, data management, data sustainability, and data ownership as well as administrative or legal challenges when data crosses borders, be those institutional or juridical borders.

The movement of data creates a multitude of challenges without always solving fundamental problems, such as those of access or interoperability. DV is an alternative approach that aims to alleviate many of these issues. Open science platforms, such as EOSC, have already facilitated researchers' access to one another's work and data. DV is now seen as a step forward toward further empowering the reach and efficacy of Open Science by facilitating a researcher's ability to navigate and access far greater amounts of data, data that is perhaps fragmented across various clouds, registries, networks, and operating systems. Via DV, AI algorithms developed to respond specific research questions travel to the data for analysis instead of first requiring the data to be transported to, and made to fit, a central repository.

Whether we are examining Big Earth Data, Environmental Data, Natural and Cultural Heritage Data or data related to Natural Risk Reduction or our Urban Environments, the ability to ability to collect, access, and interrogate that data and apply AI in order to understand, interpret, and apply the findings is of utmost importance.

Ethical considerations and legal frameworks have become core aspects of data sharing and AI in response to questions about individual and community rights, transparency, and bias. The session will highlight the importance of integrating ethical principles into AI algorithms and data visitation practices to promote fair and unbiased outcomes in support of sustainable development goals. It examines with the audience the essential role of legal frameworks and ethics in supporting data sharing and AI within the Digital Belt and Road infrastructure for sustainable development, paving the way for a more inclusive, responsible, and prosperous digital future.

Materials and Method

This session will present the results of a year-long project by the and EOSC-Future/RDA Artificial Intelligence and Data Visitation Working Group (AIDV-WG) that examined the ethical, legal, and societal considerations around data visitation (DV) and artificial intelligence (AI) for data sharing with a focus here on identifying and describing fundamental principles and guidance for developing organizational structures and governance goals for data access, use, and sharing that permits interconnectivity and interoperability across different platforms and systems addressed by the DBAR Science Program. It will address ways to contribute to building the ethical, legal, social, and technical frameworks and bridges enabling the open sharing and re-use of data in the framework of Open Science across the DBAR seven working groups and two task forces.

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Results

The results of the AIDV-WG were as follows:

1. A survey on current ethical, legal, policy, and societal frameworks for AI and DV: The survey will explore these considerations from within EU institutions as well as in other national and international institutions to assess the key challenges and gaps in AI and DV in relation to Open Science, having regard to the needs of researchers and societies in Europe and globally, taking into account SDG-associated organizations.

2. Guidance on legal considerations for AI and DV: a mapping of legal considerations for AI and DV as well as how to navigate legal frameworks for users of EOSC and other Open Science platforms. Specific attention will be given to the Schrems II decision and the effect of this on DV.

3. Guidance for informed consent in AI and DV: The GDPR and other EU data and AI regulations as well as regulations in other jurisdictions have placed heavy emphasis on the role of informed consent in data sharing and data publication. We will examine the role of informed consent in AI and DV, addressing fundamental challenges to current informed consent frameworks and practices. The aim is to provide guidance for researchers and data controllers across disciplines regarding informed consent in AI and DV.

4. Guidance for ethics committees reviewing AI and DV: Ethics committees (RECs/IRBs/IECs) have been confronted by new challenges when encountering the need for advice on data management and data sharing as well as in other areas of data processing. The use of AI and DV, especially in health-related research, requires investigation with regard to the ethical, legal, and social issues these raise for ethics committees and those submitting proposals for advice/approval to ethics committees. This guidance will assist ethics committees in understanding questions, methods, and procedures for reviewing AI and DV.

5. An AI Bill of Rights: Underlying the growing application and use of AI and DV is a concern to ensure that data subjects are protected by these new technologies. The AIDV-WG will draft an RDA AI Bill of Rights that promotes fundamental human rights and advances trust in AI and federated systems for Open Science.

Conclusions

The study and results presented in this DBAR session show the necessity of integrating ethical considerations into data visitation practices and the use AI algorithms when considering data sharing across multidisciplinary and multisectoral approaches to data sharing in complex international digital frameworks. The insights provide valuable recommendations for promoting data interoperability, standardization, equitable access, and long-term sustainability.

As we move forward, it is evident that building a sustainable digital future within the DBAR infrastructure requires a collective commitment to ethical data governance and an awareness of how to navigate different legal frameworks. By working across legal and ethical frameworks, we can harness the transformative power of data and AI to address societal challenges, drive economic growth, and achieve sustained development for digital cooperation among countries, regions, and organizations. These frameworks are required to promote responsible data sharing that contributes to a digital ecosystem that empowers nations, respects individual and community rights while paving the way for a prosperous and sustainable future for all.

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References

A list of references for this project can be found here on Zotero, compiled by Professor Natalie Meyers with cooperations from members of the AIDV-WG.

Session objectives

The principal objective of this session is to examine the complex challenges and opportunities presented by data visitation and AI within the ambitious DBAR initiative. The session has the following specific objectives:

1. To examine legal frameworks for cross-border data visitation and AI in the context of data sharing: The session aims to analyze existing legal frameworks and international agreements concerning cross-border data sharing within the Digital Belt and Road infrastructure. Participants will discuss the challenges and opportunities in harmonizing data governance policies to facilitate seamless and secure data flows for sustainable development projects.

2. To promote ethical AI and data visitation practices: The session examines the ways in which ethical and legal considerations in AI algorithms and data visitation practices contribute to the promotion of digital infrastructures and digital highways.

3. To identify and address issues of data ownership and sovereignty: The session will address complexities surrounding data ownership and sovereignty within the Digital Belt and Road initiative. Participants will explore strategies to address issues related to data control, access rights, and sovereignty concerns to foster international collaboration while respecting the rights of individual nations.

4. To facilitate interoperability and data standardization: An important objective is to discuss data interoperability and standardization challenges to enable seamless data exchange and analysis across diverse systems and stakeholders. Participants will explore ways to establish common data standards and protocols, promoting efficient data sharing and enhancing the impact of sustainable development initiatives.

5. To develop recommendations for responsible data sharing practices within DBAR: The session seeks to examine pathways for the development of actionable recommendations and guidelines for responsible data sharing within the Digital Belt and Road infrastructure.

By addressing these objectives, the session aims to provide valuable insights and actionable strategies for policymakers, legal experts, technologists, and ethicists, fostering an environment that supports data sharing and AI in a responsible and ethical manner within the Digital Belt and Road initiative for sustainable development.

Session Agenda

This 2-hours session will bring together experts from data and AI policy, data and AI science, data and AI ethics, and those involved in crisis management. It includes presentations and interactive discussions with the audience that explore ethical data governance, AI applications, challenges, and actionable strategies for leveraging data during crises to achieve the UN SDGs.

Time	Topic	Presenter
15:30	Introduction to the Session	**Francis P. Crawley**, Chairman, International Data Policy Committee, CODATA; Co-Chair, EOSC-Future/RDA

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Time	Topic	Presenter
		AIDV-WG; GCPA & SIDCER; Leuven, Belgium
15:40	Examining the role of ethics and law in fostering the digital international scientific collaboration needed for fostering sustainable development	**Professor Perihan Elif Ekmekci**, MD, PhD, Head of History of Medicine and Ethics Department, Deputy Dean of the School of Medicine, Head of the Institutional Review Board, TOBB University of Economics and Technology; Co-Chair, EOSC-Future/RDA AIDV-WG; Ankara, Turkey
15:55	An examination of the legal frameworks for data visitation and AI supporting data sharing across digital highways	**Alexander Bernier**, Centre of Genomics and Policy, McGill University, Montreal & Doctoral Candidate, Faculty of Law, University of Toronto, Canada [online]
16:10	Rethinking human rights and ethics as pathways for sustainable development	**Professor Natalie Meyers**, Professor of the Practice Lucy Family Institute for Data & Society, University of Notre Dame, USA & CODATA Working Group on the role of integrity in data and AI science, ethics, and policy (Integrity-WG) [online]
16:25	**Audience/Panel Discussion** How should DBAR operate across varying legal and ethical frameworks? What are the largest obstacles to data sharing within DBAR? What is needed to integrate local, national, and regional data sharing into the global vision of DBAR?	**Moderators:** Francis P. Crawley Professor Perihan Elif Ekmekci
16:45	Examining the role of consent in data and AI for international cooperation in achieving the Sustainable Development Goals	**Gauthier Chassang**, Lawyer in EU and International Law, National Institute of Health and Medical Research (INSERM), Toulouse, France [online]
16:55	The role of data and AI oversight for promoting data sharing in sustainable science	**Professor Valery Sokolchik**, Belarusian Medical Academy of Postgraduate Education, Minsk, Belarus [online]

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Time	Topic	Presenter
17:05	**Audience/Panel Discussion** What distinct advantages does DBAR bring to addressing the challenges of data sharing on a global scale? How can DBAR address and overcome the wide variety of legal frameworks affecting data sharing and AI? What steps are needed to develop recommendations for responsible data sharing practices within DBAR?	**Moderators:** Francis P. Crawley Professor Perihan Elif Ekmekci
17:25	Summary of the session	Professor Perihan Elif Ekmekci
17:30	Close of the session	

Biographies

Alexander Bernier, Centre of Genomics and Policy, McGill University, Montreal & Doctoral Candidate, Faculty of Law, University of Toronto, Canada

Alexander Bernier is pursuing a Doctor of Juridical Science (S.J.D) at the University of Toronto, Faculty of Law, under the supervision of Professor Gillian Hadfield. His doctoral research concerns the effects of data regulation on self-assembled biomedical data commons, and law and economics perspectives on the governance and oversight thereof. Alexander obtained a Master of Laws from the University of Toronto Faculty of Law. At the Centre of Genomics and Policy, his research is primarily concerned with data protection law, open science, and research infrastructure. Alexander Bernier is a member of the European-Canadian Cancer Network's Internal Ethical Board, and is the Ethics Officer of the Canadian Open Neuroscience Platform Ethics and Data Governance Committee.

Gauthier Chassang, Lawyer in EU and International Law, National Institute of Health and Medical Research (INSERM), Toulouse, France

As a lawyer at INSERM since 2010, Gauthier is specialised in human rights, EU law, ethics, ICTs in health, AI, governance and privacy protection applied to health research activities. Based at the Toulouse Faculty of Medicine, he actively participates to French expertise and counselling services at INSERM and in the context of the Genotoul Societal Platform "Ethique et biosciences" as well as in EU and international research projects.

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Francis P. Crawley, Chairman CODATA International Data Policy Committee (IDPC) and and Co-chair of the EOSC-Future/RDA Artificial Intelligence and Data Visitation Working Group (AIDV-WG)

A philosopher specialized in research ethics, integrity & methodology as well as in data/AI ethics & law. Expertise in EU, US, international and country-specific ethics, law, and patient and community interests in health-related research. Strong experience working closely with patients, communities, researchers, and policymakers across disciplines. domains, and geographic regions in establishing consortia, developing patient registries, contributing to the development of biobanks, drafting data management and data protection plans, and contributing to building data repositories. He is a Global Fellow in Medicines Development Program (GFMD) and currently a member if the Ethics Working Group of the International Federation of Associations of Pharmaceutical Physicians and Pharmaceutical Medicine (IFAPP).

Perihan Elif Ekmekci M.D. Ph.D

TOBB ETU Medical Faculty. Dr. Perihan Elif Ekmekci is a member of the CODATA International Data Policy Committee (IDPC) and Co-chair of the EOSC-Future/RDA Artificial Intelligence and Data Visitation Working Group (AIDV-WG). She has expertise in the fields of medicine, ethics, and history of medicine. She holds an M.D. and Ph.D. and is currently affiliated with the Department of History of Medicine and Ethics at TOBB University Medical Faculty, Ankara, Turkey. Dr. Ekmekci's educational background includes a medical degree from Ankara University Faculty of Medicine, as well as a Ph.D. in Medical Ethics and History of Medicine from Ankara University. She has held positions as an Assistant Professor and currently serves as the Head of the History of Medicine and Ethics Department and Deputy Dean at TOBB University Medical Faculty, the Head of the International Chair in Bioethics/WMA Cooperation Center (formerly UNESCO Unit for Bioethics) o, member of Open Science Committee of TOBB ETU, and as the Chair of the Institutional Review Board (IRB) of TOBB University Medical Faculty. Dr. Ekmekci is affiliated and is an active member of several professional societies and scientific boards, including the World Association for Medical Law, the European Network of Research Ethics Committees, European Open Science Cloud Task Force, the International Forum of Teachers (IFT) of the International Bioethics Chair in Bioethics, and the Research Data Alliance.

Natalie Meyers, Professor of the Practice Lucy Family Institute for Data & Society, University of Notre Dame, USA

Natalie Meyers serves as a Professor of the Practice in the Lucy Family Institute for Data & Society at the University of Notre Dame in the USA and holds an appointment as a Computational and Data Science Research Specialist at the San Diego Supercomputer Center University of California San Diego (UCSD) USA. Meyers' research focuses on FAIR data management and software preservation for model driven research. Prior to joining Notre Dame, she was co-owner of Content Innovations, LLC, a California certified woman-owned small business in San Francisco. Meyers was previously a programmer analyst and GIS specialist at UC Berkeley where she also received her Masters in Library and Information Systems (MLIS) with a concentration in Systems Analysis and Database Design. She also holds an MA in English from University of Wisconsin, Milwaukee.

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Professor Valery Sokolchik, Professor of Bioethics, Belarusian Medical Academy of Postgraduate Education; Minsk, Belarus

Belarusian Academy of Science (Institute of philosophy), Belarusian Medical Academy of Postgraduate Education (Department of Public Health and Healthcare), Head of the Republican Centre of Bioethics – Minsk, Belarus. Professor Sokochik conducts trainings on bioethics, medical ethics, methodology of science and logic with medical doctors, medical researchers, members of research ethics committees, healthcare managers and PhD students. Scientific interests – bioethics and medical ethics, methodology of science, open science approach and research ethics committees (REC, IRB, IEC). Since 2017 she is the team-leader, manager, coach of several international and national projects devoted to the education in bioethics and human rights, supported by UNESCO, WHO, Council of Europe. She is also regularly engaged in scientific research projects (Raul Wallenberg Institute, Sweden, WHO/TDR, UNESCO, RDA, Belarus etc.). She received her studied at the Moscow State University and received her PhD in Philosophy from the Belarusian State University. Dr. Sokochik is a member of the Research Ethics Committee (REC) of Belarusian Medical Academy of Postgraduate Education, member of the RDA (Research Data Alliance), member of Editorial Board of the Journal Medical Ethics (Russia); 2016 – 2020 Deputy-chairperson of the Committee on Bioethics of the Republic of Belarus; 2017 – 2020 National expert (Belarus) at DH-Bio (Council of Europe), and the longstanding representative of the National Bioethics Committee to the International Congress of Ethics Committees.