

The Sixth Session of Lakeside Talk on Computational Law

——Legal and Ethical Rules in Applications of AI to Health and Judicial Fields

The Sixth Session of Lakeside Talk on Computational Law was held at the Law Library of Tsinghua University on May 22. During this session, the experts and scholars in law fields focused on “Legal and Ethical Rules in Applications of AI to Health and Judicial Fields”. Since the workshop was supported by the French Embassy, it was also seen as a part of the Fifth Sino-French Legal and Judicial Exchange Activities.



Associate Professor LIU Han, Assistant to the Dean of Tsinghua University Law School, hosted the workshop. And Professor Anne-Marie Duguet was invited to the workshop as the main speaker. She is a Coordinator of Ethics of Digital and Robotics of UNESCO CHAIR on Ethics, Science and Society and an Emeritus Senior Lecturer of Paul Sabatier University. Professor SHEN Weixing, Dean of Tsinghua University Law School, Director of the Institute for Studies on Artificial Intelligence and Law of Tsinghua University has given the opening speech.

Highlights of the Workshop

Professor SHEN Weixing announced the Chinese Version of *the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment* issued by European Commission for the Efficiency of Justice (CEPEJ) in his welcome speech. He also pointed out that the formulation of the European Ethical Charter was quite meaningful when all the countries were having an extensive discussion on the basic principles governing AI. The Chinese Version of the Charter was the joint effort of the Computational Law Program and the Institute for Studies on Artificial Intelligence and Law of Tsinghua University. It demonstrated that scholars were reacting quickly and paying high attention to the study of AI in judicial fields.

Professor Anne-Marie Duguet reported on “Legal and Ethical Rules in Application of Artificial Intelligence in Health and Justice”.

Firstly, she explained the intimate connection between Data and AI by introducing the National Data Health System (SNDS) in France, which brought together the data of the social security in the sheets of care (SNIRAM), the data of the hospitals (PMSI) and the register of medical causes of death (CepiDCde the Inserm). The use of alphanumeric code ensured all the data to be pseudonymised, so that SNDS has become a key node in promoting health data access, trusted-platform sharing and national AI strategy.

Secondly, professor Anne-Marie introduced *the Ethical Principles of Artificial intelligence in Health (Report 1572 of National Assembly)* released on January 15, 2019. It emphasized on Digital Human Guarantee, explicability of medical solutions proposed by computers and importance of effective informed consent of the person.

Lastly, she illustrated the Five Principles of *the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environment* in detail, namely principle of respect for fundamental rights, principle of non-discrimination, principle of quality and security, principle of transparency and principle “under user control”.

GUO Rui, Associate Professor of Renmin University Law School, gave a speech on “Ethical Risks of AI Application and the Governing Mechanism”. He introduced two principles of national technology standardization process binding AI application from ethical perspective. One focuses on the benefits of human beings in AI research and deployment, the other clarifies responsibilities, namely who to blame in AI application (see *AI Standard White Paper* issued by China Electronics Standardization Institute in May).

ZHANG Kun, CEO of the Beijing EVERCARE Medical Beauty Hospital and Vice-Chairman of China Information Industry Association Medical and Health Industry Branch (CIIA-MHI), reported on “the Boundaries of Innovative AI Technology used in Clinical Practice”. His speech could be concluded as four parts:

Firstly, it is an overall trend that AI will eventually replace partial of the human being’s work. For example, reform in the medical field is doomed to happen when manually recorded data accumulates to a certain extent to enable digital analysis of diagnosis and treatment.

Secondly, there are still a long way to go before applying AI to the medical field. Huge work needs to be done in analyzing specific circumstances like business optimization, preliminary clinical research, clinical management, disease prediction and etc.

Thirdly, the whole medical system is not mature enough to embrace AI application. More rules and regulations should be set up in many aspects, such as using Electronic Medical Record (EMR), data and privacy protection, technology access of medical product, qualifications and trainings of medical staff, information asymmetry between doctors and patients, health equity studies.

Finally, a more open discussion mechanism on promoting the judicial and ethical rules of using AI in the clinical field should be established.

SU Lingyun, Senior Director of Alibaba Health Information Technology Limited (Ali Health), elaborated on the topic of “Explorations done by Ali Health on AI in Health Care”. He argued that AI is widely used in different business units of the E-Commerce Platform of Ali Health, Online Medical Care, Consumer & Healthcare and Wise Information Technology of 120 (WIT120).

He mainly introduced the AI application carried out by Ali Health in terms of WIT120. For one thing, the product “ET Medical Brain” provides assistance to varies kinds of medical practice, such as structuring medical text, constructing mapping knowledge domains, recognizing medical image and voice and identifying physical signals. For another, as WIT120 goes intelligent and service-oriented, AI application may access to other health care fields other than providing medical treatment.

LI Ming, Chief Medical Advisor of IBM Watson Health Greater China Region and Vice Chairman of the Youth Committee of Peking Health Information Technology Association, spoke on “Cognition and Ethical Thinking of Medical AI Application”.

At first, he quoted a real case of using Intelligent Image System to diagnose tuberculosis to trigger the invited guests’ insights into AI application.

Then, he cited the Hippocratic Oath to analyze the three basic principles of medical ethics, namely putting patients’ benefits as the first priority, respecting patients and being partial.

He also expressed his opinion on how to cope with ethical problems while importing new medical technologies and how to secure privacy protection, minimize biases and determine the level of transparency in the context of the rules and regulations made by American Medical Association (AMA), American Food and Drug Administration (FDA) and National Medical Products Administration of China (NMPA).

In the end, he summarized that public concerns on AI application were mainly about medical reliability and credibility. And he predicted that AI will continuously affect responsibility deciding in medical malpractice, data security and clinic decision-making.

CHEN Zihan, a lecturer from School of Law, Beijing Institute of Technology, discussed the effect that technologies have on legal research in terms of rights and benefits of genetic information from her own study experience in France. She has acquired her Doctoral Degree of Law in University of Toulouse.

Associate Professor LIU han shared his thoughts on responsibility distribution concerning AI as a legal subject.

The speeches arouse interests among presented guests and audience. They actively raised many issues on the application of AI, such as bias reduction, measures to prevent privacy disclosure, buyer personas identification, cross-border data exchange and governing principles.

Professor SHEN Weixing concluded from the points of algorithm fairness and non-discrimination principle. In most of the application scenarios of AI, each patients' gender, educational background, physiological factors and gene defects will be exposed in the process of Big Data Analysis. This is equally true of medical field. In order to avoid discrimination, some modification should be done to arithmetic measures. Further thought on legal principles is needed to meet the requirements of fairness and non-discrimination.

In the end of the Workshop, Dean SHEN expressed his deep gratitude to all the invited guests for giving interesting speeches and bringing inspirations. He wished a reunion in Tsinghua to talk more cutting-edge theories and practical experience on cross-field studies of medical, technological and legal areas.