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ABSTRACTS BOOK

DIGITAL TECHNOLOGIES IN THE COVID-19 PANDEMIC

A TRANSNATIONAL DIALOGUE BETWEEN GERMANY AND JAPAN

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SPEAKER: Prof. SATOSHI KODAMA, PhD

ETHICAL CHALLENGES OF THE COVID-19 PANDEMIC: A JAPANESE PERSPECTIVE

Prof. Satoshi Kodama, PhD, University of Kyoto

The lecture focuses on how Japan experienced the Covid-19 pandemic, presenting the various challenges that the country faced and the measures that the national government enacted to stop the spread of the virus. Contrary to other countries, the Japanese government lacks the legislative power to enforce a strong nationwide lockdown, and the declaration of the state of emergency is the only way for the prefectures to have the authority to issue effectively binding instructions. Then, that opens the possibility to explore the pandemic from the perspective of disaster preparedness and management, the ethical challenges that these events pose, and how the pandemics relate to other crises. Furthermore, the Covid-19 pandemic has been characterized by the increasing use of digital technologies to fight and control the spread of the illness. This reality also comes with a set of unique ethical challenges, and this presentation aims to present the ones that Japan as a country faced. Finally, the discussion will touch on the stress that the spread of the virus and an increase in the hospitalization rate might create. In particular, it will focus on the theme of ICU triage and the ethical debates that go together with it.

SPEAKER: Dr. phil. SUSANNE BRUCKSCH

THE LOCALE OF JAPAN. APPROACHES TO THE SOCIAL STUDY OF (DIGITAL) HEALTH TECHNOLOGIES

Dr. phil. Susanne, Brucksch, German Institute for Japanese Studies (DIJ)

Digital Health Technologies gained wider prominence during the Covid-19 pandemic when physical distance became crucial and the need for health services pressing. However, technical approaches and resulting concerns not only vary in accordance with their professional, disciplinary or organizational surroundings, but also in specific locales such as Japan. Therefore, this talk elucidates how we can approach health technologies in their various social contexts when a particular locale is included. This enables us to systematically study the making and application of health technologies as a co-constitutive process of social and technical factors.

SPEAKER: Prof. Dr. phil. ROBERT RANISCH

DIGITAL TECHNOLOGIES DURING THE COVID-19 PANDEMIC: ETHICAL PERSPECTIVES FROM A EUROPEAN PERSPECTIVE

Prof. Dr. phil. Robert Ranisch, University of Potsdam

The Covid 19 pandemic has spurred digitization in some European countries such as Germany. However, the increasing use of technology for pandemic management, but also in healthcare, is accompanied by public concerns about ethical issues and privacy. In particular, the question arises whether European countries have succeeded in fulfilling their agenda of responsible research and innovation of digital technologies even under pandemic conditions. Starting from a German and European perspective, the lecture will provide some reflections on ethical aspects and in particular on the importance of trustworthy data technologies.

SPEAKER: Prof. Dr. phil. ANN-KATRIN VOIT

BRAVE NEW WORLD: HOW DOES THE ECONOMIC SUPPLY AND DEMAND SIDE CHANGE(D) DUE TO TECHNOLOGY DEVELOPMENTS AND HOW WILL THE MARKETS REACT IN THE FUTURE?

Prof. Dr. phil. Ann-Katrin Voit, FOM University of Applied Science for Economics and Management

The last few decades have been shaped by technology and digitization. We stand by a new age in which only one thing will be constant: change. Advanced digitization, especially smart solutions and robotics will change both supply and demand significantly. New goods are constantly appearing and displacing existing markets, while the demands on employees will continue to rise at the same time. This will result in both opportunities and risks: It will be benefical to constantly increase prosperity, health and supply due to technical possibilities. At the same time, it becomes a global competitive factor when countries can draw on a well-educated population. The major risk of this development can be distributive justice, which is negatively influenced by the change.

MODERATOR: DAVIDE VIERO, M.A.

ICTs AND WEB TOOLS TO MANAGE CRISES: BETWEEN INFORMATION AND ENGAGEMENT

Davide Viero, M.A., Ruhr-University Bochum

The COVID-19 pandemic and the enforced rules aimed at stopping the spread of the virus have brought radical changes to social life worldwide. Quick communication and promotion of health and safety protocols have been fundamental, with digital technologies and ICTs playing a vital role in keeping people connected and allowing rapid policy decisions.

High reliance on web tools, websites and social media for information characterises modern society and defines information-seeking behaviours during the pandemic. However, that has favoured the spread of an overload of information, including fake and unclear news. This phenomenon, known as infodemic, further impacts an already worried public and puts pressure on how governments handle the transition and approach to digital communication.

With the increasing hunger for information on the virus, many governments established direct lines to reach the communities and websites and digital platforms to track the impact of COVID-19 or broadcast health protocols and news. Many governmental functions further shifted towards digital formats in the first pandemic stages, strengthening and testing the existing e-governing platforms and their ability to provide services and up-to-date information to the public.

Regardless of crises, informing citizens of their rights, responsibilities, and options is essential to legitimise citizen participation, which is fundamental to face crises. However, partial application and mono -directional flow of information limit possibilities for engagement and the development of fitting solutions. In this workshop, we will discuss the degree to which communities should and have been given a chance to react, provide feedback, and participate in designing adequate solutions. Through debates and practical simulations, we will do that by focusing on the role of information and communication technologies during the pandemic at different levels of governance and how governmental websites may provide chances for open and two-sided communication, consequently increasing e-participation possibilities.

PRESENTER: JUNKO AMI, M.Eng.

Co-authors: Dr. eng. Yanbo Pang; Dr. eng. Takehiro Kashiyama;
Prof. Dr. phil. Takashi Okumura; Prof. Dr. eng. Yoshihide Sekimoto

INFECTION RISK ESTIMATION USING LOCATIONAL INFORMATION WITHOUT PRIVACY VIOLATION

Junko Ami, M.Eng., University of Tokyo
Dr. eng. Yanbo Pang, University of Tokyo
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Prof. Dr. eng. Yoshihide Sekimoto, University of Tokyo

In order to control a pandemic, it is important to accurately extract and isolate people who may have come into contact with infected patients. As a countermeasure against the pandemic caused by COVID-19, contact tracing applications, that can detect a history of contact with infected patients, have been introduced in many countries. However, the spread of COVID-19 has not yet been under control.

In the presentation, an alternative approach to contact tracing applications as a potential method to control pandemics is introduced. The computation of infection risk via confidential locational entries (CIRCLE) is an approach for contact tracing with privacy protection. It evaluates the infection risk of people using locational information of their mobile phones and confidential information of infected patients with due regard for their privacy.

In the CIRCLE method, histories of location data of infected patients collected by public health authorities are provided to mobile phone carriers under a nondisclosure agreement. Mobile phone users request their mobile phone carriers, which have their locational information, to calculate their contact risk based on the provided location data of infected patients. Results are sent back to mobile phone users and they are asked to consult with public health authorities if the contact risk is considered high.

The CIRCLE method is evaluated in comparison with Bluetooth-based contact tracing applications developed for COVID-19. As for their properties of detecting contact with infected patients, the CIRCLE method has high sensitivity, but it has low specificity. In contrast, Bluetooth-based contact tracing applications have high specificity, but sensitivity is compromised. From the perspective of privacy protection, the CIRCLE method provides a high level of privacy protection. The results suggest that the CIRCLE method shows one example of the reasonable balance between privacy protection and properties of detecting contact with infected patients.

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PRESENTER: Dr. phil. GABRIEL BARTL

THE ACCEPTABILITY OF MATHEMATICAL MODELING IN THE CONTEXT OF COVID-19

Dr. phil. Gabriel Bartl, Centre Marc Bloch, Humboldt University of Berlin

In comparison to the category of acceptance, which strongly refers to the attitude and action level, acceptability hides a normative level (Lucke 1995). In this respect, acceptability covers the cultural dimension together with the values and norms embedded in it and includes an ethical dimension. In this respect acceptability in the context of digital technologies for handling the Covid-19 pandemic is not restricted to privacy issues but also encompasses questions such as transparency, fairness and legitimacy. This phenomenon is evident, for example, with regard to mathematical modeling, which has played a prominent role in the propagation of the pandemic until now.

For the case of pandemic models the following aspects are to be debated. First, there is the question of which options are represented by models at all. Eyert, for example, reports that until June 2020, no model existed that analyzed the course of the pandemic under the conditions of family-friendly lockdown measures (Eyert 2020). Furthermore, the innovation of technologies is to be understood as a social process, which leads to technologies being normatively charged constructs both in the context of their creation and in the context of their use, which cannot comply with the postulate of neutrality. Moreover, the supposed uniqueness of number-based models obscures contingency. Technological solutionism thus carries the risk of "counterproductive effects of technologies" (Ammicelle 2015) if the spectrum of possibilities of action is insufficiently captured. In addition, technologies as black boxes touch on issues of transparency when opaque operating model assumptions are not made explicit. Ultimately, this also means that possible discrimination potentials are not disclosed.

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Eyert F. (2020): Epidemie und Modellierung. Das Mathematische ist politisch. In: WZB- Mitteilungen, Heft 168, 82-85.

Lucke D. (1995): Akzeptanz – Legitimität in der „Abstimmungsgesellschaft". Opladen: Leske + Budrich

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PRESENTER: M.A. KATHARINA, DALKO

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COMMUNICATION AS A KEY TO CO-CREATION: TRANSDISCIPLINARY METHODS TO INTEGRATE PATIENTS INTO PARTICIPATORY TECHNOLOGY DEVELOPMENT AS AN ANSWER TO LONG-COVID SYNDROME

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In order to develop digital assistive technology (DAT) for health- and nursing care, a development process closely adapted to those affected by the technological intervention is necessary. Additionally, participatory approaches involving patient groups have to apply the principles of evidence-based medicine (EbM).

A major challenge, however, is the meaningful involvement of patients as users. Co-Creation as a concept of participatory technological development therefore aims to actively involve patient groups as equal partners in a collaborative process. Still, this approach brings new hurdles and risks to consider when integrating vulnerable individuals into research projects. That includes, e.g. the overcoming of hierarchical barriers and differences in levels of specific background knowledge between professionals and patients by means of shared- or participatory decision-making.

In case of COVID-19 we face additional issues while integrating patient groups dealing with post-acute symptoms caused by Long-COVID Syndrome into an ethical, participatory development process of DAT. In addition to limited knowledge regarding possible Long-COVID symptoms in general, the currently observed symptoms cover a broad spectrum from dyspnea to neurological abnormalities and other extra-pulmonary manifestations of COVID-19. This leads to the question of how devices should be designed in order to adequately address conditions and circumstances to foster patients selfcare-competencies after the acute phase of a COVID-19 infection. We therefore argue that patient participation in a process to develop technical innovations is even more crucial in that context. In the case of Long-COVID, patients themselves are still inexperienced in dealing with the post-inpatient phase of illness, as well as they have rarely organized themselves in official self aid groups.

This paper therefore asks how to access and involve Long-COVID patients into a co-creative technology development of DAT. Which methods are applied to address these issues in Germany and Japan?

We argue, that a transdisciplinary approach to co-creation focusing on collaborative and inclusive communication, helps to overcome above mentioned challenges. Respective methods put an emphasis on collective knowledge creation and shared-decision making, the creation of safe spaces as well as a promotion of inclusive communication. This means, rather than merely including various relevant perspectives, transdisciplinary approaches aim to foster communication as a process of social transformation. Co-Creation as a transdisciplinary concept hence provides a promising frame for a sustainable development of DAT in the context of Long-COVID Syndrome.

PRESENTER: NIKLAS ELLERICH-GROPPE, M.A.

"A SIGNAL OF SOLIDARITY VIA BLUETOOTH"? AN ETHICAL ANALYSIS OF THE PUBLIC DEBATE ON THE CORONA-WARN-APP IN GERMANY

Niklas Ellerich-Groppe, M.A., University of Oldenburg

In Germany, the use of the corona-warn-app was framed as a solidary contribution to the collective endeavor of infection control right from its introduction. By tracing contacts and warning the anonymous contact persons of an infected individual, the app was supposed to support the interruption of infection chains. Accordingly, it was interpreted as an opportunity for every user "to send a signal of solidarity via Bluetooth" (Witting 2020; translation NEG).

Consequently, "solidarity" became a prominent, but heterogeneously used normative category in the public debate on the corona-warn-app, continuing a long socio-political and socio-ethical tradition of this concept in Germany. Calls for the voluntary use of the app as well as warnings against the effects of de-solidarization, such as the exclusion of potentially ill people, were based on the idea of solidarity, but interpreted it in very different ways. This poses the empirical question of which notions of solidarity can be identified in the still ongoing discourse on this prominent digital technology in the COVID-19-pandemic. Furthermore, these notions are in need of ethical evaluation to clarify and discuss the normative meaning of the concept of solidarity in public debates.

Against this backdrop, I offer an exploratory ethical analysis of notions of solidarity in the public debate on the corona-warn-app in Germany. First, I refer to pertinent cases from the public media and political discourse in Germany to develop a systematic matrix of ideal-typical understandings of solidarity in the current debate. These "moral paradigms" range from more individualistic approaches emphasizing personal responsibility to more collective notions that focus on a charitable attitude towards the most vulnerable members of a society. Each of these paradigms is shaped by specific socio-cultural contexts, e.g. the tradition of the German welfare state. In a second step, I suggest four minimum conditions that have to be fulfilled for a legitimate use of the concept of solidarity (Ellerich-Groppe 2021). These conditions (openness, malleable inclusivity, appropriate cost-benefit-ratio, normative dependence) form the basis for an ethical evaluation of the identified notions of solidarity. Based on this empirical exploration and ethical evaluation, I discuss under what conditions the corona-warn-app can be understood as a solidary contribution to pandemic control.

The results of my analysis contribute to the discourse on digital technologies in the COVID-19-pandemic and provide an empirically-informed, context-sensitive perspective on solidarity, that is also suitable to assess digital technologies in healthcare in general.

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PRESENTER: MARIANNE FRANZISKA JUNG, M.A.

DIGITAL TRANSFORMATION IN GERMANY AND JAPAN: NATIONAL DISCOURSE ON ETHICAL QUESTIONS DURING THE COVID 19 PANDEMIC

Marianne Franziska Jung, M.A., University of Vienna

Today, post-industrial societies are undergoing two major changes: digital transformation and demographic ageing. The European Commission President Ursula von der Leyen has defined these two phenomena as "mega-trends" (a third being climate change) that are expected to transform European societies. Since the Covid-19 outbreak, governments invest more than ever in the ICT and 5G market, accelerating the speed of digital transformation. In Japan, we find a society that is more aged, more digitally literate, with a higher household penetration of the internet and smart home applications, compared to Germany, where society is labeled to be more skeptical. But is this really the case?

The aim of this research is threefold: First, how has the digital market expanded during the peak of the pandemic (2020-2021), and what kind of new devices and technologies have been introduced in Japan and Germany respectively? Second and more importantly, can we discern a difference in the national discourse on ethical values or concerns attached to these new technologies? Third, are ethical concerns and the usefulness of these technologies for elderly people discussed adequately?

To answer the research questions, newspaper articles from English-speaking daily newspapers (that are freely accessible) from Japan and Germany, are analyzed respectively. The same search queries will be made in the online archives of the newspapers with keywords that point to e.g., robotic(s), AAL, IoT, Avatar, AI, Smart Home, and similar or related keywords. The period covered is from 2020-2022. The hypotheses are based on the researcher's preliminary research insights and read as follows:

H1: The quantitative output of technical devices is higher for Japan than Germany.

H2: Ethical issues are addressed more in Germany than in Japan.

H3: There is no adequate discussion of the role of the elderly in this regard in both countries.

Hence, the outcome of the content analysis will quantitively show how the digital market has expanded and grown in Germany and Japan during the Covid-19 pandemic. And secondly, qualitative content analysis will bring to light whether ethical questions concerning the devices as such, as well as in the context of an ageing society, are adequately discussed to discern national trends of public discourse.

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PRESENTER: M.Ed. ANDRÉ, KUKUK

DIGITALIZATION RESISTANCES AMONG EMPLOYEES IN THE COVID-19-PANDEMIC: OPPORTUNITIES AND LIMITATIONS OF THE DIGITAL TRANSFORMATION FROM THE PERSPECTIVE OF GERMAN EMPLOYEE REPRESENTATIVES

André Kukuk, M.Ed., University of Wuppertal

Today, the digital change is reaching almost all areas of social, political and economic activity at varying speeds. While comparatively slow forms of digitalization processes are noticeable in a few contexts (i.e., parts of the manufacturing industry), an exponential amount of changes must be assumed for a large number of other sectors (i.e. IT, electronics, banking and insurance, media). More and more workplaces are increasingly influenced by digital technologies, which are driving the upheaval triggered by extensive computerization in the form of com-plex software programs, artificial intelligence, robotics and the use of big data. A trend that has clearly acceler-ated, especially regarding the consequences of the COVID-19 pandemic. Under the conditions of industrial and mid tier based "Work 4.0" (Rump/Eilers 2017), all employees are more than ever required to use future technol-ogies as regular work equipment. Only those who are prepared to adapt to technological progress through per-sonal commitment in the private sphere or through Continuing Vocational Training in professional settings will be able to maintain their employability in the long term. The efficiency thinking of modern business in the digital transformation thus brings to the fore a logic of self-exploitation that increasingly seems to be all-encompassing from which hardly any employee in Germany can escape today. However, the consequences seem even more dramatic when employees refuse to accept digital change processes in their professional lives and when they try to defy dealing with new technologies - whether on a machine- or software-supported level.

Based on existing findings respecting resistances in educational contexts (e.g., Bolder/Hendrich 2000; Faulstich/Grell 2005; Holzer 2017), this article presents initial results of a qualitative study in which works and staff council members from various sectors were surveyed on digitalization-related changes in occupational work and on possible employee resistance to the use of digital media in vocational contexts. The article focuses on the extent to which the COVID 19 pandemic has contributed to an expansion and diversification of resistances through an acceleration of digital changes, and it asks which influencing factors can be named as relevant from a vocational pedagogical perspective to strengthen or reduce digitalization resistances in company contexts. It can be shown that new social and occupational challenges have arisen which are characterized both by individual resistance at the level of company employees and by collective resistance at the level of employee representa-tives. Thereby it is also the resistance of employees and their representatives that makes it essential to constantly re-evaluate and negotiate the limits of the use of digital technologies in the workplace environment, in order to balance the tension between increased possibilities of workload reduction and excessive demands (the dissolu-tion of work boundaries), but also to reduce new opportunities of misuse (steady monitoring/control).

Bolder A., Hendrich W. (2000): Fremde Bildungswelten. Alternative Strategien lebenslangen Lernens. Opladen: Leske+Budrich.

Faulstich P., Grell P. (2005): Wiederständig ist nicht unbegründet. Lernwiderstände in der Forschenden Lernwerkstatt. In Faulstich P., Forneck H.J., Grell P., Knoll J., Springer A. (Hrsg.): Lernwiderstand - Lernumgebung - Lernberatung. Empirische Fundierungen zum Selbstgesteuer-ten Lernen. Bielefeld: W. Bertelsmann, 18-92.

Holzer D. (2017): Weiterbildungswiderstand. Eine kritische Theorie der Verweigerung. Bielefeld: transcript.

Rump J., Eilers S. (Hrsg.) (2017): Auf dem Weg zur Arbeit 4.0. Innovationen in HR. Berlin: Springer Gabler.

PRESENTER: Dr. phil. HARALD KÜMMERLE

CONTEXTUALIZING DATA PRACTICES IN JAPAN DURING COVID-19 PANDEMIC: LOCAL AND GLOBAL ENTANGLEMENTS

Dr. phil. Harald Kümmerle, German Institute for Japanese Studies (DIJ)

This paper relates data-intensive measures for coping with the COVID-19 pandemic in Japan to data technology more generally, in Japan as well as globally. It connects two measures taken during the pandemic to two original concepts of data that feature in Japan's broader digital strategy. The perspective is informed by Science and Technology Studies, particularly by agential realism (Barad 2007).

The first measure of interest is an important element of (what has come to be called) the "Japanese model" of limiting the spread of the virus: the call to avoid situations characterized by the "3Cs" (3 mitsu; closed spaces, crowded places, and close-contact settings). While the strategy of stopping community spread by focusing on cluster infections turned out to be insufficient in late March 2020, the knowledge about the patterns gained from the data regarding infection chains became the foundation for the 3Cs. Small shifts in communication put aside (Tanaka [Shigeto] 2021), warning signs to avoid the 3Cs continue to feature prominently in public life in Japan. The second measure of interest is that of contact tracing using the official application of the Ministry of Health, Labour and Welfare in Japan.

Compared to the original approach with the 3Cs, it may seem very conventional to a European user: like the official tracing app in Germany and several other countries, it uses the official (Bluetooth-based) tracing interfaces of iOS and Android. However, this "privacy-first" approach contrasts with authoritarian China, but also with the liberal East Asian democracies South Korea and Taiwan, where a "data-first" approach to contact tracing was adopted (Fahey & Hino 2020).

Two concepts of data that have originated in Japan serve as points of reference. "Real data" (riaru dēta) concerns a specific mode of gathering and making use of data, exhibiting connections to kaizen. Entangled with nationalist and culturalist discourse, it provides an analytic foundation for creating technoscientific solutions based on a position of (perceived) Japanese strength. Information banks (jōhō ginkō) are institutions that allow for personal data to be used in the broader economy while maintaining privacy and providing a benefit to the user. Although the concept can be traced back into the 2000s when legislation regarding personal data was less developed than today, it has achieved compatibility with EU data protection regulations.

Building on this and emphasizing the natureculture (Haraway 2003) of data practices, the paper argues that digital infrastructure that accommodates risks posed by pandemics cannot be designed independent of its cultural context — nor should it be, if evidence-based policy making is supposed to be effective (Cartwright & Hardie 2012).

Barad K. (2007): Meeting the Universe Halfway: Quantum Physics And the Entanglement of Matter And Meaning. Duke University Press.

Cartwright N., Hardie J. (2012): Evidence-Based Policy: A Practical Guide to Doing It Better. Oxford University Press.

Fahey R. A., Hino A. (2020): COVID-19, digital privacy, and the social limits on data-focused public health responses. International Journal of Information Management, 55, 102181. https://doi.org/10.1016/j.ijinfomgt.2020.102181

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Tanaka S. (2021): "3 mitsu" gainen no tanjō to hensen—Nihon no COVID-19 taisaku to komyunikēshon no mondai—. Tōhoku Daigaku bungaku kenkyūka kenkyū nenpō, 70, 140–116.

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PRESENTER: Dr. phil. CANDICE LOUW

IMPLEMENTATION OF OPEN SOURCE SOFTWARE SOLUTIONS FOR DIGITAL PUBLIC HEALTH IN RESPONSE TO THE COVID-19 PANDEMIC PERSPECTIVES FROM GERMANY AND JAPAN

Dr. phil. Candice Louw, Helmholtz Centre for Infection Research

In response to the coronavirus disease 2019 (COVID-19) pandemic, numerous countries, including the likes of Germany and Japan, initiated, developed and made use of open source software (OSS) initiatives in an effort to minimise the public spreading of the virus. These initiatives indicate the willingness from both German and Japanese governments to support eHealth OSS solutions for public health, however, end user acceptance and willingness to make use of the tools delivered through these initiatives are critical to their success. Fortunately, with OSS solutions, contrary to proprietary (closed source) software solutions, the opportunity exists to engage end users during the entire software development process. This may increase not only the transparency of the software by publishing its source code, but also the influence of the public through interaction with the development team throughout the development process. An opportunity thus exists to engage the public in the co-creation of eHealth solutions in the interest of the greater public good, as opposed to the conventional, private “bad” approach. In this research paper, we subsequently identify and analyse the approaches taken by two such tools developed in Germany (SORMAS - a public health office pulled approach to health data gathering, and the Corona-Warn App – a public pushed approach to data gathering)) and compare it to one such tool developed in Japan (COCOA – a public pushed approach to data gathering). Through a comparative analysis, we identify best practises for OSS solutions for public health as open source co-operations, compared to the conventional, proprietary covert-operations. Research findings indicate that open source platform choice, platform repository structure and community/ecosystem engagement are key elements to consider in open source solution development for public engagement. While these findings act as a guide for further OSS initiatives that wish to involve the public in co-creation of public health solutions, we note that the database where the information process by the software itself is stored, is equally, if not more, important to consider. OSS solutions are thus only as transparent as the digital environment where their processed data is hosted/stored.

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Prof. Dr. Phil. Claudia Müller

TOOLS FOR WORKING AND TOOLS FOR LIVING: TRANSFORMATION OF DIGITAL TECHNOLOGIES IN THE COVID-19-PANDEMIC

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Dr. phil. Katerina Cerna, University of Gothenburg
Fabian Bäumer, B.A., University of Siegen
Tanja Ertl, M.A., University of Siegen
Prof. Dr. phil. Claudia Müller, University of Siegen

This contribution reflects the social relevance of digital technologies in the field “IT for the aging society” based on the research project conducted during the 1st COVID-19 lockdown. Empirical, methodological, and analytical-conceptual considerations resulted from this project allow us to provide evidence on how the facets of resilience and vulnerabilization can advance our thinking about supporting socio-technical infrastructures for aging societies like Germany or Japan. The project “ACCESS” was taking place in Siegen, Germany, and targeted the co-production of a mobile demo kit aimed to improve the digital literacy and everyday appropriation of digital media with and for older people at their homes. Through a series of workshops, a range of current IT products have been explored by a group of 20 older adults.

For the project, a preparatory work phase with elements for enabling older adults to become co-researchers with a group of university researchers had been completed. A new phase of collaboration between the participant groups was about to start when COVID-19 shut down all co-located activities. From here, the project had to develop new forms of distributed collaboration in participatory research settings by transforming the participatory work with older adults from on-site to online practices.

1. We provide observations of appropriation practices of video technologies, which we applied to support the distributed work in the research project settings with the older co-researchers. COVID-19 has forced the project to stop ongoing work and to look for new solutions to continue the research. The attempt was made to transfer on-site into online workshops using common video-mediated systems (Skype, Zoom), however, with a series of severe challenges. Those tools were experienced as “tools for working” and could therefore not be integrated easily into everyday life in the sense of a “tool for living”, especially for (older) persons for whom digital tools are not part of their routines. The usage is framed by micro-practices and situations but also influenced by policies and discourses (e.g., socio-cultural contexts).

2. Our empirical insights and methodological reflections are strongly linked to the current social models and moral boundaries, namely to the question of how older persons should behave in the pandemic situation and what risk potential they face. Here, multi-perspective discourse lines can be observed: if older persons were initially in the foreground as a risk group, with prescribed measures such as physical distancing, the focus was initially on their high vulnerability. On the other hand, many older persons have come through the crisis/lockdown well, sometimes better than younger people, building on their previous experiences with crises. This new discourse points out the high degree of resilience that older people possess and can apply by various coping mechanisms.

PRESENTER: ELISE RACINE, M.A., M.Sc.

USING GERMANY'S CORONA-WARN-APP TO EXPLORE THE ETHICAL CHALLENGES OF DIGITAL TECHNOLOGIES IN TIMES OF CRISIS

Elise Racine, M.A., M.Sc., University of Oxford

The COVID-19 pandemic has vastly accelerated the digitalization of public health practices (e.g., contact tracing, patient triage) and fostered a new class of pandemic-related technological solutions aimed at surveilling, predicting, and controlling COVID-19's spread. Many of these tools, including various mobile applications, have been used for contact tracing or the process of identifying the individuals with whom an infected person has recently had contact. Contact tracing is an important communicable disease control measure and has been essential to stopping the transmission of SARS-CoV-2, the disease which causes COVID-19. Digital contact tracing applications have the potential to be more effective than traditional tracking methods and have in many instances been critical in formulating data-driven responses to the crisis.

But largely championed by governments and private companies, these novel digital tools have also resulted in the vast collection and processing of sensitive health information. In doing so, they have raised crucial ethical concerns, particularly around data ownership, government oversight, the potential for heightened digital surveillance post-pandemic, and the balance between individual rights and the public good. In delving into how these innovations have the potential to impact these issues, we will examine not only how public health tools are re-shaping the delineation of private and public digital goods, but how the major actors involved are navigating the transformational implications of such technologies. By engaging in a culturally sensitive dialogue around these topics, we, ultimately, aim to contribute to discussions of the possibilities and limitations of digital public health technologies—with an eye towards discerning the moral boundaries of such tools.

To aid us in this endeavor, we will focus on one tool in particular —the Corona-Warn-App— Germany's contact tracing mobile application. Adopting a case study approach, we will touch on how digital contact tracing technologies have emerged as key solutions to combatting COVID-19 and how this development relates to other digital technologies and trends. As part of this discussion, we will explore the rise of digital contact tracing applications in a German context specifically and how the Corona-Warn-App has evolved to its current iteration. We will also consider the interactions between the various actors involved and how the app is a byproduct of Germany's policy making landscape. Lastly, we will analyze how the topic pertains to other key debates on data ownership, privacy, transparency, trust, governance, and surveillance. Our objective in doing so is to offer a foundation to not only engage in meaningful transnational and interdisciplinary exchanges on the relevance of digital technologies in the COVID-19 pandemic, but develop recommendations and solutions in response to the social and ethical challenges identified.

PRESENTER: TOMOKI SAKATA, M.A.

THE EMPLOYMENT OF TECHNOLOGIES IN THE PANDEMIC ERA: GERMANY'S ETHICAL REFLECTION AND JAPAN'S NATURAL REFLEX

Tomoki Sakata, M.A., University of Bamberg

Despite their common interest in the technical excellency Germany and Japan have different views and mindsets regarding the employment of technologies. This discrepancy that results not from the technology per se but from our notion of it can best be captured by the terms 'reflection' and 'reflex' which are both derived from the Latin word 'reflectere' (literally 'to turn back'), having yet nearly opposite meanings. While a reflection takes a long discursive process, a reflex is spontaneous and somehow arbitrary action towards immediate danger.

Germany together with its EU partners has in the face of surging wave of Covid-19 developed quick test kits and vaccines, whereas the implementation of these technical measures entailed not only warm acceptance but also skeptical denial, represented by numerous demonstrations that took place and are still taking place here and there in Europe. Their main concern is that these countermeasures against the virulent virus could in turn override an individual right to decide what can and what cannot be inflicted upon the subject. The Western notion of technology is in its history dualistic because an unreflective use of it can be disadvantageous and jeopardize the human dignity. The technology is hence subordinated to the ethics.

In Japan such critical reflection did not take root. That's probably because its modernization succeeded quite recently and only partially. The Japanese emulated the know-how but principally disregarded the 'know-what' of technology. Consequently, their approach towards technology is an ad hoc quick response to immanent threat. For example, Japanese grocery stores and supermarkets accelerated the introduction of automated cashing machines to prevent the spread of virus via cash. Or a monetary support was offered to restaurants and cafés for installment of the latest ventilation system. The mobile app for vaccination status was recently introduced nationwide, but is only available for those who have "My Number Card" (social security card, possessed by roughly 40 % of citizens). On the contrary, the control of inbound travelers, where higher risks are involved, is more rigid and arranged by digital apps from its earlier stage.

This leads us to a philosophical investigation into a possible reason for the abovementioned divergence. It was already suggested that the technology that has universal applicability is yet historically and culturally conceived differently in Germany and Japan. The paper wishes to shed a new light on these varying aspects of our concept of technologies, by looking into the relevant literature from 20th and 19th century. Both types of reaction—the reflection and the reflex— can complement each other and fight together against the threat of Covid-19.

PRESENTER: TUGCE UYSAL, M.Sc.

COVID-19 AND THE DIGITAL SECTOR: IS ALL GOLD THAT GLITTERS? TECHNOLOGY ACCEPTANCE, SOCIO-CULTURAL CHALLENGES AND THE EFFECTS ON SOCIETY

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Even before Covid-19, the market for online services was constantly growing, in Germany and worldwide. With global markets and technological developments in recent times, products and services like Netflix, Zoom or digital banking apps became common for lots of people. Since the Covid-19 pandemic the world has shifted even more dramatically, especially in the use of technology to substitute personal services and the stationary supply of goods and services, mainly due to governmental restrictions and risk management. This is especially crucial when it comes to Germany, because of the subordinate valuation of technology in everyday use and high regard for data protection before the pandemic compared to many other countries.

Besides the increasing general demand for technological solutions in a changing world with more and more digitalization, there is also a shift in consumer behavior regarding the use of new technologies. Linked with the user's behavior is the social (in)acceptance of new technologies that relates back to demand itself. The Covid-19 pandemic noticeably leads to more scrutinized behavior in regard to, for example, sustainability and necessity of consumption and customer service claims. These effects differ dramatically when it comes to demographic parameters.

This paper examines why society's demand for online services and the acceptance of new technologies differ from the traditional, local buying behavior and what that means for society and economy. This leads to the positive question of what risks and challenges are involved in that shift, and also the normative question of the societal desirable structure and amount of online markets.

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PRESENTER: Dr. phil. HENK J. VAN GILS-SCHMIDT

TRANSFORMATIVE TECHNOLOGIES: ON CHOOSING DIGITAL TECHNOLOGIES THAT TRANSFORM HOW WE LIVE AND WHAT WE VALUE

Dr. phil. Henk J. van Gils-Schmidt, University of Rostock

The COVID-19 pandemic has expedited the digitalization of many industrialized societies (O'Leary, 2020), causing a surge in new digital technologies has been rapidly disseminated in society. Online communication tools and remote work were introduced in most institutions (e.g., universities and governments) and industries, with transformative effects as consequence. Our lives suddenly revolved around video conference services (e.g., Zoom), collaborative work platforms (e.g., Microsoft Teams), and online ordering via online retailers. In more covert ways, the algorithms. This not only caused overt changes—such as the ways we interact with our family, neighbors, and colleagues—but also in more covert ways, such as the algorithms in the background of these digital tools that shape the digital environments in which we, more and more, live and interact. Moreover, these digital technologies also change how we think about values such as privacy, availability for work or family, and also problematizing these—e.g., regarding what a healthy 'work-life balance' is.

In my paper, I argue that 'transformative (digital) technologies' create an ethical challenge, as we lack a rational decision standard for introducing them into society. To show this, I apply insights from a debate on transformative experiences articulated by L. A. Paul (2014, 2015). The lack results from transformative technologies changing how we live and what we value—in other words, they change our value framework. However, as it is unknown how our value framework will be changed before the introduction of the technology in society at large, as agreed upon by ethicists of technology (see, e.g., Brey 2012), we cannot determine whether we will value the caused changes. Moreover, even if we could predict this, the discrepancy between our current value perspective and our future one undermines the basis for rational choice: our current value-perspective mandates a different option as rational from our future one, and we lack a standard to choose between both value-perspectives.

To overcome this ethical challenge, I propose that, under ideal circumstances, we approach the question of introducing transformative digital technologies as social experiments (van de Poel 2011). Contra van der Poel (2013), the aim of such experiments with emerging digital technologies is not to investigate whether such technologies should be disseminated into society. The wide dissemination of a technology makes it deeply entrenched in society and thus difficult, if not impossible, to pull out—think of controversial technologies such as nuclear energy or algorithms (in their current form). Rather, the aim is the opportunity this gives us to reflect upon the transformative effects of these technologies and, when necessary, steer them in the desirable direction.

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PRESENTER: Dr. phil. KUNHAO YANG

MORE THAN A BIOLOGICAL ISSUE: CO-PRODUCTION PATTERN DURING KNOWLEDGE PRODUCTION OF COVID-19 RELATED CONTENTS IN WIKIPEDIA

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To face the challenges brought about by COVID-19 Pandemic, both governments and individuals need to base their decisions on reliable information. Previous research has pointed out that Wikipedia, a crowd-sourcing online encyclopedia, is playing an important role in sharing the reliable information of COVID-19 Pandemic among the society. In this respect, an important issue is to understand how the editors in Wikipedia generated COVID-19 related contents. In this research, I investigated what types of editors involved in the generation of COVID-19 related contents in Wikipedia by harnessing a large-scale dataset of edit history of Wikipedia editors. By employing machine learning methods and Bayesian statistical methods, I found that 1) there are two groups of editors involved in editing COVID-19 related contents. Based on their previous edit history, one group of editors mainly focused on socio-political contents (referred to as political group hereafter), and the other group of editors mainly focused on scientific, especially biological contents (referred to as scientific group hereafter). 2) The two groups of editors equally contributed to the generation of COVID-19 related contents. Specifically, there was no significant difference in the volume and reliability of contents generated by these two groups. 3) However, the political group mainly contributed to the content generation in the period when COVID-19 had a greater impact on the society (e.g., the period when COVID-19 new cases escalated rapidly, the time point when the COVID-19 vaccination started, and the time point when the discovery of the delta variant were announced). Conversely, the scientific group mainly contributed to the COVID-19 content generation when the situation of COVID-19 Pandemic was alleviated. To interpret the above results, Wikipedia community deemed COVID-19 Pandemic more than a biological issue but also a socio-political issue. Previous research has pointed out that the discussions in the political term have become a main source of the misinformation of COVID-19 Pandemic. However, given the high reliability of the COVID-19 related contents in Wikipedia, the above results implied that discussions in the political term does not necessarily cause the misinformation of COVID-19 Pandemic. The key to preventing misinformation is how to make the political discussions based on reliable evidence (e.g., citations). More importantly, by considering Wikipedia as a platform reflecting the attention of the public, these results implied that it is not enough for the policy makers to only consider COVID-19 Pandemic as a public health issue. When facing the impacts of COVID-19 Pandemic, the public was more concerned about how to understand the impacts of the COVID-19 Pandemic from the socio-political term.

PRESENTER: Esq. SOU HEE YANG, J.D.

A DOUBLE-EDGED SWORD: THE LIGHTS AND SHADOWS OF USING DIGITAL TECHNOLOGIES FOR COVID-19 MANAGEMENT FROM THE COMPARATIVE STUDY OF JAPAN AND SOUTH KOREA

Esq. Sou Hee Yang, J.D., Waseda University

While aiding in effective infectious diseases management, technology can become a source of social injustice and inequality. To control rapidly increasing COVID-19 infection and promote an effective vaccine administration, both South Korea and Japan have been utilizing several technology-based systems and mobile applications. By evaluating the two countries' differing approaches from the legal and social perspective, this research compares the two jurisdictions' use of technology, legal basis, and consequences for noncompliance, and finally, evaluate their problems and shortcomings.

South Korea has actively engaged in the nationwide implementation of digital technologies to manage the COVID-19 pandemic. The systems employing high-end technologies, such as blockchain, have led to well-organized management of self-quarantine, enabled a more straightforward and timely contact tracing, and facilitated a relatively streamlined public implementation of infection prevention measures, including efficient vaccination reservation and verification systems. However, the all-around technology implementation has caused deep social disagreement in South Korea. Opponents to the implementation express fear for potential discrimination against the socially or technologically disadvantaged who are kept out from the benefits of the technology. Moreover, the policy legally requiring the public's use of mobile applications for contact tracing and vaccination verification is criticized for the possibility of causing social exclusion, invading privacy and violating the right to self-determination in terms of both the releases of personal information and medical decision. Others dismiss that the mandated use of technology violates human rights. In their ardent advocacy for the technologies, the proponents argue that the social good and public interest outweigh the minimal discomfort born by individuals who do not take advantage of the technology. The two sides, still unreconciled, continue their debate on the use of technology for COVID-19 management in South Korea.

On the other hand, Japan has implemented several digital systems to keep track of infection cases, manage the medical institutions in terms of their resources and bed availability, and to enable efficient self-quarantine monitoring. Yet, as the technologies have been comparatively limited in impact and requirement for its citizens, fewer evidenced concerns have been raised surrounding the use of technology. Instead, the technology or the systems have been criticized for lack of efficiency, streamlined process, and accuracy. Additionally, the challenge of educating the public about the technologies and their safety to promote the use of the applications has been highlighted.

This research compares the advantages, side effects, and ethical and legal implications of these two jurisdictions' contrasting approaches to technology implementation during the COVID-19 pandemic. Through the analysis, the research aims to contribute to the pertinent discussion of whether the active and optimal use of technology for pandemic management can take place without subverting or compromising significant social values and human rights.