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icmm

13th ICMM Workshop on Military Medical Ethics

Artificial Intelligence and Big Data Ethics in Military and Humanitarian Healthcare

20-22 June 2024 | Hybrid Workshop

Jongny s/ Vevey (Switzerland) and Online

Patronage

Major General Andreas Stettbacher, MD (Surgeon General, Swiss Armed Forces)
Lieutenant General Pierre Neirinckx, MD (ICMM Secretary General)

Scientific Coordination

Dr. phil. Daniel Messelken
ZH Center for Military Medical Ethics

Col David Winkler, MD, PhD
ICMM Center of Reference
for Education on IHL and Ethics

Workshop Organization

Swiss Armed Forces
Medical Services Directorate
Centre of Competence for Military
and Disaster Medicine

ICMM Centre of Reference for Education on
International Humanitarian Law and Ethics

ZH Center for Military Medical Ethics

Scientific Coordination

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ICMM Centre of Reference for Education on IHL and Ethics
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Idea of the workshop series

The idea of the *ICMM Conference Series on Military Medical Ethics and IHL* is to bring people from different backgrounds together, to share their experience and expertise on specific problems or ethical issues with the aim of discussing how to (re)act in future comparable situations. Speakers and participants have their expertise and experience in the fields of military, international humanitarian law, and philosophy, both from academia and practice. The conference itself gives large room for plenary and informal discussions. The plenary lectures shall be published.

Chatham House Rule

The whole workshop shall be held under the "**Chatham House Rule**" to encourage open discussions among the participants and the sharing of information.
This rule reads as follows:

> *When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.*

The Chatham House Rule originated at Chatham House, and it is now used throughout the world as an aid to free discussion. Meetings, events and discussions held at Chatham House are normally conducted 'on the record' with the Rule occasionally invoked at the speaker's request.

SIWF Accreditation

The MME workshop 2024 shall be accredited by the **Swiss Institute for Postgraduate and Further Education in Medicine** (SIWF / ISFM). Participants will receive a certificate and can check with their national institutions if the credit points are accepted by them.

SIWF FMH
ISFM

Thursday 20 June 2024

All times are given in CEST = UTC+2

Session I — What is AI and How is it Regulated Currently

09:00 – 12:00 (CEST/ UTC+2) **Chair: D. Winkler/ D. Messelken**

09:00 – 09:30

Welcome	Chairman ICMM Center of Reference	David Winkler
	Swiss Surgeon General	Andreas Stettbacher (t.b.c.)
	ICMM Secretary General	Pierre Neirinckx (t.b.c.)
Introduction to the Workshop		Daniel Messelken

09:30 – 10:15

Pop the hood – inner workings of Artificial Intelligence (AI) models with implications for military medical ethics — Pirmin Schmid

Short-Break 15 minutes

10:30 – 11:15

Examining Trends in AI Ethics Codes Across Countries and Institutions via Quantitative Discourse Analysis — Oshri Bar-gil

11:15 – 12:00

Recent Trends in AI Law and Ethics and Their Implications for Military and Humanitarian Healthcare — Julian März

Lunch Break

Session II — Examples of AI usage in the Miltary

13:30 – 17:00 (CEST/ UTC+2) **Chair: Johan Crouse/ Andreas Wildi**

13:30 – 14:15

Ethical, Legal, and Societal Implications of the Darpa "In The Moment" Program — Daniel Trusilo

14:15 – 15:00

Continuous Health Monitoring & Military Service — Sheena Eagan

Coffee-Break 30 minutes

15:30– 16:15

A new age of dual-use technologies? Military medical ethics as a touchstone for evaluating AI-induced risks and opportunities — Martin Hähnel

16:15 – 16:45

Time for Plenary Discussion — Moderated by Chairpersons

Evening at free disposal

Friday 21 June 2024

All times are given in CEST = UTC+2

Session III — Philosophical reflections on AI and Big Data in the Military

09:00 – 12:00 (CEST/ UTC+2) **Chair: Pamela Ermuth/ Bilaal Shaikh**

09:00 – 09:15

Introduction to Day Two — David Winkler/ Daniel Messelken

09:15 – 10:00

Respecting Autonomy In Ai-Supported Military Medicine Decision-Making: A Conceptual Overview — Florian Demont

10:00 – 10:45

Belief attribution in cases of seamless reliance on AI — Hadeel Naeem

Coffee-Break 30 minutes

11:15 – 12:00

Given The Use Of Ai, Can There Still Be Good Military Medical Service Or Only Bad One? — Bernhard Koch

Lunch Break

Session IV — Ethics of AI and Big Data in Humanitarian Contexts

13:30 – 16:15 (CEST/ UTC+2) **Chair: Sylvain Fournier/ Ismail Ülgür**

13:30 – 14:15

Black Boxes/Blackouts/Blackened Out: Genai And The Implications Of Wrapping Humanitarian Health Care Around Digital Infrastructures — Kristin Bergtora Sandvik

14:14 – 15:00

New Technologies And Managing Ethical Risks In Collection And Use Of Data. An Experience Briefing From Insecurity Insight — Ana Barbar/ Christina Wille

Coffee Break 30 minutes

15:30 – 16:15

Data Stewardship, Ethical Responsibilities, And Potential Ai Challenges In Humanitarian Health Project Closures — Isabel Muñoz Beaulieu

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17:00 – 22:00 **Social Program & Host nation dinner** (on-site participants only)
Details and meeting point will be communicated during the workshop

(Civilian clothes)

Saturday 22 June 2024

All times are given in CEST = UTC+2

Session V — AI's impact on our self-understanding and human control

09:00 – 12:00 (CEST/ UTC+2) **Chair: D. Messelken/ D. Winkler**

09:00 – 09:10

Introduction to Day Three — David Winkler/ Daniel Messelken

09:10 – 09:55

The Impact of Artificial Intelligence on Human Self-Understanding in a Military Context — Dirk Fischer

09:55 – 10:40

From Medical Triage To Autonomous Weapons Systems - How To Maintain 'Meaningful Human Control' Over High Stakes AI Decision Making — Atay Kozlovski

Short-Break 20 minutes

11:00 –11:30

Closing Plenary discussion — Moderated by chairpersons

11:30 – 12:00

Closing Remarks *Swiss Surgeon General and ICMM Vice Chairman* — Andreas Stettbacher (t.b.c.)

Lunch Break

End of the Workshop – Departure

Abstracts and Bio Notes (in alphabetical order)

Oshri Bar-gil – *Examining Trends in AI Ethics Codes Across Countries and Institutions via Quantitative Discourse Analysis*

Abstract

As artificial intelligence (AI) advances, various countries, companies, militaries, and other institutions have drafted ethics codes to encourage responsible development practices. This paper presents a comparative discourse analysis of 12 major AI ethics codes related to military contexts.

A team of experts selected codes from 3 countries, 3 militaries, 4 academic/non-profit organizations, and 2 private companies to analyze. The codes were analyzed using quantitative discourse analysis—a methodology integrating qualitative textual analysis and quantitative literature review techniques.

The analysis identified key principles emphasized across the documents and quantified the frequency of value-laden terminology. Document clustering explored similarities and differences between various codes based on principles and semantics.

The results reveal striking trends differentiating various codes. Industry codes focus substantially on technical solutions like improving system fairness, explainability, transparency, and accountability through governance frameworks. Academic codes express more concern about existential threats from advanced AI, emphasizing issues of control, unintended consequences, and constraints to limit functionality. National codes stress aligning AI progress with public sentiments through principles like transparency, privacy, and building public trust.

Additionally, differing conceptions of terms like autonomy, control, independence, and accountability underscore tensions between global and local perspectives. Global calls emphasize developing universal guidelines and regulations applicable across contexts. However, results show even foundational principles take on localized meanings when contextualized within different nations and institutions.

By employing an original quantitative methodology to AI ethics code analysis, this study systematically compares approaches to responsible AI among key countries, companies, and organizations. Identifying points of unity and divergence can inform developing global governance frameworks while respecting necessary local variances in AI regulations.

Biographical Note

Organizational psychologist with expertise in military psychology, technology ethics, information studies, and qualitative methods. Currently Director of Technology Research at the IDF Behavioral Science Institute. Previously, post-doc at NATO Defense College as a research fellow and in the IDF as a military psychologist. Published widely on technology impacts, AI ethics, crisis management, and civil-military relations. PhD in psychoanalysis and culture from Bar-Ilan University

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Ana Elisa Barbar & Christina Wille – *New Technologies And Managing Ethical Risks In Collection And Use Of Data. An Experience Briefing From Insecurity Insight*

Abstract

According to broad ethical guidance on collection and use of data on attacks against healthcare, information should function to enhance the protection of healthcare. In conflict settings, this means that data collection must be non-maleficent to the people at risk of violence or affected by it: it must not increase likelihood of violence, through misuse of data for further violence (attacks or blockages) or reprisals against reporting. In addition, the use of data should bring clear benefits: by supporting warring parties in exerting precaution and proportionality, by informing health system stakeholders in risk analysis (reducing chances of indiscriminate negative consequences of hostilities and supporting mitigation measures to limit the impact of violence on the delivery of health care), or by favouring accountability.

Insecurity Insight (II) has a decade-long track record of collecting and displaying data on attacks on healthcare. The organization developed a platform in which healthcare professionals can report violence, but most of its data collection relies on media scanning tools supported by artificial intelligence (AI), to identify information that humans then verify through triangulation. Using relevancy classifiers and natural language processing (NLP) capacities, Insecurity Insight continuously expands its capabilities to gather and verify growing numbers of events, including in languages other than English, while maintaining reliability and ethical principles.

The presentation will share II's experience in use of technology and the risk mitigation measures it places to ensure ethical collection and use of data. It will critically debate how risks may be overemphasized compared to benefits. Finally, it will propose a brief comparative analysis on how the use of AI can, in fact, reduce some risks posed by data collection, if the proper protective elements are implemented alongside the use of such technology.

Biographical Note

Ana Elisa Barbar is a Brazilian psychologist, acting Chair of the Board of Insecurity Insight and former adviser to the International Committee of the Red Cross (ICRC) on protection of healthcare and health policy. She has worked in humanitarian operations in Latin-America, Africa and the Middle East. Ana has lectured in universities in Europe and Africa and served as expert to different high-level panels, including at the Economic and Social Council of the United Nations.

Christina Wille is Director and founding member of Insecurity Insight and has developed Insecurity Insight's AI supported data collection processes on violence and its consequences for humanitarian work. She is the editor of the Safeguarding Health in Conflict Coalition Report and a board member of the Explosive Weapons Monitor and the h2h network. Previously, she worked for the Small Arms Survey and the European Commission. She studied International Relations at the University of Cambridge, UK.

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Florian Didier Demont Biaggi – *Respecting Autonomy In Ai-Supported Military Medicine Decision-Making: A Conceptual Overview*

Abstract

Debates on epistemic injustice had an influence on philosophical accounts of autonomy. In particular, accounts of relational autonomy (partly in conjunction with the development of relational accounts of equality) flourished in the last decade and provide a basis for arguing that bioethics has to reconsider some fundamental questions in the light of these thick concepts of autonomy. Apart from more obvious repercussions for military medicine in general, there are some new issues concerning AI-supported decision-making in this field.

AI-supported decision-making may employ artificial intelligence as an aid for decision-making, for which a human decision maker is fully accountable, or it may design decision-making procedures involving man-machine interactions, for which accountability is not exclusively associated with one human decision maker. In order to map the conceptual terrain, the paper begins by asking four questions about respecting autonomy: Whose autonomy? What autonomy? Respect for whom or what? What respect? The resulting conceptual space will be further limited by constraints endemic to medical practices in military contexts. At the end, an overview of the varieties of military medicine decision-making approaches will be available for which more or less AI-support is to be admitted while retaining respect for autonomy in some sense.

Even though this contribution does not seek to settle the question of what respecting autonomy can and should amount to, it has two clear upshots. First, it will be argued that AI-employment in military medicine decision-making has to differ clearly form the sort of AI-employment envisaged for military decision-making by Johnson (2024). Second, it will be argued that accountability – pace authors such as Bazargan-Forward (2022) – is centrally about tracing causal contributions.

Biographical Note

Dr. phil. Florian Demont-Biaggi has been a lecturer at the Military Academy (MILAC) at ETH since 2013. He has specialised in applied ethics with an emphasis on leadership and military ethics. After writing the monograph Rules and Dispositions in Language Use (Palgrave 2014), he edited The Nature of Peace and the Morality of Armed Conflict (Palgrave 2017). Peer-reviewed contributions to journals and edited books on applied ethics, philosophy of language and other topics round off his research profile.

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Sheena Eagan – *Continuous Health Monitoring & Military Service*

Abstract

Wearable medical monitoring technologies have undergone rapid advancements, providing unprecedented insights into individuals' health. Their integration into military settings is increasingly prevalent, with wearables tracking vital signs, sleep patterns, and overall well-being among service-members. Within the realm of military medical

ethics, the extensive data collected by these technologies presents both opportunities and challenges. While promising insights into force readiness and the potential for pre-symptomatic diagnosis exist, ethical concerns related to privacy, autonomy, and data misuse must be addressed.

This presentation provides ethical analysis of emerging health-monitoring technologies, examining how considerations evolve based on three key features: the invasiveness of the technology (wearable vs. implantable), the autonomy of the service-member (whether participation is mandated or voluntary), and the nature of military activity (in-garrison, during training, pre/post/deployment). Ethical analysis will focus on privacy issues, the dynamics of consent and autonomy, and the possible misuse of collected data (including the risk of discrimination or stigmatization). Specifically, this work will examine whether the military's claim to this data changes based on the features outlined above—focusing on questions such as: Should continuous monitoring be mandated or voluntary, and does this change depending on whether the service-member is deployed? How do we consent this population to continuous monitoring? Are standard consent procedures sufficient for this new technology? Given the unprecedented amount of data that these technologies collect, how will privacy and confidentiality be protected?

Biographical Note

Sheena M. Eagan is an Associate Professor with the Department of Bioethics and Interdisciplinary Studies in the Brody School of Medicine at East Carolina University. Dr. Eagan holds a PhD in the medical humanities from the Institute for the Medical Humanities at the University of Texas Medical Branch in Galveston as well as a Master of Public Health from the Uniformed Services University.

Dr. Eagan is co-director of ECU's Veteran to Scholar Boot Camp, and faculty advisor to the Military Medicine student Interest Group. Sheena serves as Head of the North Carolina Unit for the International Chair of Bioethics/WMA Cooperating Centre and is also the creator/founding president of the American Society of Bioethics and Humanities group for Military, Humanitarian and Disaster Medicine.

Dr. Eagan's research and teaching focus on medical ethics and the history of medicine, with a subspecialized focus on military medicine.

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Dirk Fischer – *The Impact of Artificial Intelligence on Human Self-Understanding in a Military Context*

Abstract

The impact of artificial intelligence, AI, within all fields of human endeavor will play a major disruptive role in the 21st century. This is true in both civil and military contexts and will likely lead to major changes in both our work and private lives. In the field of military medicine, the ethical challenges of AI have become obvious areas of concern, both for researchers as well as for therapists. Practical aspects aside, future developments are likely to provoke an in-depth analysis of fundamental medical ethical concepts. How might AI change existing expectations, either of the patient or of the physician; and how might its emergence ultimately affect the physician-patient-relationship? Will classical concepts of medical ethics, such as the principles-based approach (autonomy, non-maleficence, beneficence, justice) still be appropriate? Will there be a need to re-think our understanding of morality and ethics in the light of such developments? How will the use of AI in a civil context rest with its applications in the military?

Particularly in light of the potential of AI in a military medical context there is a need to rearticulate our crucial questions of humanity. Will artificial intelligence lead to a deeper understanding of what it means to be human? Especially in times of war the role of AI in a medical context needs to be examined. Could it be a force for good, a tool to help humanity achieve breakthrough in times of war? Could it contribute to the humanization of war, or is it merely another tool in an arsenal of weaponry?

The roles that AI will play will need to be closely monitored. This aim of this lecture will be to shed light on fundamental questions posed by artificial intelligence within the field of military medicine. The discussion will be accompanied by practical examples, such as the application of AI specific tools within the operation of unmanned rescue drones.

Biographical Note

Ltd Col (Res) DR DR Dirk Fischer studied medicine, philosophy and theology in Lübeck, Munich, Rome and Frankfurt/Main. He holds a doctorate in both medicine and catholic theology. Since 2013 he has been working as a consultant and since 2016 as head of the Teaching and Research Unit for Military Medical Ethics at the Bundeswehr Medical Academy in Munich. Since 2018 he has been deputy chairman of the Military Medical Ethics Advisory Committee of the Bundeswehr Medical Corps. In 2023 he became head of the Bundeswehr Institute for Military

Medical Ethics in Munich. In 2023 he was nominated chief of the ethical advisory board of the IMEDCAP Project. His research interests include: Military Medical Ethics and Infield Medical Ethics, medical ethical foundation of international humanitarian law, human enhancement, moral injury, history of the medical service.

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Martin Hähnel – *A new age of dual-use technologies? Military medical ethics as a touchstone for evaluating AI-induced risks and opportunities*

Abstract

The ethical analysis of dual-use technologies is intricate and no longer appears to be limited to the problem of using a technology (or components thereof) for both civilian and military purposes. Due to the increased use of a universal technology such as AI, we find ethical ambivalences in almost every area of application that need to be analysed in more detail. In my contribution, I would first like to look at what exactly dual-use means. I will then present three areas within medicine and healthcare in which the dual-use potential of the introduction of AI-supported systems is virulent: 1) drug development, 2) (emotional) care of vulnerable people, 3) generation and dissemination of health disinformation through new large language models. It can be assumed that an ethical analysis of these three fields of application will present all stakeholders with the challenge of coping with various trade-off situations. In a final step, it should also be shown to what extent new spin-off effects can arise between civil and military medical use.

Biographical Note

Martin Hähnel graduated as an industrial engineer in 2004 and studied Philosophy, Romance Studies and Economic and Social History at the TU Dresden from 2004 to 2009. In 2010, he began his doctoral studies at the Catholic University of Eichstätt-Ingolstadt, which he completed in 2015 with a thesis on the anthropology of virtue. Since 2014, Hähnel has been involved in several third-party funded projects on medical ethics at the endowed professorship for bioethics at the KU Eichstätt-Ingolstadt. Since 2021, he has been coordinator of a joint project funded by the German Federal Ministry of Education and Research on the responsible use of AI in medicine at the University of Bremen. Since February 2024, he has also been involved in a project on predictive AI in the context of psychiatric healthcare at the University of Augsburg. Martin Hähnel completed several research stays (e.g., at the University of Oxfor d and Boston College) and worked as an ethical advisor for an EU project for the University of Cambridge. This year he hopes to complete his habilitation at the University of Bremen with a thesis on the neo-Aristotelian justification of the philosophical foundations of bioethics.

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Bernhard Koch – *Given The Use Of Ai, Can There Still Be Good Military Medical Service Or Only Bad One?*

Abstract

Artificial intelligence poses a challenge to our traditional ethical concepts, arguments and legal ideas in several respects. This does not only apply to the question of bias, which refers to the ethical “quality” of data sets that have been used to train an AI application. But it is also about the question of what right we have to continue to attribute authorship to actions and to distribute praise and blame. These circumstances pose major challenges for military and medical culture. As a philosophical lecture, it can only stimulate empirical research, but cannot itself anticipate it. Nevertheless, it would be extremely interesting to learn how the fact that authorship is increasingly difficult or impossible to attribute affects the dual role affiliation among military medical personnel. The lecture – which certainly raises more questions than provides answers – attempts to bring some fundamental considerations into play that draw attention to the emerging problems and can be used by practitioners to inform them from their own experience.

Biographical Note

Bernhard Koch is currently acting head of the Institute for Theology and Peace in Hamburg and adjunct professor of moral theology at the University of Freiburg. His research focuses on the ethics of (military) violence, International Humanitarian Law and new military technologies. He has been co-teacher ethics at the ICMM Courses on Military Medical Ethics for more than a decade.

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Atay Kozlovski – *From Medical Triage To Autonomous Weapons Systems - How To Maintain 'Meaningful Human Control' Over High Stakes AI Decision Making*

Abstract

As the use of machine learning based AI systems is becoming increasingly widespread, we are forced to confront the question of whether any limits should be placed on the types of decisions these systems are allowed to make. Although AI systems present an opportunity to improve on our all too human decision making fallibilities, such as biases, lack of consistency, personal interest, etc, many are concerned that AI systems bring their own set of unique problems such as algorithmic discrimination, LLM hallucinations, 'Black Box' opaqueness, etc. While these issues may not be so troubling when an AI is used to recommend which movie to watch on Netflix or which item to buy on Amazon, but when life and death are on the line, the margin for error becomes very thin and we may question the suitability of using such systems in these cases. Nevertheless, AI systems are finding their way into high stakes decision scenarios on the battlefield and in hospitals in various forms such as recommendation systems for organ transplant decisions and suicide drones which can autonomously select targets. In an attempt to create regulations and standards for the responsible use of such systems, the notion of 'Meaningful Human Control (MHC)' has been developed. Drawing on philosophical literature in normative ethics and axiology, this paper will analyze the concept of MHC and attempt to articulate whether and how MHC can be achieved in high stakes decisions. The paper will offer a novel articulation for MHC in terms of value alignment and explainability, and specify the type of AI-Human collaboration and feedback mechanisms that should be implemented if we are to ensure that someone will be held responsible for the actions of these systems.

Biographical Note

Dr. Atay Kozlovski is a postdoctoral researcher at the University of Zurich's Center for Ethics. Dr. Kozlovski holds a PhD in Philosophy from the University of Zurich, a Master's in 'Political, Legal, and Economic Philosophy' from the University of Bern, and a Bachelor's in Philosophy from Tel-Aviv University. Dr. Kozlovski's doctoral dissertation focused on normative ethics and rational decision theory exploring the implications of rational underdetermination of choice for group political decision making and the responsible design of technological innovation. His current research explores the socio-technical and philosophical challenges in the use of AI systems for autonomous decision making and action. Before his academic work, Dr. Kozlovski served as an officer in the Israeli Defence Forces (IDF) from 2007-2012.

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Julian März – *Recent Trends in AI Law and Ethics and Their Implications for Military and Humanitarian Healthcare*

Abstract

In this presentation, I will analyze recent developments regarding AI regulation and AI ethics guidance and will discuss their implications for military and humanitarian healthcare. A primary focus of the presentation will be on regulation currently prepared at the US federal level, the EU level, and the Council of Europe level (which has 46 members and 6 observers, including Canada, Israel, Japan, and the US - https://www.coe.int/en/web/about-us/our-member-states), and on AI ethics guidance issued by UN specialized agencies (including WHO, UNESCO, ITU, World Bank, WIPO), the Council of Europe, and the EU. The presentation will also include a review of the relevant case law of the US federal judiciary, the Court of Justice of the EU, and the European Court of Human Rights (the most important judicial body of the Council of Europe). The presentation is intended as a general introduction to legal and ethical aspects of AI in military and humanitarian healthcare, which is meant to serve as basis for the further discussions in the workshop.

Biographical Note

Julian W. März is a research fellow at the Institute of Biomedical Ethics and History of Medicine (IBME) of the University of Zurich and an associated researcher at the Digital Society Initiative (DSI), the Competence Center Medicine – Ethics – Law Helvetiae (MERH), and the University Research Priority Program (URPP) Innovative Therapies in Rare Diseases (ITINERARE) of the University of Zurich. He has studied law, medicine and bioethics at the Universities of Zurich, Oxford, Munich, Regensburg and Passau, and the IEP de Paris, and has worked as researcher for the German Cancer Research Center (DKFZ, Heidelberg) and the Centre for Law, Medicine and Life Sciences of the University of Cambridge. Since March 2023, he has been leading the curriculum development project "Integrating ethics and governance into the design of artificial intelligence technologies for health" of the WHO Digital Health and Innovation (DHI) and Health Ethics & Governance (HEG) Units.

https://www.ibme.uzh.ch/en/Biomedical-Ethics/Team/Research-Fellows/Julian-März.html
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Isabel Muñoz Beaulieu, Handreen Mohammed Saeed, Matthew Hunt – *Data Stewardship, Ethical Responsibilities, And Potential Ai Challenges In Humanitarian Health Project Closures*

Abstract

Humanitarian health projects often involve extensive personal, administrative, and operational data collection. This data is likely to persist long after project conclusion in physical or electronic forms. The responsible management of this data is crucial during the project closure's phase, orienting methods for its sharing, storage, return, or destruction. Through an exploration of ethical considerations of humanitarian health projects' closure, we have developed key questions to guide ethical reflections on data management during project closures in humanitarian contexts. These questions emphasize the importance of purpose limitation, data minimisation, paramount respect for data rights, obligations of care, transparently clarifying stakeholder expectations, and ensuring alignment with pertinent policy and regulatory frameworks.

Emergence of Artificial Intelligence (AI) and big data could present unique ethical challenges in military and humanitarian contexts, including challenges associated with the closure of humanitarian health projects. Examples of such challenges are heightened risks associated with individuals' identification through data set combinations, privacy, and confidentiality breaches. In this presentation, we will discuss the implications of how AI/big data create added or amplified ethical challenges for health project data at closure that demand careful consideration.

To illustrate the implications of such challenges, we will present a case study centered on the phased handover of a healthcare project within a Syrian refugee camp in Iraq. This transition saw the transfer of responsibilities and data from an international humanitarian organization to local health authorities. Our case study analysis will underscore the significance of data stewardship as a cornerstone of ethical project closure. By drawing attention to the broader spectrum of responsibilities during project lifecycles and beyond, we advocate for an integrated approach to data management, including careful ethical attention to AI and Big Data considerations and robust data stewardship during project closure.

Biographical Note

Isabel Muñoz Beaulieu is conducting her PhD at McGill's Department of Family Medicine. At McGill, she also completed a joint honors BA in International Development Studies and Philosophy. Isabel's research interests focus on issues in humanitarian aid, global health ethics, and health systems and policy. Isabel is a member of the Humanitarian Health Ethics Research Group where she has collaborated with organizations like the Center for Disaster Preparedness in the Philippines and the Canadian Red Cross on several studies on humanitarian ethics, data management, and humanitarian projects' closure. In addition, Isabel has gained practical experience working in the humanitarian and development field with the United Nations High Commissioner of Refugees in Guatemala and The Hunger Project. Isabel is a member of the health equity committee at Women's College Hospital Institute for Health System Solutions and Virtual Care, where she works as a casual research assistant. She is a member of the Executive Council of McGill Global Health Programs and an executive member of the Family Medicine Graduate Student Society.

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Hadeel Naeem – *Belief attribution in cases of seamless reliance on AI*

Abstract

My research focuses on exploring the responsible use of smart and autonomous technologies, such as AI systems. I am particularly interested in how we can attribute beliefs to agents formed as a result of seamlessly relying on such technologies. As these technologies become smarter, more portable, and even implantable, it is important to examine how we can seamlessly rely on them while still being responsible. I have identified a gap in the existing literature regarding belief attribution. The literature tends to focus on epistemic responsibility's link to the generation of knowledge. This means that belief attribution is formulated in terms of acquiring knowledge, that is, only beliefs that are in the running for knowledge can be attributed to us. However, this approach is too stringent because it does not account for the beliefs that we form with technology that may not be formed responsibly enough to qualify as knowledge but are still sufficiently responsibly formed to be attributed to us. Therefore, I argue that

epistemic responsibility can be present in degrees, and I outline when it is sufficient for successfully attributing beliefs to us. To support my position, I draw upon the literature on extended cognition and extended beliefs. Specifically, I examine how medical practitioners, such as diagnosticians or surgeons, rely on AI systems and how the beliefs they form with their reliance on these systems may be attributed to them. This study can help address the moral responsibility gap (Matthias 2024) by filling what I call a "belief gap," which can explain why a belief formed by interacting with an autonomous AI system may be attributed to the human in the loop.

Biographical Note

I am a junior fellow at the Käte Hamburger Kolleg: RWTH Aachen University, where my research is funded by the Bundesministerium für Bildung und Forschung. I am currently examining how we attribute beliefs in cases of seamless human-AI interaction -- the kind of interaction that can also be characterized as a cognitive extension. I am also exploring the concept of phenomenal transparency in seamlessly employing technology and whether cognitive extension into AI systems should be discouraged.

I have a PhD in philosophy from the University of Edinburgh. My thesis focused on understanding epistemic responsibility in cases of cognitive extension. My research contends that subpersonal epistemic responsibility practices are insufficient in explaining how extended beliefs are responsibly formed. Before my PhD, I completed an MPhil in philosophy and a BSc Hons in philosophy and biotechnology from Pakistan.

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Kristin Bergtora Sandvik – *Black Boxes/ Blackouts/ Blackened Out: Genai And The Implications Of Wrapping Humanitarian Health Care Around Digital Infrastructures*

Abstract

While Generative AI is a language not an information model, we need to consider distributive impacts on humanitarian medicine and health care delivery. The paper considers three sets of ideas and questions:

(1) GenAI represents a form of continuous and remote 'black box' experimentation. Departing from scientific experimentation, digital experimentation – particularly GenAI and its perpetual beta-testing mode –is evolving as a hitherto unregulated and extractive experimental process. The aggregate impact of the adoption and adaptation of generative AI (including the perpetual beta-testing aspect) transforms the modes of humanitarian health governance beyond its 'digital tools.' For humanitarian healthcare- from cold chains to diagnostics and treatment protocols - focus must shift from accountability for governing experimental technologies to accountability for experimental humanitarian governance.

(2) The everyday of blackouts: Connectivity is not equal, stable, or infinite. In addition to external threats we need to consider the logistical implications of wrapping health care around digital infrastructures. While we are currently discussing digital shadows and strategic underserving of populations (through 3G), the increased climate and disaster risk coupled with decoupled and/or disrupted global supply chains or resource scarcity might mean that the humanitarian sector is setting itself up for serious access problems. For emergency care, disruptions in a digitally dependent system will have a catastrophic impact on response.

(3) Blackening out health care responses: Surveillance, mis/disinformation and censorship risks. AI is radically shaping data collection, analysis, and programming. The adverse consequences for veracity, authenticity and trust are well known and exacerbate existing problems with rumors and violence (vaccines, Ebola, Covid-19) against healthcare clinics. Yet, in light of GenAI's experimental nature, what are the more foundational implications for the field of emergency medicine, the profession, and individual professionals, for how patients seek health care and for what type of interventions are funded?

Biographical Note

Kristin Bergtora Sandvik (S.J.D Harvard Law School 2008) is a professor of legal sociology at the Faculty of Law, University of Oslo, and a Research Professor in Humanitarian Studies at PRIO. Sandvik's research on the humanitarian sector focuses on refugee issues, global health, ethics and legal regulation and technology and innovation. Her book, 'Humanitarian Extractivism: The digital transformation of aid' has just been published with Manchester University Press. Her next book has the working title 'Regulating humanitarianism'.

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Pirmin Schmid – *Pop the hood – inner workings of Artificial Intelligence (AI) models with implications for military medical ethics*

Abstract

Modern machine learning models, known as Artificial Intelligence (AI), are revolutionizing professional and private lives of people at a speed never seen before. The last few years have revealed impressive progress in Natural Language Processing (NLP), Media generation, Autonomous Driving and Flying (robotics), and specialized fields like Medicine. It is estimated that 40 to 60 percent of all jobs will be affected by AI in the following decade. This includes many complex jobs, such as medical diagnostics and therapy recommendations.

As much as AI is hyped by managers, as much it typically is used as a black box tool without deeper understanding of the underlying technology. This is a dangerous approach.

Knowledge of some fundamental technical workings of neural networks, training methodology and thus associated limitations and biases are a required foundation to build deeper ethical discussions on various AI models used in society, in particular military, medical and military-medical settings.

This presentation will show key technologies in building and training AI models as they are currently used, connect them with examples and exemplary ethical questions, and thus provide a foundation for more detailed discussions during the workshop.

Building reliable and intelligible AI models is of utmost importance, in particular in critical settings where people could be harmed, such as medical and autonomous systems. Pushing AI too quickly into too many systems has the risk of harming people. Thus, knowledge and understanding are prerequisites for a responsible and ethical deployment of this technology for the benefit of mankind.

Biographical Note

Dr. Pirmin Schmid, MD, MSc ETH Computer Science, CAS MedLaw UZH, is a physician specialized in Internal Medicine and Hematology, with extensive clinical, laboratory and research experience. Additionally, he is a computer scientist, software engineer and software architect who has studied, built, and trained machine learning and artificial intelligence models at one of the foremost universities in AI research of the world, ETH Zurich. Currently, he is a physician and the Medical Intelligence specialist of the Swiss Armed Forces. As trained officer and physician of the Swiss Armed Forces and alumnus of the ICMM LOAC and MME courses, he is familiar with specific ethics topics in the field of military medicine.

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Daniel Trusilo – *Ethical, Legal, and Societal Implications of the Darpa "In The Moment" Program*

Abstract

The In the Moment (ITM) program, sponsored by the United States Defense Advanced Research Projects Agency (DARPA), is a fundamental research program that seeks to understand how humans can develop trustworthy AI for making difficult decisions in domains where there is no agreed upon right answer, such as battlefield medical triage. The program will produce a framework for developing algorithms that can express key attributes that are aligned with trusted humans. Through a series of workshops, the external-facing Ethical, Legal, and Societal Implications (ELSI) team has identified and explored several areas of interest. This presentation will share some of the challenges and questions related to these areas of interest, including:

- The need for transparency to build user confidence in algorithmic decision-making tools for the medical field due to limited artificial intelligence (AI) regulations and generational gaps in digital adaptation;
- The importance of strengthening responsible and ethical AI practices through interdisciplinary collaboration, proper incentives, audits, and effective design-evaluation partnerships;
- The importance of considering multiple audiences for ITM-like technology, including patients, the beneficiary (i.e., the military), and the provider conducting triage; and
- How the value structures of trusted medical decision-makers and existing policy can inform the determination of critical moments to use ITM technology in military medical triage.

This presentation will be the first instance of the ELSI considerations of the ITM program being discussed at an international forum. We believe this discussion is critical as the ELSI questions raised by the ITM program apply to automated-decision making and responsibility beyond military triage operations. If the foundational ITM technology is successful, the framework could inform future operational systems that rely on trusted decision-making algorithms.

Biographical Note

Dr. Daniel Trusilo is a postdoctoral scholar at the University of California, San Diego where he works at the intersection of AI, applied ethics, and public policy. He is also a member of the Ethical, Legal, and Societal Implications team for the DARPA In the Moment program. Previously, Dr. Trusilo was a Humanitarian Advisor for the US Agency for International Development. He also served seven years as a US Army officer where he held a variety of positions in Colorado, Iraq, and Germany. Dr. Trusilo earned a bachelor's degree from the US Military Academy at West Point, a Master of Arts in Law and Diplomacy from the Fletcher School at Tufts University, and Masters and Doctorate degrees in International Affairs from the University of St. Gallen, Switzerland.

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Publications from previous workshops

Barbar, Ana; Messelken, Daniel (FORTHCOMING), editors. **Challenging Medical Neutrality - Ethics of providing health care in armed conflict and other complex settings**. Springer.

Eagan, Scheena; Messelken, Daniel (2023), editors. **Resource Scarcity in Austere Environments: An Ethical Examination of Triage and Medical Rules of Eligibility.** Springer. DOI 10.1007/978-3-031-29059-6

Messelken, Daniel; Winkler, David (2022), editors. **Health Care in Contexts of Risk, Uncertainty, and Hybridity.** Springer. DOI 10.1007/978-3-030-80443-5

Messelken, Daniel; Winkler, David (2020), editors. **Ethics of Medical Innovation, Experimentation, and Enhancement in Military and Humanitarian Contexts**. Springer. ISBN 978-3-030-36318-5

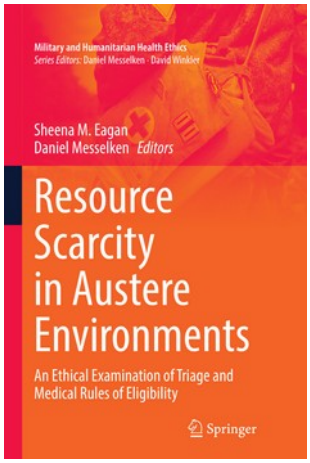
Messelken, Daniel; Winkler, David (2017), editors. **Ethical Challenges for Military Health Care Personnel: Dealing with Epidemics** (Proceedings of the 5th ICMM Workshop on Military Medical Ethics). Routledge. ISBN 978-1472480736

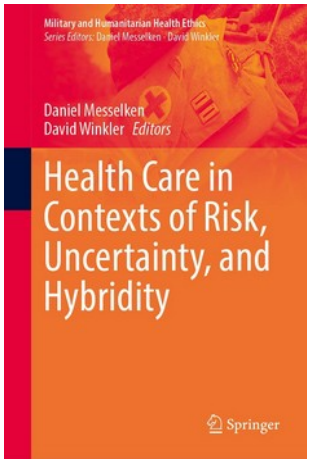
Messelken, Daniel; Winkler, David (2015), editors. **Proceedings of the 4th ICMM Workshop on Military Medical Ethics**. Bern, 2015. ISBN 978-3-905782-98-1

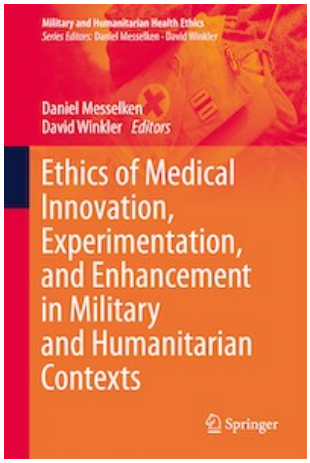
Messelken, Daniel; Baer, Hans U (2014), editors. **Proceedings of the 3rd ICMM Workshop on Military Medical Ethics**. Bern, 2014. ISBN 978-3-905782-97-4

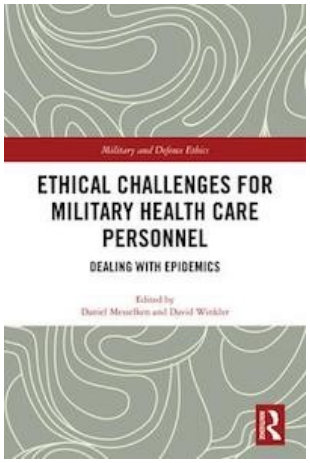
Messelken, Daniel; Baer, Hans U (2013), editors. **Proceedings of the 2nd ICMM Workshop on Military Medical Ethics**. Bern, 2013. ISBN 978-3-905782-94-3

More information on http://publications.melac.ch /









Practical Information

Registration is mandatory for all attendants. No participation is possible without registration and the zoom access links will only be distributed to admitted participants.

Please be aware that **places at the workshop are limited** as we want to keep the format of the workshop as close as possible to the previous years, which includes time and opportunity for discussions. These are only possible in a smaller group. Participants will be selected with the aim of putting together a well-balanced group of speakers and participants to allow for productive discussions. The number of participants per country can be limited.

Criteria for selection will be:

- The motivation and previous knowledge/ expertise/ experience of applicants
- The function and institutional role of applicants
- Date the application is received

Workshop fee online	Free of charge, motivation letter needed.
Workshop fee on-site	**856 CHF** to be paid directly at the hotel Includes 3 hotel nights (19-22June 2024) and all meals during the workshop and the transport from Geneva airport to the hotel in Jongny s/ Vevey. The host nation dinner on Friday is offered to all on-site participants.

Workshop location

The on-site workshop will take place at
Hôtel du Léman, Ch. de la Fontaine 2, 1805 Jongny s/ Vevey
https://www.hotel-leman.ch/en.html

The online workshop will be streamed via zoom videoconferencing.

Dress code

Dress code during the workshop is office uniform for military personnel, and smart casual for civilian attendees and military personnel who cannot wear their uniform.

Contact

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Swiss Armed Forces, Medical Services Directorate, Centre of Competence for Military and Disaster Medicine
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Emergency contact during the workshop

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Workshop venue "Hotel du Léman"	+41 21 923 03 03