CODING AND CONCEPTUALIZING TECHNOLOGY IN THE FUTURE OF LAW AND LEGAL PRACTICE: AN OVERVIEW OF THE ALF ANNUAL SEMINAR 2019

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Introduction

The "Technology and International Law" seminar took place on May 10, 2019 as part of an annual seminar series hosted by the Amsterdam Law Forum at the Vrije Universiteit Amsterdam. The seminar brought together experts from a variety of disciplines to share their views on the intersection of emerging technologies and human rights law. The speakers discussed the ever-increasing impact of technology in relation to human rights, climate change, and legal practice. The purpose of the seminar was to show various fields in which technology impacts international law and regulation, and to create a constructive dialogue about the way forward. This commentary is a brief review of the views expressed by the speakers in their individual talks and in the panel discussion that followed.

I. Open Sourcing Open Source Intelligence

Following the welcoming remarks, Lonneke van der Velden[1] opened the seminar. Her talking points focused on her research on open source intelligence and on the responses of civil society organizations, social movements, activists and hacktivists to datafication.[2] In light of Snowden's revelations, which showed worldwide, large-scale surveillance activities of the Amercian Security Agency, van der Velden researches civil society and the politics of data. Her research analysed the responses of initiatives like WikiLeaks and the NSA disclosures, as big-scale data collectives.

Van der Velden introductorily emphasized that to understand knowledge production in these spheres, you have to know how people handle and look at data. In order to see how people handle and look at data, one must see two sides of the same coin. The first side is the response towards mass data collection and looks at privacy by design or encryption techniques. The other side of the coin is how social movements use big data for social causes and to foster social change.

Herein, in order to understand the usage of data for social change, it is important to define data activism. The latter concept can be defined as an awareness of the consequences of datafication

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[1] Lonneke van der Velden is a lecturer at the department of media studies at the University of Amsterdam and is on the board of directors for Bits of Freedom. Her research deals with conceptualisations of internet surveillance and internet activism
[2] We define datafication as 'the transformation of social action into online quantified data, thus allowing for real-time tracking and predictive analysis' in accordance with Mayer-Schoenberger and Cukier (2013), see: V. Mayer-Schoenberger & K. Cukier 'Big Data. A Revolution That Will Transform How We Live, Work, and Think', London: *John Murray Publishers*, 2013.

which results in the use of particular tools, strategies, vocabularies, expectations and imaginaries (what data does or what data can do). Examples of these types of projects are people mapping human rights violations or data saving projects in case authorities, as well as private parties wanting to delete data, for example in relation to various human rights violations.

Building upon this, Van der Velden introduced Open Source Intelligence (OSINT) as "a process whereby police or other investigative agencies gather and analyse data that are in principle accessible to any organisation or individual" – in short, the collection of data drawn from publicly available material. However, van der Velden pointed out that this conventional understanding of accessibility is not necessarily the case, as you need certain competences and technological knowledge to get to the 'free' information.

In this introduction to OSINT, Van der Velden further clarified that it is often used by civil society groups, journalists, and activists with intelligence often gathered by NGO - or other self-organised groups. Bellingcat, Transparency Toolkit, Sharelab, Artists Against 419 are some examples of OSINT projects. In the Open Source industry, there are a lot of people that are self-taught analysts of social media data. For example, the founder of Bellingcat, Elliot Higgins, trained himself in social media weapons tracking. Bellingcat is a civilian collective of OSINT researchers, that look into international crimes and write about their methods and findings on their website.[3] Some people receive training, or they have jobs next to their open source work. They share their methods and they teach others to use their digital data. Van der Velden discusses Bellingcat as an OSINT organisation that focus on investigative criminal research, and how they manage to be transparent and create public trust by posting their open source tools and methodology. They often have various documentation on one single event by combining multiple archives on the same event, which includes images and videos, to create a timeline of the event.

Another project of OSINT is the Syrian archive. This is an archive of human rights documentation focussed on the conflict in Syria. This project was originally started after data loss in previous parts of the conflict. The project focuses on mass collection and documentation at the civilian level. It is being said that there are more hours of documentation of the Syrian conflict than actual fights. The project of the Syrian archive was initiated to counter problematic forms of data loss. First, the data sometimes gets removed if you upload it to YouTube or another social media platform, as it violates their community guidelines (e.g. because it is violent). Sometimes this removal happens through the use of algorithms but sometimes through human intervention. Second, offline data loss occurs too. Mobile phones get lost or stolen or ceased or broken, especially in conflict areas. The Syrian archive is a way to provide room for untold stories and long-term storage for long-term prosecution.

But one question remains, as further discussed by van der Velden: how is knowledge produced in open source context? The information collection is happening in the public domain due to the open nature of OSINT. Instead of knowledge gathering being conducted by governmental institutions that work without a semblance of transparency, these new institutions work and publish everything in the open and try to train others in their respective ways. In this way, knowledge gained from open source investigations is trustworthy and legitimate and can be reviewed by the public to further improve its credibility. Ideally speaking, OSINT allows for expertise to be distributed – a democratisation of the knowledge production processes. Indeed, it focuses on communal ways of solving problems and sharing knowledge.

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[3] To visit their website: https://www.bellingcat.com/ (last accessed on 16th of July 2019).

However, issues may arise with this type of research. First and foremost, is it stimulating legal investigations? For example, Bellingcat typically passes its information on to the police – but is this information really beneficial to the police? Moreover, questions along these lines arise also in relation to the methodologies of open source information. Trust in OSINT is really based on the possibility of review. Yet, for this process we naturally need people that do this review, and a lot of these groups work on a purely voluntary basis. Even if you peer-review, the question arises as to how capable the people reviewing are, and as they are amateurs and not working professionals, does this constitute an objective review capable of inspiring trust in derived conclusions? Moreover, OSINT is often referred to as publicly available data, but is it really that simple? And if it is publicly available data, what constitutes responsible use of this public data – indeed, can we even talk about 'responsible data use' in, for example, the emotionally-laden context of war? In addition, there are further questions on the use of these databases - such as, ethical questions in relation to whether the concerned groups are being re-victimized when things are made visible again. On a final note, counter profiling is always a risk with databases.

Lonneke van der Velden finished her presentation with questions on the future of these archives: Should they be curated, and should they be kept in the long-term – for example, following the settlement of a conflict?

II. Human Rights Chatbot: Bridging the Gap Between Victims and Justice
Marieke de Hoon[4] gave a talk on her project: the human rights chatbot. This chatbot is aimed at diminishing the knowledge gap that victims of human rights violations often encounter, as they often do not know how to file an admissible complaint concerning their experiences. It removes the need to spend funds on hiring legal expertise, thereby diminishing financial barriers when considering legal action. As such, the VU International Law Clinic[5] – a student-run organization in which students work on projects that have real legal impact – is concerned with developing a chatbot that interacts with victims of human rights violations to provide victims with the information they seek. In her presentation, Marieke de Hoon discussed this project as well as a variety of challenges that we face in developing technology to provide legal assistance to victims of human rights violations around the world.

The virtual human rights chatbot is an online open access tool that aims at assisting victims, local lawyers and civil society organisations in a language accessible to the non-legally literate. The products are open access for wider society to use. It stems from the desire to help those that do not have the means to find legal aid. The chatbot is called the Public International Policy Group (PILPG) Virtual Human Rights Lawyer. The difficulties involve finding out where to go and expenses such as hiring a legal expert in a conflict zone, where it can be expensive and difficult. Navigation is necessary and that is why the chatbot was created. If you ask the right questions it will inform you. It is not a digital lawyer; it is only meant to direct you towards your legal options, such as, where to start a process or where to find a lawyer.

The goal is to have a robot that can process and store all the human rights law information and, with an understanding of people in conflict and crisis, translate that to actual legal options. Artificial Intelligence (AI) is needed in order to do so. The chatbot's actions would include

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[4] Marieke de Hoon is the Director and Senior Counsel of PILPG Netherlands Office and an Assistant Professor of International Law and International Criminal Justice at VU Amsterdam.
[5] Since 2010 the Vrije Universiteit is involved through the International Law Clinic.

advising people on how to deal with human rights violations and how to go about legal action, giving important information on what type of lawyer they would need and directing them to the appropriate lawyers. Marieke de Hoon noted that currently, a prototype is being built for human rights violation in Namibia. This happens in collaboration with the Legal Assistance Centre-Namibia (LAC) and the Knowledge Management Fund (KMF).

Currently, the handbook of information gathered for this purpose is being put into the AI. The chatbot will work through chatting via the App Telegram, which is a secure massaging app. The virtual human rights lawyer prompts the user with questions and relies upon (Y/N) decision-trees adapted by machine learning. Each node in the tree and each branch is a possible outcome, with the tree leading to a possible number of outcomes. In the immediate case, this could be pointing towards a human rights mechanism, or emphasizing that national legal remedies first need to be exhausted. Upon the completion of a fully functional chatbot, the goal is to spread its use and adapt it to other countries. At this point the human rights bot is mainly a feasibility study - meant to show if it is possible and useful, in practice.

Marieke de Hoon underlined the importance and difficulties of trying to add the human way of interacting to a non-human format – such as a chatbot. This process is extremely difficult, and technologies are currently not there yet – think for example, of the need for empathy when discussing traumatic experiences. It is also important to explain the kind of remedy that comes out of the chatbot and manage expectations on what the victims can achieve in using the chatbot – and legal action more generally.

Marieke de Hoon stipulated that the advantages of the chatbot are that it is free, anonymous, openly accessible for anyone with a device connected to the internet, the chatbot is written in plain language, and is easy to use. Challenges for its development and application ultimately include the issue that internet access is necessary for it to work, the remaining need for lawyers - as the chatbot could only point towards the right legal help, and the fact that it is still unclear whether the chatbot will be feasible – in particular, considering the kind of international funding that would be needed for its global application. Moreover, local customs would need to be taken into account and the chatbot will have to be trained in interacting with victims: empathy or some type of subtle more suitable approach as the people using the chatbot will often have been through traumatic experiences that may be difficult to re-tell and re-live. Furthermore, the chatbot additionally faces technological challenges with respect to protecting data and keeping its system updated – such as how to best update the chatbot once it is launched? Case law is constantly changing so it is important for the chatbot to have the most up-to-date legal information available.

In her concluding remarks, Marieke de Hoon emphasized that a lawyer will always remain necessary because law is inherently subjective, and the notion that law is objective is ultimately a flawed idea. However, by using the advice of the chatbot, or similar services, it is possible to minimize the need for a lawyer in the legal process – in particular, for those who may not be able to afford such services. And the previously discussed challenges can be ameliorated by interdisciplinary and dynamic, adaptable work approaches, expert input, partnerships with other organization such as using PILPG's international network, data protection protocols and communicating the noted limitations to all involved parties.

III. Environmental Law and Technology

Gareth Davies[6] was the final speaker of the event. He discussed the interplay of technology and the environment, and in particular, the use of new technologies which enable active manipulation of the climate – also known as geo-engineering.

Gareth Davies opened by emphasizing that technological progress has always been about communication and entertainment. If you look historically, artefacts that have substantially changed the world have been those that correspond to and interact with the realities of the international order. Environmental technology is an example of this and is gaining attention in recent decades. It seems increasingly likely that environmental problems cannot be solved without the influential use of technology. Currently, we receive the message to do and consume less: to use less packaging, eat less meat, and lead a 'simple' lifestyle in order to reduce large-scale deforestation and other environmental disasters. The message being: do everything less and save the world. However, experts have concluded that that lifestyle switch alone is not going to amount to the necessary change needed. Even if we all become vegan tomorrow it will not be enough – and that is, moreover, irrespective of the fact that this type of radical lifestyle change is not easily accomplished. Therefore, Davies suggests, we should look into other, perhaps technological options to reduce the amount of carbon in the atmosphere. There are examples of places where this is already happening, like seaweed farms. There are more ways to do so, including storing CO_2 emissions technologically.

Geo-engineering can play a role here. Geo-engineering can be defined as the manipulation of climate change. Gareth Davies states that geo-engineering makes climate change seem a boringly easy problem to solve. The idea itself is simple: we use the technology we have to change the climate. It is not as if humanity does not know how to do it. It is all about refining techniques. The basic ideas are there already. Right now, there are climate engineering projects focused on re-freezing the artic by means of cooling the clouds.

Gareth Davies continued by stating that there seems to be a consensus among contemporary experts that we could possibly cool the planet within 3 months. It can be done *inter alia* through use of volcanic dust that blocks out sunlight which will reduce sunlight and therefore temperature. There are other ways, too. The point being that we could stop global warming. But given that it is so easy, why do we not do it? Why do we see it as an existential threat? Not because we do not know how.

Some argue that this is unlikely to happen with reference to reigning corporate interests. However, Gareth Davies does not think this is a plausible answer. There is money to be made out of energy and climate. He argues that there is more ideological opposition to addressing environmental climate problems because they involve taking control over the climate. A lot of people think that is a very bad idea. Why? The fear of who will be in control. There are big governance problems with taking control of the atmosphere. This problem of global governance is the true difficulty in combatting climate change.

Interestingly, Gareth Davies brings up that a lot of the people who care most about the environment think that part of the problem is that we have become exploitative of the environment. We use it as an instrument which, in the context of capitalism, will lead to destruction. This follows 'deep ecology' thinking, which says that the solution to these

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[6] Gareth Davies was a barrister in London before being a University Lecturer at the University of Groningen (2000-2007) and then moving to Vrije Universiteit Amsterdam (2007 to the present).

environmental issues is for humans to live in harmony. Gareth Davies points out this theory resists the idea of human controlling the environment, and therefore, resists the idea of technology being used to manage the environment. Technology wants to control, manage and reduce; it does not fit a vision of a truly harmonious environment. For this reason, its opponents say that geo-engineering the environment is a short-term solution, not a long-term one.

Gareth Davies says that the neoliberal notion of 'less is the answer' does not add up to a realistic solution. He argues that we will never convince people to do so in the numbers needed, only based on these ideas of harmony. It will not get the necessary masses mobilized.

However, Gareth Davies states these committed ecologists have one fair point, which is the problem of exerting global power. Gareth Davies, at this point, refers to a famous article in post naturalism[7], which talks about *who* should set the global thermostat. It might be easy to cool the planet, but determining who can do so is more difficult: who will be in control?

Global democracy is problematic because we do not have that type of international community that gives and takes in the necessary democratic manner: When it is just the heads of state who make decisions, that can be problematic as not all those in power are necessarily there in the name of the people. Moreover, it could produce strange situations in which countries want the weather to be warmer or colder for the Olympics or create extreme weather conditions that could end in environmental wars: one person's climate protection might mean the other person's aggression. There will always be winners and losers in these types of global changes. This is why technological governance can be an intractable problem.

According to Gareth Davies, there are three paths we could go on with respect to climate governance:

The first would be to create some type of global governance on the climate. This entails creating a new system in which decisions are made for the environment – but that includes a number of difficult questions such as who gets a vote? And on what? Secondly, we could realize that stopping climate change may ultimately be worse than letting it happen – given that it is possible such a new world order would inspire insecurity and wars. Thirdly, we could privatize the environment. This would solve the issue we have with rising seas for example, as nobody takes responsibility for making them a problem of the commons.

Gareth Davies also discussed another type of solution. Instead of focusing on the environment as a whole, we could replace 'environment' as a focus with smaller pieces like 'weather' and focus on local weather adaptation. Gareth Davies brings up the possibility that maybe we should act locally instead of acting globally. Perhaps it is wrong for us to try to influence the cooling or heating of the whole world. Instead, we could focus on one country or part of a country. Policy goals could be exercised only on the sky above you and everyone could choose their own personal climate. However, Gareth Davies points out this will most likely remain a technological utopia (or a nightmare future, depending on your view).

A question posed by a member of the audience concerned the problem that could arise because of the interconnectedness of nature. If the Netherlands would become warmer, this would impact

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[7] Gareth Davies defines post-naturalism as the idea that a natural state is thought of. It contrasts the idea that there is a difference between the natural and the artificial and argues it is redundant, because we are all natural and all is made at the same time.

other areas in Europe where they might not want a different climate. The question was: How would local weather manipulation counter this and make sure not to destroy another country's natural resources?

Gareth Davies answers that the problem with multi-level governance is that every measure creates a new problem. We will need to face that. We do so with medicine: if there are side-effects we give more drugs, such as painkillers, that may ameliorate the experienced side effects. Every problem creates a new problem, that creates a new problem: that is the price for a very wealthy complicated world. However, with climate we seem to desire a flawless answer. According to Gareth Davies, that is not possible.

IV. Panel Discussion: The Effects of Emerging Technologies

After the individual talks, the three speakers were invited to return to the stage for a panel discussion for which Magdalena Jowiak[8] joined the other speakers and Tina van der Linden[9] acted as a moderator.

Tina van der Linden first invited Gareth Davies to comment on a question concerning the problem of environmental monopolies and how to deal with that. Gareth Davies answered by emphasizing that it is the power structures that ultimately will determine such issues.

Another question from the audience was whether or not technology education should be part of legal education in the future. The speakers did not agree, with some stating that it can only add value and help increase comprehension of the technological challenges that society faces, and others stating that a law student or lawyer should be skilled in the law and therefore not too much extra focus should be placed on other areas. The latter group argued that there are other experts in those fields that can help lawyers when needed. The important thing, Marieke de Hoon adds, is that we educate ourselves and be critical.

Lonneke van der Velden, subsequently answered a question on whether she thought that the development of open source technology and open source codes could allow flawed evidence to be used in court cases. Lonneke van der Velden explained that the groups using open source technology are using it because they want their investigative method to be transparent and because their verification of the model is also based in part on the transparency of the method. She brought up the example of a project that embeds a hash in a video and that if someone were to modify the video, it would be seen in the hash of the video and therefore traced. 'Camera-V' and 'iWitness' are closed source versions of an originally open source idea that aim at preventing the tampering of evidence.

The next question was directed to Marieke de Hoon on the challenges to her Virtual Human Rights Lawyer app – in particular in relation to its relative capacity to adapt to local customs and languages in its practical application. In response, Marieke de Hoon clarified that lawyers normally have a conversation with their clients that starts with a factual conversation but ultimately dwells into the development of understanding and trust between the lawyers and her client. The

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[8] Magdalena Jozwiak holds a Master of Laws degree from Adam Mickiewicz University in Poznan, Poland and an LLM degree in Law in a European and Global Context from the Catolica Global School of Law in Lisbon, Portugal.
[9] Tina van der Linden has been teaching at the VU University since August 2017. Before that, she was a lecturer at Utrecht University. Tina now specialises in the legal questions spawned by blockchain

person acting as a lawyer gives human answers, not only legal ones. That is the job of the lawyer, to listen and to ask culturally sensitive questions. Victims of human rights violations are often severely traumatized people. When you have a conversation with them, you need to be aware of the local culture and the local language. The chatbot is currently only available in English and is also a computer. Even if you could embed natural language processing, the question remains how you would deal with dialect, accents, and the way people use certain words. The challenge is teaching the chatbot this. If you let a computer interact with a victim, you must ensure it is not re-traumatizing.

The following question was addressed to Magdalena Jozwiak and related to the removal of data from Facebook. The question was: what can be done to prevent evidence elimination online, but also how to make sure that there are less violent videos circulating on social media platforms that are traumatizing in themselves. Magdalena Jozwiak answered with the example of Facebook having to quickly deal with the videos of the Christchurch massacre. Facebook used hashing technologies to remove the videos, regardless of the intentions with which they were posted. New Zealand's government stated that all videos and photos of the incident had to be taken down. Local policemen without any relevant training had to help out and take it all down. Facebook is now doing this worldwide without disclosing exactly how they judge their content – she further injected that it is quite strange and remarkable that a social media platform has all this power.

Gareth Davies added that this is a post-colonial tradition: Facebook, Instagram and YouTube are all American companies so therefore their intense protection of free speech – including hate speech – is exported worldwide along with their platforms. Europe is currently acting as a counter-post-colonialist by putting privacy forward as our most fundamental right.

Marieke de Hoon added that within the UN Human Rights Council, there is now a focus on storing information about atrocity crimes committed in Myanmar in addition to Syria. This could provide evidence that could be used by the Council later on. However, there are challenges: if there is no way to hash a photo, it is more difficult to check whether it is real.

The last question, on what people can do themselves, was redirected from the panellists to the audiences: How can we support the ethical development and regulation of emerging technologies? A student in the audience replied that people who do not understand technology often think technology is objective or 'maths' whereas just helping people understand that it is not – that it reflects subjective values – might be helpful. The quote, 'technology is neither good nor bad, nor neutral' seemed to resonate with the panellists as well as the audience.

Gareth Davies ended the discussion, and the annual seminar, with advice to the students in the room. He harkened back to 1960s, a decade which caused a lot of social change. In comparison, young people today have a certain deterministic view. They often think: 'you cannot do much against the institutions', opinions do not have the necessary political power. However, Gareth Davies advised that "students should not buy into the orthodoxies of the institutions. They are bluffing. They do not know what to do next. The quality of the people running the world is low. They speak the language of 'this is the way it is has to be' showing a kind of deterministic view of the world. Push a little harder, and it will all crumble."

V. Conclusion: The Law and Politics of Emerging Technologies

It is the present authors' impression that the aforementioned lectures and panel cumulatively raises the questions: how is law - and legal practice more specifically – influenced, swayed, or aided by the effects of emerging technologies? And how should we seek to respond to these emerging challenges? It is, at this point, evident that what is commonly referred to as 'technological essentialism' – the belief that there is an intrinsic truth in technology – remains an insufficient analytical lens with which to answer these questions. Technologies do not necessarily carry linear, monocausal effects on the law and politics of their host societies – any intrinsic truth of either good or evil identifiable by way of academic scrutiny. To pursue Gareth Davies' case of geoengineering as an illustration: geoengineering may, on the one hand, offer a convenient, plausible solution to the challenges of climate change. On the other hand, it may equally serve to justify and stall much-needed policy development when it comes to modifying international consumption and production patterns. And as Marieke de Hoon identified, a human rights chatbot may offer additional protections but may also be re-traumatizing and re-victimizing in asking victims to recount their experience of the violations.

With this in mind, it is our belief that the essential insight, and contribution, of this year's ALF seminar was not how specific technologies come to challenge law and politics – but rather, the reality that technologies do so in multi-faceted, ambiguous ways even in their quotidian use. Addressing 'law and technology' is therefore not only a question of adding the seemingly apolitical technological variable to normative scrutiny but problematizing it on account of its practical effects on human life. The legal and political domains are not necessarily neatly separable, and because of that, technological determinism – the primary conceptualization of the technological variable in both international relations and international law – ultimately remains limited in its explanatory purchase.