Opinion

Rethinking Freedom of Thought for the 21st Century

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Abstract

Freedom of thought is protected as an absolute right in international human rights law but has received little attention over the years either in the courts or in academic analysis, in part because of an assumption that our inner thoughts were beyond reach. Recent developments in technology, however, are increasingly providing new ways to access, alter and manipulate our thoughts in ways we had not previously dreamed possible. This article explores the way the technology we use in our daily lives could interfere with our freedom of thought and the potential impact of that on us as individuals and democratic societies. It argues that there is a pressing need to explore and define the scope of the right to freedom of thought in light of this new reality and to develop strong legal frameworks to protect our freedom of thought for the future.

Introduction

Perhaps because of an assumption that our inner thoughts are beyond the effective scope of state intervention, the right to freedom of thought has received little attention in the courts and little academic analysis in international human rights law. But as technology and science develop ever clearer pictures of the way our thought processes work, and how our thoughts can be accessed, altered and manipulated, it is time to reflect on the practical needs for protecting freedom of thought in the rapidly changing digital reality of the 21st century.

Freedom of thought is an essential plank of the international human rights framework. Unlike many other rights such as the right to private life that allow for restriction in certain circumstances, there is an absolute right to think what you like in the "forum internum", or the inner space of your mind. This inviolable freedom has been described as "the foundation of democratic society" and "the basis and origin of all other rights". And it is connected to the corresponding right to freedom of expression and opinion which provides the social backdrop crucial to critical and intellectual thought. The absolute nature of the right reflects its fundamental importance but the lack of development of the right means it is difficult to pin down its exact scope in a rapidly changing world.

¹ Limited examples of academic work on the topic include C. Bublitz and R. Merkel, "Crimes against Minds: On Mental Manipulations, Harms and a Human Right to Mental Self-Determination" (2014) 8 Crim. Law and Philos. 64 and Professor Eben Moglen's speech at Re-Publica, Berlin in 2012, "Why Freedom of Thought requires Free Media and why Free Media require Free Technology", at https://re-publica.com/en/file/republica-2012-eben-moglen-freedom-thought-requires-free-media-0 [Accessed 18 May 2017].

² Nolan v Russia (2011) 53 E.H.R.R. 29 at [61].

³ Rene Cassin, France, as reported in M. Scheinin, "Article 18", in A. Eide et al. (eds), *UDHR: A Commentary* (Scandinavian University Press, 1992), p.266.

Protected alongside freedom of religion, belief, conscience and opinion, international human rights law makes a distinction between the internal aspect of the right—the right to think or believe what you like in the inner sanctum of your mind—and the manifestation of the right. It is that internal aspect that is now under threat. Freedom of thought includes the freedom to keep our thoughts private so that we may not be coerced into revealing them; freedom from indoctrination or influence on our conscious or subconscious mind through manipulation; and a prohibition on penalising a person for their thoughts or opinions. But despite the apparent strength of protection contained in the right, little has been done to develop the legislative and regulatory frameworks to ensure that enjoyment of the right to freedom of thought is real and effective in a modern context.

State signatories to international human rights conventions are bound to respect the right, but also to protect all those in their jurisdiction from interference with the right. This means that governments need to refrain from using techniques that interfere with our freedom of thought, but they also need to take concrete steps to protect us from interference from the private sector where much of the technology is being developed and used. While detailed domestic and regional laws and regulations have developed over the past two decades around privacy and data protection in both the public and private sectors in response to the exponential changes brought in by the internet and other technology, freedom of thought has remained a blind spot in the legal framework around digital developments. This article will argue that new legal and policy responses are required as a matter of urgency to regulate and limit business practices or state interventions that risk interference with freedom of thought.

There are several areas where the use of technology with an impact on freedom of thought may arise including politics and elections, medicine, surveillance, public campaigns, security and law enforcement, private sector risk management and insurance, marketing and advertising. Developments in fields like neuroscience raise numerous complex ethical and legal questions around freedom of thought in both medicine and criminal justice. Researchers are beginning to explore these issues in a rapidly changing environment through the development of the concept of "cognitive liberty", the "right to mental self-determination" and the discipline of neuroethics: an ew field concerned with the benefits and dangers of modern research on the brain, and by extension, with the social, legal and ethical implications of treating or manipulating the mind". Although there is limited academic literature on the subject, some commentators have sought to distinguish freedom of thought from "cognitive liberty" or "the right to mental self-determination" arguing that there is a need for a new human rights framework to cover this field. I would argue that these concepts represent the practical development of the contours of freedom of thought in the 21st century. There is no need to design new rights, but we do need clearer guidance and legal development of the meaning of the right to freedom of thought and opinion in the modern context and a more detailed legal framework to protect it.

Technological threats to freedom of thought come from many different sources and the issue raises several complex issues. This article will focus on the areas of technological development, particularly related to the internet and big data, that engage our inner thoughts on a daily basis across our societies and which may be used by both governments and the private sector to manipulate us as individuals or groups. It will explore the potential to use the right to freedom of thought in international law to protect us as individuals living in democratic societies in the internet age and the steps we need to take to ensure the essence of the right is not lost for future generations.

⁴ See R. Boire, "On Cognitive Liberty", at http://www.cognitiveliberty.org/curriculum/oncoglib_123.htm [Accessed 18 May 2017].

⁵ Bublitz and Merkel, "Crimes against Minds" (2014) 8 Crim. Law and Philos. 64.

⁶ See http://www.cognitiveliberty.org/proj_neuro.html [Accessed 18 May 2017].

⁷ See Bublitz and Merkel "Crimes against Minds" (2014) 8 Crim. Law and Philos. 64.

Freedom of thought, the internet and international law

Use of the internet is now ubiquitous. In 2011, in a case about restricting internet access for sex offenders, the High Court of England and Wales found that:

"a blanket prohibition on computer use or internet access is impermissible. It is disproportionate because it restricts the defendant in the use of what is nowadays an essential part of everyday living for a large proportion of the public, as well as a requirement of much employment."8

We can no longer imagine living our lives without the internet to help us find and carry out work, make and manage our relationships, our finances, our news and our free time. Internet access is seen as a crucial tool for societal and individual development. Without our smartphones, many of us are, quite literally, lost. The discussions around human rights and the internet have mainly focused on the right of access to the internet, 9 its importance in providing a platform for the exchange of ideas and freedom of expression, 10 the risks of hate speech¹¹ and issues around the right to private life and data protection.¹² These rights are all related to freedom of thought and freedom of opinion in that they represent the external manifestations of our thoughts and opinions. I choose to use my freedom of expression to tell you what I am thinking or to get access to the ideas of others. My right to private life gives me a space within which I can develop my personality and practice being myself. But these rights may all be limited in certain circumstances and it is this scope for limitation which has given rise to a complex network of law and regulatory policy mapping out the ways in which they can be legitimately curtailed. Thought, however, is a different matter. The right to think what I like in the "forum internum" is absolute; there can be no justification for interfering with it. Once a practice steps across the threshold of interference with my mind, it cannot be permissible. It is, therefore, accorded a stronger protection in international human rights law, one which reflects its profound importance for who we are as individuals and as societies. But to protect it we need to define where the threshold is and this is becoming less and less clear. Paradoxically, it seems the absolute nature of the right in law has led us to ignore the ways it may be being threatened in practice.

International organisations and civil society are grappling with this new world and trying to set down the parameters for understanding human rights and the internet. But the potential for technology to access, manipulate and penalise our thoughts and thought processes has received very little attention from a human rights perspective to date. In a powerful speech in 2012, Professor Eben Moglen sounded the alarm about the risks to freedom of thought of current developments¹³ but there has been little follow-up. The scale and speed of technological developments relating to data, networking and surveillance is exponential—Facebook has just announced details of its development of a "Brain Computer Interface" which it hopes will be able to read thoughts and transmit them without the need for typing or speaking—this is an issue that we ignore at our peril. The Council of Europe recently published a "Guide to Human Rights" for Internet Users". 14 While the guide asserts that the internet is global and that access to it is our human right, what is notable is the absence of any reference to or analysis of the potential impact on the absolute right to freedom of thought protected under art.9 of the European Convention on Human Rights or the right to freedom of opinion protected under art.10. Neither do these rights figure in the fact-sheet of case

⁸ R. v Smith (Steven) [2011] EWCA Crim 1772 (19 July 2011).

⁹ See, e.g. A. Wagner, "Is Internet Access a Human Right?" (11 January 2012) The Guardian, https://www.theguardian.com/law/2012/jan/11/is -internet-access-a-human-right [Accessed 18 May 2017].

¹⁰ A/HRC/17/27—Report of the Special Rapporteur on Freedom of Opinion and Expression, Frank La Rue of 16 May 2011, http://www2.ohchr.org /english/bodies/hrcouncil/docs/17session/A.HRC.17.27_en.pdf [Accessed 18 May 2017]. A/HRC/17/27.

¹² F. Kaltheune, "Cambridge Analytica Explained: Data and Elections" (13 April 2017), see https://medium.com/@privacyint/cambridge-analytica -explained-data-and-elections-6d4e06549491 [Accessed 18 May 2017].

13 Moglen, "Why Freedom of Thought requires Free Media and why Free Media require Free Technology", at https://re-publica.com/en/file/republica

⁻²⁰¹²⁻eben-moglen-freedom-thought-requires-free-media-0 [Accessed 18 May 2017]

14 Council of Europe, "Guide to Human Rights for Internet Users", http://www.coe.int/en/web/internet-users-rights [Accessed 18 May 2017].

law on new technologies.¹⁵ It is as if the potential impact on our thoughts of the technology we use daily is something we simply cannot bear to think about.

What is protected?

Of the sparse case-law from the European Court of Human Rights on art.9, none relates directly to the concept of freedom of thought as opposed to ideas related to religion, conscience or belief. What the absolute protection of the right to freedom of thought means in practice will, therefore, depend to a great extent on what the right actually entails. The Court, in assessing the type of beliefs protected by art.9, has taken a relatively restrictive approach. For personal beliefs to fall within art.9 protection they must "attain a certain level of cogency, seriousness, cohesion and importance" and be such as to be considered compatible with respect for human dignity. In other words, the belief must relate to a "weighty and substantial aspect of human life and behaviour" and be deemed worthy of protection in European democratic society. But thought itself is different—it can only really be manifested through expression which is protected under a different, limited right.

In a rare example of jurisprudence touching on freedom of thought, the European Commission on Human Rights found that, given the "comprehensiveness of the concept of thought", a parent's wish to name their child in a certain way would come within the scope of the right to freedom of thought. This would indicate a broad scope of protection for all kinds of thought, whether trivial or profound. The limited literature on the subject seems to suggest that the freedom of thought, conscience and religion in art. 18 of the UDHR taken together cover all possible attitudes towards the world and society protecting the "absolute character of the freedom of an inner state of mind". The concept of "thought" is potentially broad including things such as emotional states, political opinions and trivial thought processes. My decision on what colour socks to wear, how I feel about Monday mornings or my thoughts on capital punishment are all capable of coming within the scope of freedom of thought. It is, however, unclear what that means in practical terms for the obligation to protect my freedom to think about these things as opposed to my rights to act on or express those thoughts.

How is it protected in international law?

Freedom of thought is an absolute right enshrined in art.9 of the European Convention on Human Rights (ECHR), art.18 of the International Covenant on Civil and Political Rights (ICCPR) and directly linked to freedom of opinion in art.10 of the ECHR and art.19 of the ICCPR which is also considered as an absolute right.²⁰

The Human Rights Committee in its General Comment No.22²¹ of 1993 on art.18 explains the scope and absolute nature of the right:

"1. The right to freedom of thought, conscience and religion (which includes the freedom to hold beliefs) in article 18(1) is far-reaching and profound; it encompasses freedom of thoughts on all matters, personal conviction and the commitment to religion or belief, whether manifested individually or in community with others. The Committee draws the attention of States parties to the fact that the freedom of thought and the freedom of conscience are

¹⁵ Council of Europe, Fact Sheet on Case Law and New Technologies (March 2017), http://www.echr.coe.int/Documents/FS_New_technologies_ENG.pdf [Accessed 18 May 2017].

¹⁶ Campbell v United Kingdom (1982) 4 E.H.R.R. 293.

¹⁷ Salonen v Finland (1997) 25 E.H.R.R. 371.

¹⁸ While mentioned in human rights texts covering art.9 of the ECHR and art.18 of the UDHR and ICCPR, there is little in-depth analysis.

¹⁹ Scheinin, "Article 18", in A. Eide et al. (eds), *UDHR: A Commentary* (1992), pp.264–266

See also General Comment No.34 on art.19 para.5.

²¹ CCPR/C/21/Rev.1/Add.4.

protected equally with the freedom of religion and belief. The fundamental character of these freedoms is also reflected in the fact that this provision cannot be derogated from, even in time of public emergency, as stated in article 4(2) of the Covenant.

3. Article 18 distinguishes the freedom of thought, conscience, religion or belief from the freedom to manifest religion or belief. It does not permit any limitations whatsoever on the freedom of thought and conscience or on the freedom to have or adopt a religion or belief of one's choice. These freedoms are protected unconditionally, as is the right of everyone to hold opinions without interference in article 19(1). In accordance with articles 18(2) and 17, no one can be compelled to reveal his thoughts or adherence to a religion or belief."

The HRC, therefore, has made it very clear that freedom of thought and freedom of opinion are absolute rights and there can be no legitimate justification for limiting them or interfering with them. The Council of Europe guidance²² on art.9 of the ECHR also clarifies that the right to freedom of thought in the "forum" internum" is absolute and non-derogable. On the face of it, this should be the case, no matter what the topic or quality of thought is—thoughts about what to buy and how to vote appear to be equally inviolable. What has not been explored so far, is what interference with those absolute rights might look like in practice. Where we draw the line around what is protected absolutely will define our future societies. As the General Comment on freedom of thought was drafted in 1993 before the potential impact of the internet on individual and societal thought could really be imagined, it could hardly be expected to cast much light on the practical implications of the right in the internet age. Now that the impact of technology on our daily lives, our societies and the minds of our children begins to crystallise, there is an urgent need to take stock and consider whether we are living in an age in which we are giving away our inalienable rights without really thinking about it. The data I unwittingly provide through my smartphone, social networking and online shopping make the full range of my preferences, emotions, views and inclinations increasingly accessible and open to manipulation. This raises important questions about the true scope of freedom of thought in the internet age. What exactly is "thought" requiring protection? At what point does the use of our data reach beyond our private life and into our thoughts? When does suggestion or persuasion cross the line into manipulation and brain-washing? And can we ever be properly considered to give informed consent to these practices?

What is an interference with freedom of thought?

What can be gleaned from the international law framework is that the right has three key elements:

- the right not to reveal one's thoughts or opinions;
- the right not to have one's thoughts or opinions manipulated; and
- the right not to be penalised for one's thoughts.²³

All three elements are crucial to ensuring the absolute nature of the right and all three are potentially threatened by developments in technology.

Given the absolute nature of the right to freedom of thought, once an interference or limitation is established, it will be unlawful and cannot be justified. This means that governments are prohibited from acting in a way that interferes with freedom of thought and that they have a duty to protect us from others who seek to interfere with our freedom of thought. This should include an obligation to establish appropriate legal and regulatory frameworks to prevent the private sector from engaging in practices that interfere

²² Council of Europe Guide to Article 9: Freedom of Thought, Conscience and Religion, http://echr.coe.int/Documents/Guide_Art_9_ENG.pdf [Accessed 18 May 2017].

23 B. Vermeulen, "Article 9" in P. van Dijk, F. van Hoof, A. van Rijn and L. Zwaak (eds), *Theory and Practice of the European Convention on*

Human Rights, 4th edn (Cambridge: Intersentia Press 2006), p.752.

with our thoughts. The key to understanding freedom of thought in the digital age is a thorough assessment of what an interference could look like. The following are some examples of practices that appear to be within the scope of the right to freedom of thought.

The right not to reveal one's thoughts or opinions

"They own the search box and we put our dreams in it. And they eat them and they tell us who we are right back" (Professor Eben Moglen, 2012).²⁴

The right not to reveal one's thoughts does not prevent us from revealing our innermost thoughts and feelings if we want to. But as technology develops more complex ways to surveille us and analyse the resulting data, it becomes less clear which thoughts we are offering to the outside world and which are being extracted without our knowledge or understanding.

Smart technology is monitoring us on a scale never before possible. It can listen in to our conversations and interpret the words. Devices that record "health data" like iPhones and fit-bits provide data that can be analysed to give a picture of emotional states or to predict psychotic episodes.²⁵ In some cases, an individual may be providing the information voluntarily. But others may not be aware of the level of information about their inner thoughts that can be extracted from the data they provide, often without realising it. They may also have little choice about the data they disclose as increasingly we have to exchange data to get access to basic services.

In 2015, a Cambridge University study²⁶ showed that psychological profiling based on Facebook likes allowed researchers more insight into a user's personality than their close friends and family. The researchers reportedly observed:

"The results of such data analysis can be very useful in aiding people when making decisions.

... Recruiters could better match candidates with jobs based on their personality; products and services could adjust their behaviour to best match their users' characters and changing moods.

People may choose to augment their own intuitions and judgments with this kind of data analysis when making important life decisions such as choosing activities, career paths, or even romantic partners. Such data-driven decisions may well improve people's lives."²⁷

But what are the costs of this "brave new world"? The use of data to read and predict our characters, thoughts and changing moods is arguably an interference with our right to freedom of thought. While we may be happy to let people know that we liked a post about Salvador Dalí and another about kittens, we may not be so comfortable with the fact that this information will be analysed to reveal profound psychological traits and the inner workings of our minds that will, in turn, be used to tell us how to behave or to tell others how they should treat us. What is more, the interpretation of our online activity is not restricted to conscious and public choices we make online. It is not only what we say we like through hitting the "like" button that is recorded, but also what we look at but do not choose to "like", how long we linger over particular content and the conversations we have around our mobile devices.²⁸ All this information is being extracted and analysed as part of our daily interactions with technology. In many

²⁴ E. Moglen, "Why Freedom of Thought requires Free Media and why Free Media require Free Technology", at https://re-publica.com/en/file/republica-2012-eben-moglen-freedom-thought-requires-free-media-0 [Accessed 18 May 2017].

²⁵ E. Eisner, "A 'smart' way to spot schizophrenia signs" (31 October 2015) BBC News, http://www.bbc.co.uk/news/health-34656921 [Accessed 18 May 2017].

²⁶ W. Youyou, M. Kosinski and D.Stillwell, "Computer-based Personality Judgments are More Accurate than those Made by Humans", http://www.pnas.org/content/112/4/1036.full.pdf [Accessed 18 May 2017].

[.]pnas.org/content/112/4/1036.full.pdf [Accessed 18 May 2017].

27 S. Knapton, "Facebook knows you better than your members of your own family" (12 January 2015), The Telegraph, http://www.telegraph.co.uk/news/science/science-news/11340166/Facebook-knows-you-better-than-your-members-of-your-own-family.html [Accessed 18 May 2017].

²⁸ A. Griffin, "Facebook is using smartphones to listen to what people say, Professor suggests" (31 May 2016), The Independent, http://www.independent.co.uk/life-style/gadgets-and-tech/news/facebook-using-people-s-phones-to-listen-in-on-what-they-re-saying-claims-professor-a7057526. html [Accessed 18 May 2017].

cases, we accept terms and conditions that purport to show our consent, but it is very difficult to describe such consent as informed when the use our data may be put to is constantly evolving and terms and conditions are lengthy, difficult to understand and not designed to be read. Every time we interact, we teach the machine to understand our thoughts more completely than we understand them ourselves. The law on privacy and data protection is struggling to keep up with technological developments, but it is not enough.

Facebook has just announced²⁹ the development of its Brain Computer Interface technology which it hopes will create a seamless, non-invasive interface between our thoughts and the network. Despite Facebook's assertion that it will not decode our random thoughts but only those we want to express, it is difficult to guarantee that these capabilities could not be abused. These developments may bring about useful changes for some, but their development and use requires intensive legal and ethical oversight to avoid undesirable consequences that could undermine our rights and our democratic societies. As Facebook's Regina Dugan said in her presentation of the new technology, "We don't always have the luxury of time." In terms of responding to the technology to ensure our freedom of thought for the future, it is clear that time is of the essence.

As Moglen points out:

"in the 20th Century, people were tortured to reveal their thoughts and inform on their friends and family but in the 21st Century you just build social networks and everyone informs on everyone else." 30

If social networks are to be used in a way that allows users to protect their right to freedom of thought as well as their privacy, people need to be given the choice to opt in or out of algorithms that monitor and interpret their activity and we need to understand what the present and possible future capabilities are for extracting information from the data we hand over. This means providing real options and explaining them in straightforward layman's terms. Only then can we identify what people are consenting to divulge and what is and is not permissible from the perspective of freedom of thought.

The right not to have one's thoughts or opinions manipulated

"[F]reedom to think is absolute of its own nature, the most tyrannical government is powerless to control the inward workings of the mind" (United States Supreme Court 1942).³¹

The assumption that our inner minds were inviolable may have had a degree of legitimacy in the 1940s and 1950s when much international human rights law was drafted. But in the 21st century it is increasingly clear that there are many ways in which our minds can be manipulated. Marketing, advertising, governmental and political organisations are all exploring the most effective ways to change the way we think. The fundamental question for us now, therefore, is where do we draw the line between legitimate persuasion and unlawful manipulation?

In 2012, Facebook published the results of research³² showing it could alter the emotional state of users by manipulating their news feeds. Researchers found those shown more negative comments posted more negative comments and vice versa. There was a negative backlash from Facebook users who were unhappy with this evidence of control and manipulation of their emotional states and concern was raised about the

²⁹ "F8 2017: AI, Building 8 and More Technology Updates From Day Two" (19 April 2017) Facebook News, https://newsroom.fb.com/news/2017/04/f8-2017-day-2/ [Accessed 18 May 2017].

^{/04//8-2017-}day-2/ [Accessed 18 May 2017].

30 Moglen, "Why Freedom of Thought requires Free Media and why Free Media require Free Technology", at https://re-publica.com/en/file/republica-2012-eben-moglen-freedom-thought-requires-free-media-0 [Accessed 18 May 2017]

³¹ Jones v Opleinka 1942, 316 US 584, 618.

³² A.D.I. Kramer, J.E. Guillory and J.T. Hancock "Experimental Evidence of Massive Scale Emotional Contagion through Social Networks", at http://www.pnas.org/content/111/24/8788.full.pdf [Accessed 18 May 2017].

apparent lack of informed consent.³³ In response, Facebook apologised and said the experiment should have been "done differently".³⁴ Arguably, an experiment that sought to manipulate the inner space of individual minds through social networking should not have been done at all if it amounts to an interference with the right to freedom of thought.

In 2016, the idea behind the research on altering emotional states through Facebook was brought together with research on psychological profiling linked to research on Facebook likes³⁵ in a technique called "behavioural microtargeting" which was reportedly used for the Trump campaign in the United States³⁷ and, according to some reports, for the leave.EU campaign in the EU referendum in the United Kingdom. The effectiveness of the technique has been questioned.³⁸ But the intent to access our thoughts on an individual level without our knowledge and use that information to change our thoughts, emotional states, opinions and therefore our voting behaviour without us realising it must surely amount to an attempt to interfere with freedom of thought on a grand scale. Even if it is not yet wholly successful, we need to examine whether the premise itself is unlawful under international human rights law. Given the speed of technological development and the profundity of what is at stake, we cannot afford to wait until our thoughts have actually been manipulated to decide that the manipulative technique is wrong.

Behavioural microtargeting is of particular concern because it aims to interfere with our thoughts for political gain and is a threat to the foundations of our democracies. But the right to freedom of thought is absolute, so, arguably, any technology designed to manipulate the way we think or feel would not be permissible, irrelevant of the ultimate goal. This has significant implications for marketers and advertisers but also for governmental use of "nudge technology" to make us behave as better citizens. For example, the UK Behavioural Insights Team³⁹ (also known as the "Nudge Unit") uses behavioural science to identify ways to intervene in decision-making processes to improve society in a range of areas including health care, the environment and financial services. Its aim is for social good but the design of its interventions will need to give careful attention to the potential impact on freedom of thought. Although privacy concerns may have been considered in this area, the right to private life may be limited to meet a legitimate goal but the right to freedom of thought may not.

There is an urgent need for the law to catch up with the technological reality and provide guidance on the border between legitimate persuasion and unlawful interference with the right to freedom of thought. The consequences of allowing unchecked development in this area will be profound for us as individuals and as democratic societies. In the past year, concerns about the impact of "fake news" on election outcomes have been high up the political agenda combined with arguments that targeting fake news risks curbing freedom of expression. But the bigger question is the way the internet, new media and smart technology is being used already to manipulate our thought processes in ways we did not think possible just 20 years ago. Without clarity in the law around freedom of thought, we are at serious risk of losing the ability to know what or how to think.

³³ See PNAS Editorial Expression of Concern and Correction of 22 July 2014, http://www.pnas.org/content/111/24/8788.full.pdf [Accessed 18 May 2017].

³⁴ M. Schroepfer, Blog, 2 October 2014, https://newsroom.fb.com/news/2014/10/research-at-facebook/ [Accessed 18 May 2017].

³⁵ See Youyou, Kosinski and Stillwell, "Computer-based Personality Judgments are More Accurate than those Made by Humans", http://www.pnas.org/content/112/4/1036.full.pdf [Accessed 18 May 2017].

³⁶ The term "behavioural microtargeting" was used by Cambridge Analytica on their website when accessed during the research for this article but has subsequently been removed.

³⁷ H. Grassegger and M. Krogerus "The Data That Turned the World Upside Down" (28 January 2017), https://motherboard.vice.com/en_us/article

³⁷ H. Grassegger and M. Krogerus "The Data That Turned the World Upside Down" (28 January 2017), https://motherboard.vice.com/en_us/article/how-our-likes-helped-trump-win [Accessed 18 May 2017].

[/]how-our-likes-helped-trump-win [Accessed 18 May 2017].

38 N. Confessore and D. Hakim, "Data Firm Says 'Secret Sauce' Aided Trump; Many Scoff' (6 March 2017) The New York Times, https://www.nytimes.com/2017/03/06/us/politics/cambridge-analytica.html?_r=0 [Accessed 18 May 2017].

The right not to be penalised for one's thoughts

"The thought police would get him just the same. He had committed—would have committed, even if he never set pen to paper—the essential crime that contained all others in itself. Thoughtcrime, they called it. Thoughtcrime was not a thing that could be concealed forever. You might dodge successfully for a while, even for years, but sooner or later they were bound to get you" (George Orwell, 1984, Book 1, Chapter 1).

Once our thoughts have been extracted, it is very difficult to control how they will be used for or against us in the future. In late 2016, Facebook refused to allow a car insurance company to install an app that would give it access to young drivers' Facebook accounts in order to analyse their personality traits and price their car insurance accordingly.⁴⁰ Although Facebook turned down the app based on its privacy policy, the type of data concerned and the potential analysis of it could arguably come within the scope of freedom of thought as well as the right to private life. It was reported that:

"Under the scheme, the company would identify personality traits through examining posts and likes by Facebook, although not photos, and looking for certain habits. Facebook users who write in short, concise sentences, use lists, and arrange to meet friends at a set time and place, rather than just 'tonight', would be identified as conscientious. In contrast, those who frequently use exclamation marks and phrases such as 'always' or 'never' rather than 'maybe' could be overconfident."

Although the selling point to young drivers was the potential to reduce their insurance premiums, equally, some consumers would end up with higher premiums because of the assessment of their personality and their thoughts as revealed through their social media activity. This time, Facebook said no. But as technology develops and becomes cheaper and more widespread, businesses, employers and governments are more and more likely to use the information we have unwittingly revealed about our inner thoughts against us. And as Facebook develops its Brain Computer Interface, we may find ourselves in a situation where our thoughts are constantly accessed to make our technology work. Once our thoughts are out in the world we will have no control over the way they are used or abused—we will be unable to close Pandora's box.

When people are presented with arguments about privacy, they will often respond that they have nothing to hide. But if we allow the machine to know us better than we know ourselves, we may no longer have the capacity to know whether or not we have something to hide, from whom or how to hide it. Over time, societies and regimes change, opinions, character traits and behaviours become more or less socially or politically acceptable. We should never forget that modern human rights laws arose out of the horrors of the Second World War when groups of people were targeted and murdered for their faith, their sexual orientation, their ethnicity and their political opinions.

Thoughts may become unspeakable and criminalised under new regimes—but in this new world they will not be unknowable. Surveillance techniques may interpret outward signs of inner thoughts to indicate who is a security risk to allow law-enforcement or security services to take preventive action to stop a thought translating into an action. These developments are happening already—to a degree, the PREVENT strategy in the United Kingdom is premised on the idea that we can identify people with extremist ideas and change the way they think before they become a danger to society.⁴² Types of personality may become more or less desirable in the job market. Services that we consider essential, like access to healthcare,

⁴⁰ G. Ruddick, "Facebook forces Admiral to pull plan to price car insurance based on posts" (2 November 2016) *The Guardian*, https://www.theguardian.com/money/2016/nov/02/facebook-admiral-car-insurance-privacy-data [Accessed 18 May 2017].

⁴TRuddick, "Facebook forces Admiral to pull plan to price car insurance based on posts" (2 November 2016) *The Guardian, https://www.theguardian.com/money/2016/nov/02/facebook-admiral-car-insurance-privacy-data* [Accessed 18 May 2017].

⁴² For example recent calls by Tarique Ghaffur to intern those believed to hold extremist views, see D. Millward, "7/7 Met Police officer calls for

⁴² For example recent calls by Tarique Ghaffur to intern those believed to hold extremist views, see D. Millward, "7/7 Met Police officer calls for internment of Islamic extremists" (28 May 2017), *The Telegraph*, http://www.telegraph.co.uk/news/2017/05/28/77-met-police-officer-calls-internment-islamic-extremists/ [Accessed 3 June 2017].

may exclude those who display self-destructive character traits. We need to be alert to legal or policy changes that risk penalising our thoughts as evidenced through our interactions with technology but we also need to beware of technology that will interpret and record our thoughts for posterity through our data without us even realising what we are revealing of ourselves.

Freedom of thought in a changing world

What does our acquiescence to and collaboration with the ubiquity of technology and networking in our lives mean for freedom of thought? Could it be said that, according to the principle that human rights are "living instruments", ⁴³ the right to freedom of thought has lost its relevance and resonance in modern society? Are we consenting to the loss of freedom of thought? I believe that such a view would be a betrayal of the earlier generations who have fought for our rights and the future generations who rely on us to protect their rights. Although we may be rather late to wake up to the issue, we should instead view the living instrument doctrine as a route to recognising the new threats to our fundamental right to freedom of thought, whatever guise they may come in and establishing clearly the scope of the right in this new context. This requires an understanding of the way technology currently interacts with our thoughts and thought processes to test the boundaries of interference with freedom of thought. And it also requires the development of a framework for understanding the future risks associated with technological developments.

The precautionary principle

UNESCO, along with its advisory body, the World Commission on the Ethics of Scientific Knowledge and Technology, developed a working definition of the "precautionary principle" that is found in many international instruments relating to scientific developments and in the environmental field:

"When human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm.

Morally unacceptable harm refers to harm to humans or the environment that is

- threatening to human life or health, or
- serious and effectively irreversible, or
- inequitable to present or future generations, or
- imposed without adequate consideration of the human rights of those affected.

The judgement of plausibility should be grounded in scientific analysis. Analysis should be ongoing so that chosen actions are subject to review.

Uncertainty may apply to, but need not be limited to, causality or the bounds of the possible harm. Actions are interventions that are undertaken before harm occurs that seek to avoid or diminish the harm. Actions should be chosen that are proportional to the seriousness of the potential harm, with consideration of their positive and negative consequences, and with an assessment of the moral implications of both action and inaction. The choice of action should be the result of a participatory process."

Technological developments that have the capacity to interfere with our freedom of thought fall clearly within the scope of "morally unacceptable harm". It is now time to ensure that the precautionary principle is rigorously applied to ongoing developments in this field. The European Union's General Data Protection

⁴³ Tyrer v United Kingdom (1978) 2 E.H.R.R. 1.

⁴⁴ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (GDPR) http://ec.europa.eu/justice/data-protection/reform/files/regulation_oj_en.pdf [Accessed 18 May 2017].

Regulation brings in new standards in an attempt to future-proof the right to data protection in light of fast-changing technological advances. The preamble recognises that:

"The processing of personal data should be designed to serve mankind. The right to the protection of personal data is not an absolute right; it must be considered in relation to its function in society and be balanced against other fundamental rights, in accordance with the principle of proportionality. This Regulation respects all fundamental rights and observes the freedoms and principles recognised in the Charter as enshrined in the Treaties, in particular the respect for private and family life, home and communications, the protection of personal data, freedom of thought, conscience and religion, freedom of expression and information, freedom to conduct a business, the right to an effective remedy and to a fair trial, and cultural, religious and linguistic diversity."

The substantive rights of the Regulation include the right not to be subjected to automated individual decision making and data profiling. ⁴⁶ But data protection and privacy can be limited—a more explicit legal framework addressing the potential for technology to interfere with our absolute right to freedom of thought is needed urgently to address the risks.

Protecting freedom of thought for the future

"Ours is the last generation of human brains that will be formed without contact with the net ... Humanity will become a super-organism in which each of us is but a neuron in the brain ... In this generation, we will decide how the network is organised. Unfortunately, we are beginning badly" (Professor Eben Moglen 2012).⁴⁷

It is time to start thinking about how we can repair the damage already done and future-proof the right to freedom of thought. This will require a concerted effort from lawyers, academics, civil society, governments, the media and technology professionals as well as the public at large. The threats to freedom of thought come both from the private sector developing ways to monetise access to our minds and from government agencies seeking more efficient ways to control and monitor us in the name of security. Both have strong interests in accessing our thoughts and technology developed for use in one area will always run the risk of being turned to another, more sinister purpose. The obligation to respect human rights means that states must refrain from interfering with or curtailing the enjoyment of our rights. The obligation to protect requires states to protect individuals and groups against human rights abuses by others. The obligation to fulfil means that states must take positive action to facilitate the enjoyment of basic human rights. In relation to the right to freedom of thought, those obligations mean that states cannot avoid their responsibilities simply because much of the interference comes from the private sector.

We love technology because it makes our lives easier. It is the ease that seduces us into revealing more about ourselves to get more in reward. But as a society and as individuals, we are developing a toxic co-dependence on the internet. It is like indulging in fast-food without considering the obesity epidemic or the environmental impact it causes. This is particularly dangerous because the internet is not an independent and benign space—it is owned by individuals, corporations and states. From the perspective of freedom of thought and freedom of opinion, we need to take action to ensure that technological developments are designed to serve mankind, not the other way around.

⁴⁵ GDPR para.4

⁴⁶ GDPR art.22.

⁴⁷Moglen, "Why Freedom of Thought requires Free Media and why Free Media require Free Technology", at https://re-publica.com/en/file/republica -2012-eben-moglen-freedom-thought-requires-free-media-0 [Accessed 18 May 2017].

The law

In the legal sphere, the scope of the right to freedom of thought needs to be developed so that it fits our modern reality. It is no longer sufficient to regard it as a given through high level legal principles. States have an obligation to protect our fundamental rights. The technological threat to the right to freedom of thought comes both from state surveillance and related activities and from the private sector. As technology develops, it will likely become available globally for use by the public and private sectors alike. While the right to private life, data protection and freedom of expression have attracted much attention in the development of law and the internet, the right to freedom of thought remains largely unexplored. There is an urgent need for the development of legal policy and legislative and regulatory frameworks at national, regional and international level that address this gap.

I am not persuaded by the arguments that there is a need to develop new rights related to cognitive liberty or mental self-determination. The right to freedom of thought is couched in very strong and absolute terms in international human rights law and I can see no reason to assume that it does not cover those spheres. The suggestion that a new and limited right⁴⁸ should be developed to meet new realities in interference with our mental states strikes me as a way of diluting our rights and undermining the fundamental importance and absolute nature of the right to freedom of thought. But there is a need to map the right in the new context and its intersection with other rights such as the rights to private life and freedom of expression so that it can be properly protected.

The issues raised by the need to protect the right to freedom of thought are profound and complex. The right is facing new challenges every day in a myriad of fields. It has been left to the side for so long that there is a need to catch up in defining the parameters of the right and the requirements for its protection and fulfilment. This requires both reflection and action. International and regional organisations should put a new focus on the protection of the "forum internum" in the 21st century. While I do not believe there is a need for new rights, new guidance about what the right to freedom of thought means in the modern context is urgently needed. At the UN level, a new Special Procedure could be established to look into new threats to the autonomy of our minds. Guidance such as the Council of Europe Guide to Human Rights for Internet Users should be updated to include proper consideration of the right to freedom of thought. Policy development, advocacy and research on the closely related rights to privacy and data protection should explore the overlap with the right to freedom of thought and use the absolute nature of the right to strengthen rights protection in this field more broadly. Opportunities for incorporating arguments around the right to freedom of thought, in addition to privacy and data protection, in strategic litigation challenging practices that interfere with our rights should be sought out to probe the boundaries of the right and hold governments accountable for gaps in the legislative framework to protect us.

Where a practice feels wrong but we cannot find adequate frameworks to challenge it, the right to freedom of thought should provide a platform to demand new laws that allow us to make the right real and effective in the modern context. Given the speed of technological change and advancement in this area and the complex ethical issues, we should consider the need for a dedicated body capable of providing robust oversight of scientific and technological developments that have the potential to interfere with our minds and suggesting appropriate legal and policy responses to meet the changes as they happen. It is time to put the right to freedom of thought firmly on the legal map before we lose it.

The practice

In Moglen's view, in order to turn things around we need free media to protect freedom of thought. He puts forward a clear picture of what free media requires in the internet age—free software, free hardware

⁴⁸ Bublitz and Merkel, "Crimes against Minds" (2014) 8 Crim. Law and Philos. 64.

and free bandwidth. If we are not able to control and change the technology that we access, we are, essentially, allowing it and the people who own it, to control us. As he puts it, social networking creates the possibility of kinds of social control that were previously too cumbersome. We are constantly tracked, monitored and predicted by the media we use.

If we are uncomfortable about losing our autonomy and giving up our free will to those who seek to monetise and control our thoughts, it is time to take action. A first step in creating a free media in this context is to establish a clear code of media ethics which should include, as a primary principle, "do not surveille the reader". ⁴⁹ As a society, this requires us to wake up to the threat, demand an ethical framework and make choices as users that drive change. We need to choose to step away from dealers in surveiled books, music and movies and drive the creation of social networks that do not exploit and manipulate our thought processes. In order to do this, in reality, we will need to have free choices. Socially conscious developers will be at the heart of this movement and governments that recognise the value in democracy should promote these developments by creating enabling legal and policy frameworks to create a digital world that works for humanity.

Conclusion

The right to freedom of thought has taken a back seat in the discourse around human rights and the internet so far. It is as if we cannot bear to accept that our thoughts may not be our own, that someone could reach inside our minds and manipulate the way we see the world. It is an unbearable idea. Privacy and data protection law will only protect our rights so far and they are at risk of dilution. People can be *blasé* about their privacy in a way that they may not be about their free will. Suggestions that we need to design new, limited rights to protect the mental space show how far down the road we may be to accepting that some interference with our minds may be acceptable. This is a slippery slope. As technology progresses, the design targets the workings of our mind. New inventions seek to create the ultimate interface between mind and machine. Freedom of thought requires free media and, at the same time, we should never accept that free media requires us to give up our freedom of thought.

Moglen tells us "We are the last generation that's lived on both sides of the techno divide—we are the last chance. We are giving it away for convenience." He is right. Technological convenience may be both seductive and addictive but it is time for us, both as societies and as individuals, to use our freedom of thought and take concrete steps to protect it before we lose it forever.

⁴⁹ Moglen, "Why Freedom of Thought requires Free Media and why Free Media require Free Technology", at https://re-publica.com/en/file/republica -2012-eben-moglen-freedom-thought-requires-free-media-0 [Accessed 18 May 2017].

⁵⁰Moglen, "Why Freedom of Thought requires Free Media and why Free Media require Free Technology", at https://re-publica.com/en/file/republica -2012-eben-moglen-freedom-thought-requires-free-media-0 [Accessed 18 May 2017].