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Mr. Ahmed Shaheed  
Special Rapporteur on freedom of religion or belief  
Office of the High Commissioner for Human Rights  
By email to [freedomofreligion@ohchr.org](mailto:freedomofreligion@ohchr.org)

8 June 2021

## **Re: Call for Input on Respecting, Protecting, and Fulfilling the Right to Freedom of Thought**

Dear Mr. Shaheed,

I am writing to provide input and information for your upcoming report to the 76<sup>th</sup> Session of the General Assembly which seeks to explore the international human right to freedom of thought. I appreciate the opportunity to submit comments, and I hope this will be helpful to you.

I am an attorney with an LLM in International Human Rights Law from the Irish Centre for Human Rights at the National University of Ireland Galway. My master's thesis entitled "www: Minding the Human Rights of the *Forum Internum* in the Digital Age" analyzed the variety of ways digital surveillance technologies are impacting our *forum internum* which comprises the absolute international human rights to freedom of thought, conscience, opinion and belief. It is no longer a question whether digital technologies are changing the way we think. Artificial machines can now read and transcribe our private thoughts, predict a range of characteristics and behaviors, sway public opinions as well as political elections, permanently alter our memories, and affect our mental health and self-development over time.

The rights of the *forum internum* are not well-defined in law or theory making accountability for violations very difficult. It is next to impossible to conclude whether our rights have been breached without a clear understanding of the scope of the *forum internum*. Summarizing part of my thesis, this submission provides a sketch of the contours of the *forum internum* which encompasses five key rights or elements: 1) cognitive liberty, 2) intellectual privacy, 3) mental integrity, 4) psychological continuity, and 5) memory. Defining these rights and what this means in everyday practice is vital for the future of freedom of thought in a post-digital age where almost everything may become digitized via the "Internet of Things". Our minds, just like our bodies, were not meant to be manipulated and enslaved by others let alone machines.

If you have any questions or would like additional information, please do not hesitate to contact me.

Sincerely yours,

*Kelly Ledoux*

**A Submission to the United Nations Special Rapporteur on  
Freedom of Religion or Belief**

Kelly Ledoux, Esq.

June 2021

**Defining the Rights of the *Forum Internum***

The inner realm of thinking in the mind is also referred to as the “*forum internum*”<sup>1</sup> and includes the rights to freedom of thought, conscience, belief, and opinion under international human rights law.<sup>2</sup> These rights are absolute, “far-reaching and profound”, and “cannot be derogated from, even in times of public emergency.”<sup>3</sup> The *forum internum* is in juxtaposition with the “*forum externum*” which is defined as the outward manifestation of a person’s opinions and convictions.<sup>4</sup> In contrast to the *forum internum*, the rights associated with the *forum externum* may be limited or restricted for certain reasons such as public health or safety.<sup>5</sup>

Professor Ben Vermeulen has interpreted freedom of thought as having three rights: 1) the right not to reveal one’s thoughts; 2) the right not to have one’s thoughts manipulated; and 3) the right not to be penalized for one’s thoughts.<sup>6</sup> Bioethical researchers Marcello Ienca and Roberto Andorno have suggested that international human rights law could expand to include four new “neuro-rights”: 1) cognitive liberty; 2) mental privacy; 3) mental integrity; and 4) psychological continuity.<sup>7</sup> Dr. Simon McCarthy-Jones believes securing mental autonomy should be placed at the center of the right to freedom of thought under the law.<sup>8</sup> Finally, Professor Adam Kolber and Dr. Jan-Christoph Bublitz have proposed a right to memory.<sup>9</sup>

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<sup>1</sup> UNGA, ‘Report of the Special Rapporteur on freedom of religion or belief’ (23 December 2015) UN Doc. A/HRC/31/18 para 17 and 71; *see also* Mari Stenlund, ‘Forum Internum Revisited: Considering the Absolute Core of Freedom of Belief and Opinion in Terms of Negative Liberty, Authenticity, and Capability’ (2018) 19 Human Rights Rev 425.

<sup>2</sup> Universal Declaration of Human Rights (adopted 10 December 1948) UNGA Res 217 A(III) (UDHR) art 18; International Covenant on Civil and Political Rights (adopted 16 December 1966, entered into force 23 March 1976) 999 UNTS 171 (ICCPR) art 18(2); Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights, as amended) (ECHR) art 9(1); American Convention on Human Rights “Pact of San José, Costa Rica” (adopted 22 November 1969) (ACHR) art 13; African Charter on Human and Peoples’ Rights (adopted 27 June 1981, entered into force 21 October 1986) 26 ILM 58 art 8.

<sup>3</sup> HRC, ‘General Comment 22: The right to freedom of thought, conscience and religion (Art. 18)’ (30 July 1993) UN Doc CCPR/C/21/Rev.1/Add.4 para 1.

<sup>4</sup> UNGA (n 1) para 19.

<sup>5</sup> *Ibid*; ICCPR art 19(3); ECHR art 10(2).

<sup>6</sup> Ben Vermeulen, ‘Freedom of thought, conscience and religion (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* (Cambridge: Intersentia Press 2006) 751–772.

<sup>7</sup> Marcello Ienca and Roberto Andorno, ‘Towards new human rights in the age of neuroscience and neurotechnology’ (2017) 13, 5 Life Sciences, Society and Policy 1.

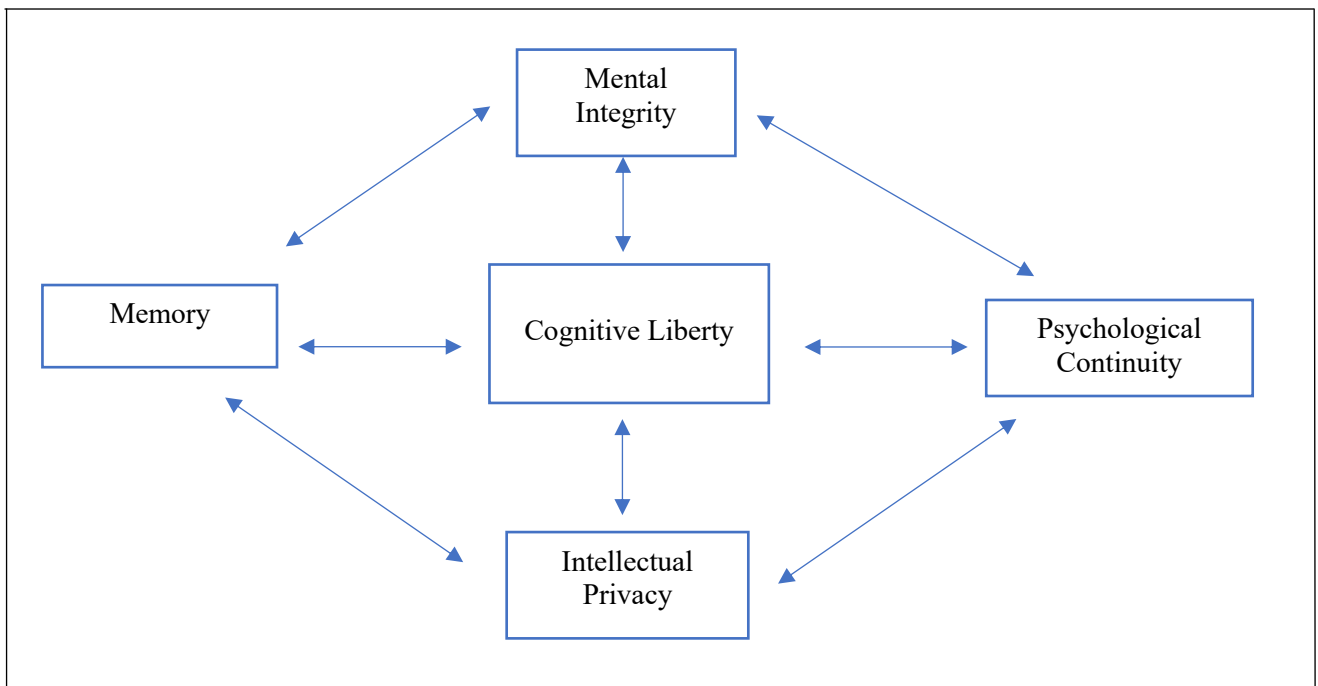
<sup>8</sup> Simon McCarthy-Jones, ‘The Autonomous Mind: The Right to Freedom of Thought in the Twenty-First Century’ (2019) 2 Front. Artif. Intell. 5.

<sup>9</sup> Adam J. Kolber, ‘Therapeutic Forgetting: The Legal and Ethical Implications of Memory Dampening’ (2006) 59, 5 Vanderbilt L Rev 1561; Christoph Bublitz and Martin Dresler, ‘A Duty to Remember, a Right to Forget?’

Synthesizing the law and scholarship, the *forum internum* appears to be comprised of five key rights or elements:

- 1) Cognitive liberty including the right to change one’s mind and not be penalized for one’s thoughts;
- 2) Intellectual privacy including the right not to reveal one’s thoughts;
- 3) Mental integrity including the right not to have one’s thoughts manipulated;
- 4) Psychological continuity including the right to consciously develop as the same person over time; and
- 5) Memory including the right to forget or remember.

These five rights are not mutually exclusive and can overlap with each other leading to conflation and confusion. The former Special Rapporteur on the promotion of protection of the right to freedom of opinion and expression, Frank La Rue, has said that an infringement upon one right “can be both a cause and consequence of an infringement upon another.”<sup>10</sup> For example, a violation of mental integrity can also infringe on cognitive liberty, memory, and psychological continuity as depicted in the diagram below:



This interconnected web of thought raises queries on whether the five elements of the *forum internum* fall under the absolute rights to freedom of thought, conscience, belief and opinion, or whether these should be designated as five new rights altogether. Ienca and Andorno say that intellectual privacy, mental integrity, and psychological continuity could be

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Memory Manipulations and the Law’ in J. Clausen and N. Levy (eds.), *Handbook of Neuroethics* (Springer, Dordrecht 2015) 1279.

<sup>10</sup> UNGA, ‘Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, Frank La Rue’ (17 April 2013) UN Doc. A/HRC/23/40 para 79 (discussing implications of surveillance on human rights).

classified under the qualified rights to privacy, integrity, identity and personality respectively.<sup>11</sup> However, all five rights outlined above include “a person’s inner realm of thinking and believing” so must in theory be included within the sphere of the *forum internum*. Consequently, each right should be unconditionally protected regardless of whether closely-related (but limited) rights are also implicated.

Barrister Susie Alegre believes it is unnecessary to create new rights because these concepts simply represent practical developments of the contours of freedom of thought.<sup>12</sup> I agree and therefore contend international human rights law should develop with a focus on the *forum internum* as a whole.<sup>13</sup> By defining the boundary line between the internal and external fora, states and corporations may be held accountable for breaching the absolute rights of the *forum internum*.

## 1. Cognitive Liberty

Cognitive liberty is “the right and freedom to control one’s own consciousness and electrochemical thought processes” which is “the necessary substrate for just about every other freedom.”<sup>14</sup> Cognitive liberty guarantees individuals “sovereignty over their minds” and prohibits states from requiring people to have specific thoughts, be in particular mental states, or feel in certain ways.<sup>15</sup> Cognitive liberty would also give individuals the ultimate decision whether or not to use technologies that can influence their thoughts.<sup>16</sup>

What logically follows from the right to think for oneself and change one’s mind is the freedom not to be punished for one’s thoughts.<sup>17</sup> The prohibition against thought crime has been expressly recognized by the U.S. Supreme Court almost a century ago: “[I]f there is any principle of the Constitution that more imperatively calls for attachment than any other it is the principle of free thought – not free thought for those who agree with us but freedom for the

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<sup>11</sup> Ienca and Andorno (n 7) 24.

<sup>12</sup> Susie Alegre, ‘Rethinking Freedom of Thought for the 21st Century’ (2017) 3 Eur. Hum. Rights Law Rev 227.

<sup>13</sup> This recommendation parallels Bublitz’ suggestion that “[a] modern legal protection of the mind should be based in one unified right that comprises the entire mind, including emotions and non-rational processes.” See Jan-Christoph Bublitz, ‘The Nascent Right to Psychological Integrity and Mental Self-Determination’ in Andreas von Arnould, Kerstin von der Decken, and Mart Susi (eds.), *The Cambridge Handbook of New Human Rights* (Cambridge University Press 2020) 385.

<sup>14</sup> Ienca and Andorno (n 7) 27 (citing Wrye Sententia, ‘Neuroethical considerations: cognitive liberty and converging technologies for improving human cognition’ (2004) 1013 *Annals of the New York Academy of Sciences* 227).

<sup>15</sup> Bublitz (n 13) 12; Jan-Christoph Bublitz, ‘My Mind is Mine!? Cognitive Liberty as a Legal Concept’ in Elisabeth Hildt & Andreas Francke (eds.), *Cognitive Enhancement* (Springer, Dordrecht 2013) 233, 9.

<sup>16</sup> Marcello Ienca, ‘Preserving the Right to Cognitive Liberty’ (2017) 317 *Scientific American* 10.

<sup>17</sup> HRC, ‘General comment No. 34: Article 19: Freedoms of opinion and expression’ (12 September 2011) UN Doc CCPR/C/GC/34 para 9 (“No person may be subject to the impairment of any rights under the [ICCPR] on the basis of his or her actual, perceived or supposed opinions. All forms of opinion are protected, including opinions of a political, scientific, historic, moral or religious nature. It is incompatible with paragraph 1 [of article 19 of the ICCPR] to criminalize the holding of an opinion. The harassment, intimidation or stigmatization of a person, including arrest, detention, trial or imprisonment for reasons of the opinions they may hold, constitutes a violation of article 19, paragraph 1.”); Vermeulen (n 6); McCarthy-Jones (n 8).

thought that we hate.”<sup>18</sup> This prohibition was recently affirmed in *United States v. Valle*, a case involving a policer officer who was convicted of conspiracy to kidnap after he described online abducting, torturing and cannibalizing women.<sup>19</sup> The officer was subsequently acquitted which the 2nd Circuit Court of Appeals confirmed for the following reasons:

This is a case about the line between fantasy and criminal intent. Although it is increasingly challenging to identify that line in the Internet age, it still exists and it must be rationally discernible in order to ensure that a ‘person’s inclinations and fantasies are his own and beyond the reach of the government.’...

This does not mean that fantasies are harmless. To the contrary, fantasies of violence against women are both a symptom of and a contributor to a culture of exploitation, a massive social harm that demeans women. Yet we must not forget that in a free and functioning society, not every harm is meant to be addressed with federal criminal law.<sup>20</sup>

States must be very cautious before punishing arguably mental activities such as reading online or keying in thoughts into a search engine<sup>21</sup>, because even the slightest interference<sup>22</sup> with cognitive liberty can generate a slippery slope into large-scale thought crime and panopticon conformity.<sup>23</sup> Such effects can be seen in China via its mandatory social credit system (SCS) which uses data to track, monitor and rank its entire population.<sup>24</sup> China’s SCS does not give citizens any choice whether to opt out of the technologies that can affect their thoughts and actually penalizes individuals based upon personal characteristics such as “untrustworthiness”.<sup>25</sup> Although China’s SCS is not based upon criminal law like *Valle*, its

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<sup>18</sup> *United States v. Schwimmer*, 279 U.S. 644 (1929).

<sup>19</sup> *United States v. Valle*, 807 F.3d 508 (2d Cir. 2015).

<sup>20</sup> *Ibid.* (internal citations omitted).

<sup>21</sup> McCarthy-Jones argues “we should expand the domain of the right to [freedom of thought] to cover external actions that are arguably constitutive of thought. This includes reading, writing, and many forms of internet search behavior.” McCarthy-Jones (n 8) 11.

<sup>22</sup> Simply being aware of online surveillance has been documented to cause a chilling effect on users’ internet search behaviors. See Alex Marthews and Catherine E. Tucker, ‘Government Surveillance and Internet Search Behavior’ (2017) Research Paper <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2412564](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2412564)> accessed 23 May 2020 (showing a significant drop in embarrassing or incriminating Google search histories after Edward Snowden revealed widespread surveillance by the U.S. National Security Agency in 2013).

<sup>23</sup> This phenomenon was theorized by Michael Foucault based upon the panopticon architectural prison system, a sociological way to exert automatic control and discipline over inmates. Michael Foucault, *Discipline and Punish: The Birth of the Prison* (Alan Sheridan trs, Penguin, 1977) 201; Thomas McMullan, ‘What does the panopticon mean in the age of digital surveillance?’ *The Guardian* (23 July 2015) <<https://www.theguardian.com/technology/2015/jul/23/panopticon-digital-surveillance-jeremy-bentham>> accessed 10 August 2020.

<sup>24</sup> Antoine Boquen, ‘An Introduction to China’s Social Corporate Credit System’ (*New Horizons*, 26 June 2020) <<https://nhglobalpartners.com/chinas-social-credit-system-explained/>> accessed 10 August 2020.

<sup>25</sup> Alexandra Ma, ‘China has started ranking citizens with a creepy “social credit” system – here’s what you can do wrong, and the embarrassing, demeaning ways they can punish you’ (*Business Insider*, 29 October 2018) <<https://www.businessinsider.com/china-social-credit-system-punishments-and-rewards-explained-2018-4?r=US&IR=T>> accessed 10 August 2020.

scheme restricts a range of rights from human dignity, education, employment, home, family, honour and reputation which is prohibited under the ICCPR.<sup>26</sup>

## 2. Intellectual Privacy

Intellectual privacy has been defined as the right to communicate our inner thoughts, opinions and beliefs or keep them secluded inside our minds.<sup>27</sup> The right could also safeguard “any bit or set of brain information about an individual such as conscious or unconscious brainwaves data.”<sup>28</sup> With the rise in artificial intelligence (AI)<sup>29</sup> and commercially available brain-computer interfaces (BCIs)<sup>30</sup>, protecting intellectual privacy is urgently needed as our thoughts are becoming available to states and corporations through “brain data”.

Scholar Neil Richards argues there is a fundamental need to protect our minds from unwanted observation or scrutiny by others as this is crucial for intellectual exploration and development.<sup>31</sup> McCarthy-Jones similarly explains that surveillance can lead us to “experience biologically rooted pressures to conform them to social norms”<sup>32</sup> thereby risking self-censorship and group conformity.<sup>33</sup> For these reasons, intellectual privacy must form the second pillar under the unconditional rights of the *forum internum*.<sup>34</sup>

If intellectual privacy is not classified as an absolute right but rather qualified under the right to privacy<sup>35</sup>, an appropriate balance must be struck between respecting privacy interests versus limiting state intrusion for public safety or welfare. The critical issues raised by this balancing test can be seen in Facebook’s AI algorithm which can detect and prevent suicide

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<sup>26</sup> HRC (n 17).

<sup>27</sup> Ienca and Andorno (n 7) 14; McCarthy-Jones (n 8) 6.

<sup>28</sup> Ienca and Andorno (n 7) 15 (discussing the right to ‘mental privacy’ which is synonymous with intellectual privacy).

<sup>29</sup> AI, machine and deep learning algorithms can make numerous predictions about online users based upon their data such as “sexual orientation, ethnicity, religious and political views, personality traits, intelligence, happiness, use of addictive substances, parental separation, age, and gender.” Michael Kosinski, David Stillwell, and Thore Graepel, ‘Private traits and attributes are predictable from digital records of human behavior’ (2013) 110 Proceedings of the National Academy of Sciences of the United States of America 5802.

<sup>30</sup> BCIs have the capability to read neural activity and transcribe it into words with up to a 92% accuracy. Sigal Samuel, ‘Facebook is building tech to read your mind. The ethical implications are staggering.’ (*Vox*, 5 August 2019) <<https://www.vox.com/future-perfect/2019/8/5/20750259/facebook-ai-mind-reading-brain-computer-interface>> accessed 23 May 2020; Samuel Gibbs, ‘Researchers develop device that can “hear” your internal voice’ *The Guardian* (6 April 2018) <<https://www.theguardian.com/technology/2018/apr/06/researchers-develop-device-that-can-hear-your-internal-voice>> accessed 23 May 2020.

<sup>31</sup> Neil M. Richards, ‘Intellectual Privacy’ 87 *Tex L Rev* 387, 408, 416.

<sup>32</sup> McCarthy-Jones (n 8) 6.

<sup>33</sup> The argument for intellectual privacy dovetails very closely with the right to cognitive liberty when discussing surveillance. See Neil Richards, ‘The Dangers of Surveillance’ (2013) 126 *Har L Rev* 1934, 1958 (“[S]urveillance inclines us to the mainstream and boring. It is a claim that when we are watched while engaging in intellectual activities, broadly defined – thinking, reading, web-surfing, or private communication – we are deterred from engaging in thoughts or deeds that others might find deviant. Surveillance thus menaces our society’s foundational commitments to intellectual diversity and eccentric individuality.”).

<sup>34</sup> Richards (n 31) 408; McCarthy-Jones (n 8) 6.

<sup>35</sup> UDHR art 12; ICCPR art 17; ECHR art 8; Convention on the Rights of the Child (adopted 20 November 1989, entered into force 2 September 1990) UNGA Res 44/25 (CRC) art 16; International Convention on the Protection of All Migrant Workers and Members of Their Families (adopted 18 December 1990) UNGA Res 45/158 art 14.

among its users.<sup>36</sup> Although Facebook’s “suicide AI” has provided some successful interventions, it has falsely reported people who were not suicidal to law enforcement causing them to have to undergo unnecessary psychological evaluations.<sup>37</sup> Such a model may provide advantages for counter-terrorism operations in thwarting homicides, terrorist attacks, or mass shootings.<sup>38</sup> However, the AI could lead to premature arrests for thought crimes or be introduced into court as conclusive evidence of *mens rea* or criminal intent which is in blatant contradiction to the privilege against self-incrimination.<sup>39</sup>

The law currently does not provide sufficient protections and guarantees that our brain data is not being shared with social media companies, employers, insurers, or the general public.<sup>40</sup> Exposure of such data could potentially trigger job dismissal, higher premiums, and social stigma like China’s SCS. There are also grave security threats that our brain data could be hacked or stolen by foreign states.<sup>41</sup> All these risks should give us serious concerns for limiting the rights to intellectual privacy in any way.

### 3. Mental Integrity

Where intellectual privacy can guard against mind reading, mental integrity can defend against mind control.<sup>42</sup> Mental integrity is encompassed within the absolute rights of the *forum internum* to hold beliefs and opinions without coercion or interference.<sup>43</sup> Researcher Andrea Lavazza defines mental integrity as “the individual’s mastery of his mental states and his brain data so that, without his consent, no one can ... alter such states and data in order to condition

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<sup>36</sup> Norberto Nuno Gomes de Andrade, Dave Pawson, Dan Muriello, Lizzy Donahue, and Jennifer Guadagno, ‘Ethics and Artificial Intelligence: Suicide Prevention on Facebook’ 31 *Philosophy & Technology* 669-684.

<sup>37</sup> Benjamin Goggin, ‘Inside Facebook’s suicide algorithm: Here’s how the company uses artificial intelligence to predict your mental state from your posts’ (*Business Insider*, 6 January 2019) <<https://www.businessinsider.com/facebook-is-using-ai-to-try-to-predict-if-youre-suicidal-2018-12?r=US&IR=T>> accessed 10 August 2020.

<sup>38</sup> See Myriam Feinberg, ‘International counterterrorism – national security and human rights: conflicts of norms or checks and balances?’ (2015) 19 *The International J of Human Rights* 388.

<sup>39</sup> The privilege against self-incrimination provides a person an absolute right to refuse to testify against himself or herself. The privilege applies only to communications or testimony (i.e. the contents in your mind) not physical evidence. There is no legal precedent deciding whether brain data is protected under the privilege of self-incrimination as it could technically include both physical evidence (neurons) or testimonial evidence (expression once transcribed). It is unclear whether states may issue warrants to search and seize brain data and under what circumstances. ICCPR art. 14(3); ACHR art. 8(2); ECHR art. 6; *Schmerber v. California*, 384 U.S. 757 (1966).

<sup>40</sup> The law does not distinguish between brain data generated by our minds and other types of internet data. Jon Dean, ‘Robots Could Soon Read Your Mind’ *mirror* (23 January 2016) <<http://www.mirror.co.uk/news/weird-news/robots-could-soon-read-your-7230366>> accessed 17 April 2020.

<sup>41</sup> Vice, ‘Shelter in Place with Shane Smith & Edward Snowden’ (*YouTube*, 10 April 2020) <<https://www.youtube.com/watch?v=k5OAJnveyJo&list=PL36KTtaSs1JdszYOMI7eREO1ljBu0QbS4&index=47>> accessed 10 August 2020.

<sup>42</sup> Bublitz (n 13) 12; Ienca and Andorno (n 7) 17.

<sup>43</sup> During the drafting of the ICCPR, “[t]he ability to hold an opinion freely was seen to be a fundamental element of human dignity and democratic self-governance, a guarantee so critical that the Covenant would allow no interference, limitation or restriction.” UNGA, ‘Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, David Kaye’ (22 May 2015) UN Doc. A/HRC/29/32 para 19; see also ICCPR arts 18(2) and 19(1).

the individual in any way.”<sup>44</sup> Ienca and Andorno assert that a violation of mental integrity would: “(i) involve the direct access to and manipulation of neural signaling; (ii) be unauthorized (i.e. must occur in the absence of informed consent); and (iii) result in physical and/or psychological harm.”<sup>45</sup>

Recognizing harmful coercion is not so easy in everyday life because people change each other’s minds constantly. Proving microtargeting manipulation caused injury is both a legal and practical challenge.<sup>46</sup> With the barrage of social media posts coupled with the average person having thousands of thoughts per day, connecting one online advertisement to a specific harm may not be possible. Even if a causal link is shown, there is still an issue of drawing the line in the sand between legitimate influence on opinion such as education versus dangerous manipulation of mental states.<sup>47</sup>

Rather than deliberating about the harm element, states can begin differentiating activity that crosses the absolute line into the *forum internum* by examining whether free and informed consent has initially been given. Any forced psychological intervention is considered a violation of the right to mental integrity and unlawful.<sup>48</sup> Therefore, microtargeting and neuromarketing tactics which are forced upon users (especially at the unconscious level without their knowledge or consent) breaches the right to mental integrity.<sup>49</sup>

Even after the Cambridge Analytica scandal of 2016, psychological manipulation is not considered illegal in many jurisdictions. Scholars Davit Harutyunyan and Lilit Yeremyan have since called for outlawing large-scale psychological operations as an unlawful interference with freedom of thought.<sup>50</sup> They reason that in day-to-day conversations, both parties are horizontally and symmetrically related and can choose what information to believe.<sup>51</sup> But new digital technologies have changed the relationship into vertical and asymmetric, “which makes psychological manipulation easier and less obvious (hidden), the expected outcome more

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<sup>44</sup> Andrea Lavazza, ‘Freedom of Thought and Mental Integrity: The Moral Requirements for Any Neural Prosthesis’ (2018) 12 *Frontiers in Neuroscience* 4.

<sup>45</sup> Ienca and Andorno (n 7) 18.

<sup>46</sup> See *Bensaid v. United Kingdom*, (2001) 33 EHHR 10 (concluding hypothetical factors were not enough to substantiate a claim for interference with psychological integrity).

<sup>47</sup> Online education, mental health therapy, and deep brain stimulation can provide remarkable benefits and support to people with mood disorders, Parkinson’s disease, or epilepsy. See Liam Drew, ‘The ethics of brain-computer interfaces’ (*nature*, 24 July 2019) <<https://www.nature.com/articles/d41586-019-02214-2>> accessed 10 August 2020.

<sup>48</sup> UNGA, ‘Promotion and protection of the right to freedom of opinion and expression’ (29 August 2018) UN Doc. A/73/348 para 23 (“[F]orced neurological interventions, indoctrination programmes (such as ‘re-education camps’) or threats of violence designed to compel individuals to form particular opinions or change their opinion violate article 19 (1) of the Covenant.”); see also ACHR art. 5 (the right to mental integrity is considered non-derogable); see also Tina Minkowitz, ‘The United Nations Convention of the Rights of Persons With Disabilities And The Right To Be Free From NonConsensual Psychiatric Interventions’ (2007) 34 *Syracuse J. Int’l L. & Com.* 406 (arguing that a breach to the right to mental integrity, including the doctrine of informed consent, constitutes a violation of the non-derogable freedom from torture and cruel, inhuman or degrading treatment or punishment).

<sup>49</sup> McCarthy-Jones (n 8) 4; Ienca and Andorno (n 7) 22.

<sup>50</sup> Davit Harutyunyan and Lilit Yeremyan, ‘Freedom of Thought: Legal Protection from Manipulation’ (2020) 1, 14 *Wisdom*, 131, 138.

<sup>51</sup> *Ibid.*



precisely predictable, the outcome more targeted and large-scale, capable even of affecting public relations and government structures.”<sup>52</sup>

While banning widespread microtargeting practices seems like a plausible idea on its face, attributing conduct to a specific individual, corporation or state through cyber means may be virtually impossible.<sup>53</sup> Citizens may also have limited remedies in preventing such tactics by their own government. Nevertheless, if we do not begin to protect the right to mental integrity digitally, cyber-influence operations could destabilize democracies all over the world and flip the international human rights framework on its head. We must never forget that in less than fifteen years, Hitler’s hateful propaganda against Jewish populations (which did not involve complex, digital microtargeting) distorted the minds of Germans ultimately causing a second world war and genocide of millions of people.

#### 4. Psychological Continuity

Interference with the *forum internum* can not only affect our present states of mind but how we think into the future. Accordingly, there is a need to protect “psychological continuity” or the right to “experience oneself as persisting through time as the same person” without disruption.<sup>54</sup> As psychological continuity involves thinking and consciousness over a period of time, this right should also be contained within the scope of the *forum internum*.<sup>55</sup>

Psychological continuity is closely tied with identity<sup>56</sup> and personality. The dominant philosophical viewpoint is that identity is formed by the continuity of an individual’s psychological makeup over time.<sup>57</sup> Personalities are defined as individual differences in patterns of thinking, feeling and behaving such as irritability or sociability.<sup>58</sup>

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<sup>52</sup> Ibid.

<sup>53</sup> Cordula Droegge, ‘Get off my cloud: cyber warfare, international humanitarian law, and the protection of civilians’ (2012) 94 Intl Review of the Red Cross 543.

<sup>54</sup> Although the right may overlap with mental integrity, psychological continuity would protect against manipulation that is not necessarily unauthorized or harmful. Ienca and Andorno (n 7) 20-22.

<sup>55</sup> UNGA (n 1) para 19 (“Exposure to coercion in this inner nucleus, for example, by being forced to conceal one’s true position or conviction or to feign a belief that is not authentic, can mean betraying oneself. If this happens repeatedly or over a long period, it can undermine the preconditions for developing a stable sense of self-respect.”).

<sup>56</sup> Under the psychological framework, identity is referred to as an individual’s sense of self consisting of physical, psychological, and interpersonal characteristics that are not completely shared with others (e.g. names, appearances, or nationalities). ‘identity’ (*American Psychology Association*) <<https://dictionary.apa.org/identity>> accessed 11 August 2020.

<sup>57</sup> Marc Slors, *The Diachronic Mind: An Essay on Personal Identity, Psychological Continuity and the Mind-Body Problem* (Kluwer Academic Publishers, 2001) 2; John Locke, *An Essay on Human Understanding* (1689) (considering personal identity to be a matter of consciousness).

<sup>58</sup> ‘personality’ (*American Psychology Association*) <<https://www.apa.org/topics/personality>> accessed 11 August 2020; Kendra Cherry, ‘The Psychology of Personality Formation’ (*verywell mind*, 11 May 2020) <<https://www.verywellmind.com/personality-development-2795425>> accessed 24 May 2020.

The rights to identity and personality under the UDHR<sup>59</sup>, ECHR<sup>60</sup>, and CRC<sup>61</sup> may offer some surface-level protections for the right to psychological continuity such as one's appearance. However, these instruments do not protect the deep psychological makeup and antecedent level of "raw neural functioning" that underlies dreams, choices, preferences, and behaviors.<sup>62</sup> Although states may restrict external manifestations of identity or personality, the consciousness that accompanies the self should never be disrespected.

Preserving psychological continuity is essential in the digital age where a vast majority of children grow up attached to the internet. Babies under one year old can interact with phones before they are able to talk out loud, yet screen time can delay speech and the capacity to communicate thoughts.<sup>63</sup> Adolescents spend over 10 hours a day exposed to electronics<sup>64</sup> even though social media has direct effects on mental health including self-esteem, human connection, sleep, attention span, and addiction.<sup>65</sup> Unlike medicine which comes with numerous warning labels about possible negative side-effects, online users are given no notice about the dangers of social media when accepting "cookies" to browse the web.

In certain ways, digital technologies can cultivate psychological continuity by connecting individuals with other likeminded people. Support groups can provide invaluable resources for people with disabilities, and community networks can create safe spaces for racial, ethnic, and LGBTQI+ identities.<sup>66</sup> In other ways, social media can sculpt adolescents' self-perceptions via disparaging online comments and unhealthy comparisons of others.<sup>67</sup> Social networking sites can actually encourage users to create façades or "false selves".<sup>68</sup> The line between reality and fantasy, person and persona, could become blurred or erased completely where our true selves are replaced and enmeshed with online acceptance and status.<sup>69</sup>

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<sup>59</sup> UDHR arts. 22, 26(2), and 29.

<sup>60</sup> Identity and personality rights are protected under the right to "private life" afforded by Article 8 of the ECHR. Cases discussing identity under Article 8 mostly focus on static characteristics such as one's gender, name, citizenship, origin, ethnic identity, religion, appearance, and marital status. *López Ribalda and Others v. Spain*, (2018) ECHR 14 (holding private life includes "an individual's physical and social identity" and "the right to establish and develop relationships with other human beings and the outside world."); *see also* European Court of Human Rights, 'Guide on Article 8 of the European Convention on Human Rights' (30 April 2020) <[https://www.echr.coe.int/Documents/Guide\\_Art\\_8\\_ENG.pdf](https://www.echr.coe.int/Documents/Guide_Art_8_ENG.pdf)> accessed 11 August 2020.

<sup>61</sup> CRC arts 8 and 17.

<sup>62</sup> Ienca and Andorno (n 7) 22.

<sup>63</sup> Julia Ma, 'Handheld screen time linked with speech delays in young children' (2017) *American Academy of Pediatrics* <<https://www.sciencedaily.com/releases/2017/05/170504083141.htm>> accessed 24 May 2020.

<sup>64</sup> Lauren A. Spies Shapiro and Gayla Margolin, 'Growing Up Wired: Social Networking Sites and Adolescent Psychosocial Development' (2014) 17 *Clinic Child Family Psychological Review* 1-18.

<sup>65</sup> Heather Cleland Woods and Holly Scott, '#Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem' 2016 51 *Journal of Adolescence* 41-49; Barr (n 53).

<sup>66</sup> Shapiro and Margolin (n 64).

<sup>67</sup> *Ibid.*

<sup>68</sup> Oren Gil-Or, Yossi Levi-Belz, and Ofir Turel, 'The "Facebook-self": characteristics and psychological predictors of false self-presentation on Facebook' (2015) 6 *Frontiers in Psychology* 1-10.

<sup>69</sup> Jim Taylor, 'Technology: Is Technology Stealing Our (Self) Identities?' *Psychology Today* (27 July 2011) <<https://www.psychologytoday.com/us/blog/the-power-prime/201107/technology-is-technology-stealing-our-self-identities>> accessed 24 May 2020.

## 5. Memory

If history truly repeats itself, we must have the ability to remember and learn from our past. Memory, also coined “mental time travel”<sup>70</sup> or the “residue of thought”<sup>71</sup>, should thus form the fifth element of the *forum internum*. Professor Kolber has proposed a legal right to memory which would contain a “bundle of rights to control what happens to our memories” including the right to remember, forget, improve, or change memory.<sup>72</sup>

Unlike computers, memory does not store exact replicas of photographs or videos in the brain but is instead subject to alteration and mistake.<sup>73</sup> States have an interest in preserving accurate memories for the administration of justice through identification evidence, fact-finding, and trials.<sup>74</sup> Collective memories also build the foundation of history which can shape culture and values.<sup>75</sup>

Some international laws may support the broader social, historical or cultural aspects of the rights of memory, but these frameworks are not applied globally or unconditionally. Transitional justice mechanisms such as the Jointet/Orentlicher Principles concentrates solely on memorialisation rights and is guided for victims of systemic human rights abuses.<sup>76</sup> Under the GDPR, the “right to be forgotten” applies to citizens or residents of the European Union and there are exceptions for exercising this right including public interest or scientific purposes.<sup>77</sup>

Protecting the absolute right to memory is imperative in the “fake news” era which has enormous power to alter our opinions and perceptions of reality. Known as the “misinformation effect”, misleading information overwrites and blends into original memory inhibiting recall.<sup>78</sup> Once false memories are implanted, it festers in our minds and actually hinders our ability to learn accurate information in the future.<sup>79</sup> This phenomenon is especially challenging in India

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<sup>70</sup> Bublitz and Dresler (n 9) 1280 (citing Endel Tulving, ‘Memory and consciousness’ 26, 1 Canadian Psychology/Psychologie Canadienne 1-12).

<sup>71</sup> Daniel T. Willingham, ‘Ask the Cognitive Scientist: What Will Improve a Student’s Memory’ (American Educator, 2008-2009) <[https://www.aft.org/sites/default/files/periodicals/willingham\\_0.pdf](https://www.aft.org/sites/default/files/periodicals/willingham_0.pdf)> accessed 11 August 2020.

<sup>72</sup> Kolber (n 9) 1567.

<sup>73</sup> Bublitz and Dresler (n 9) 1281.

<sup>74</sup> Bublitz and Dresler (n 9) 1297-98; Kolber (n 9) 1578.

<sup>75</sup> Bublitz and Dresler (n 9) 1295-96.

<sup>76</sup> UN Commission on Human Rights, ‘Updated Set of Principles for the Protection and Promotion of Human Rights Through Action to Combat Impunity’ (8 February 2005) UN Doc. E/CN.4/2005/102/Add.1 Principle 2 (the inalienable right to the truth) and Principle 3 (the duty to preserve memory).

<sup>77</sup> GDPR art 17(3).

<sup>78</sup> Viewing bogus photographs or reading fake stories after events can distort a person’s memory of the details of that event. C.A. Morgan III, Steven Southwick, George Steffian, Gary A. Hazlett, and Elizabeth F. Loftus, ‘Misinformation can influence memory for recently experienced, highly stressful events’ (2013) 36 International Journal of Law and Psychiatry 11-17; Kendra Cherry, ‘The Misinformation Effect and False Memories’ (*Verywell Mind*, 29 April 2020) <<https://www.verywellmind.com/what-is-the-misinformation-effect-2795353>> accessed 11 August 2020.

<sup>79</sup> Jonathan Howard, *Cognitive Errors and Diagnostic Mistakes* (Springer, 2019) 247-264; see Gillian Murphy, Elizabeth F. Loftus, Rebecca Hofstein Grady, Linda J. Levine, and Ciara M. Greene, ‘False Memories for Fake News During Ireland’s Abortion Referendum’ (2019) 30, 10 Psychological Science 1449.

where deceptive misinformation circulated on the WhatsApp messaging system has fueled lethal riots across the country.<sup>80</sup> The right to memory must be absolutely respected and protected as truth and justice go hand in hand. We cannot afford to wait and only realize the value of our memories and free thought until after they are destroyed.

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<sup>80</sup> Timothy McLaughlin, 'How WhatsApp Fuels Fake News and Violence in India' (*wired*, 12 December 2018) <<https://www.wired.com/story/how-whatsapp-fuels-fake-news-and-violence-in-india/>> accessed 11 August 2020.