



Response to the Human Rights Council Advisory Committee Questionnaire on “Neurotechnology and human rights”

Towards a Human Right to Psychological Continuity?

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Formal introduction and summary

- I am a legal scholar specializing in human rights for the mind, funded by the Dutch Research Council, as a postdoc on the research project Law and Ethics of Neurotechnology in Criminal Justice (VI.C.201.067).
- This submission focuses on question 14 of the Human Rights Council Advisory Committee Questionnaire on “neurotechnology and human rights”:

“What are the main international regulatory and governance gaps that you have identified as regards neurotechnology and human rights?”

- It considers one specific, alleged gap in human rights law, relating to the protection of personal identity and psychological continuity in view of emerging neurotechnology. To fill this alleged gap, it has been argued to recognise a new human right to psychological continuity. The possibility of developing such a right has also been referred to by the Human Rights Council Advisory Committee as well as by the Council of Europe.
- The primary focus of the analysis in this submission is on European human rights law. The objective is threefold. It aims to:
 1. Clarify the meaning and scope of a potential human right to psychological continuity, which is grounded in the psychological-continuity account of personal identity,
 2. show and highlight that from a European perspective, there is no need to recognise a specific human right to psychological continuity, and

3. provide a source of inspiration for the Human Rights Council Advisory Committee, on how to achieve adequate protection of personal identity and psychological continuity, within the existing framework of human rights law, in particular, through the legal protection of personal *identity* and personal *integrity* guaranteed by the International Covenant on Civil and Political Rights.

➤ The **summary conclusions** are:

- A. From a European perspective, there is no need for the recognition of a new human right to psychological continuity. The European Convention on Human rights offers robust – absolute and qualified – protection to the notion of psychological continuity. This protection is covered, or is at least able to be covered, by the rights to personal identity, self-determination, and the right to psychological and physical integrity. Recognising a right to psychological continuity would, therefore, be repetitive of existing human rights.
- B. However, much of the central notions and concepts that are relevant to the protection of psychological continuity, are still underdeveloped and ill-defined in jurisprudence and legal doctrine. Examples are the concepts of “psychological”, “mental”, “moral”, and “physical” integrity, whose exact meaning, scope, and distinctive functions remain largely unclear. Likewise, human rights law guarantees a right to personal identity and personality, to which the preservation of “mental stability” appears a relevant factor. However, these notions are as yet underexplored in case law and legal thinking.
- C. To address the legitimate concerns about the sustainability of human rights in view of emerging neurotechnology, it is much needed to provide more conceptual clarity about the existing legal concepts relevant to the legal protection of the human mind, and how these concepts (should) relate to each other. This could be achieved pro-actively and in a general way by UN treaty-based bodies issuing general comments on this matter or by way of a resolution of the UN Human Rights Council. In parallel, it can also be done by way of (quasi-)judicial adjudication in individual cases by both UN treaty bodies and regional human rights courts, like the European Court on Human Rights.

1. Substantial introduction: the current debate on human rights for the mind

Since recent years, scholars from different disciplines, including law, philosophy and neuroscience, are increasingly debating how human rights should protect the autonomy not only over our bodies but also over our minds.¹ This debate is often driven by developments in neuroscientific and digital technologies, such as brain computer interfaces, brain stimulation, nudging, and microtargeting in advertisement and political campaigns.² These emerging techniques appear able to access, monitor, and manipulate mental states in ways that were previously inconceivable. They raise novel questions about how human rights law should protect the intimate, *mental* aspects of life, like what we think, hope, prefer, dream of, how we feel, and who we are. Whereas some human rights already protect certain personal interests in the mental realm, such as the right to freedom of thought,³ it has been argued that novel human rights are necessary to offer adequate, holistic protection against emerging technologies that threaten the last fortresses of privacy, personal integrity, and identity: our brains and minds.⁴ Sometimes, these proposed new human rights are referred to as ‘neurorights’.⁵ They include a right to psychological continuity, cognitive liberty, mental integrity, and mental privacy.⁶

Although some legal scholars have challenged the necessity of creating novel human rights for the mind,⁷ the idea of recognising ‘neurorights’ has now reached the agendas of the higher official institutions, including the Human Rights Council of the United Nations,⁸ the Council

¹ Farahany, *The Battle for Your Brain. Defending the Right to Think Freely in the Age of Neurotechnology* (2023); Navarro et al., *The Risks and Challenges of Neurotechnologies for Human Rights* (2023); Lighthart et al., ‘Minding rights: Mapping Ethical and Legal Foundations of ‘Neurorights’’, (2023) online first *Cambridge Quarterly of Healthcare Ethics* 1; López-Silva and Valera, *Protecting the Mind* (2022); Ienca and Andorno, ‘Towards new human rights in the age of neuroscience and neurotechnology’ (2017) 13 *LSSP* 1; Bublitz and Merkel, ‘Crimes Against Minds: On Mental Manipulations, Harms and a Human Right to Mental Self-Determination, (2014) 8 *Criminal Law and Philosophy* 51.

² For an exhaustive overview of emerging technologies that threaten the autonomy over our minds, see Farahany supra n 1.

³ Lighthart et al., ‘Rethinking the Right to Freedom of Thought: A Multidisciplinary Analysis’ (2022) 22 *Human Rights Law Review* 1

⁴ Ienca and Andorno, supra n 1; Farahany, supra n 1; Yuste, Genser and Hermann, ‘It’s Time for Neuro-Rights’, (2021) 18 *Horizon* 154; Goering et al., ‘Recommendations for Responsible Development and Application of Neurotechnologies’, (2021) 14 *Neuroethics* 365; Genser, Hermann and Yuste, *International Human Rights Protection Gaps in the Age of Neurotechnology* (2022).

⁵ See, for example, the website of the NeuroRights Foundation: <https://neurorightsfoundation.org/>.

⁶ Supra n 4. See, also, Lighthart et al. Supra n 1.

⁷ Bublitz, ‘Novel Neurorights: From Nonsense to Substance’ (2022) 15 *Neuroethics* 7; Lighthart, *Coercive Brain-Reading in Criminal Justice: An Analysis of European Human Rights Law* (2022); Alegre, *Freedom to Think: Protecting a Fundamental Human Right in the Digital Age* (2022); Hertz, *Neurorights – Do we Need New Human Rights?* (2023) 16 *Neuroethics* 5; Michalowski, ‘Critical Reflections on the Need for a Right to Mental Self-Determination,’ in Von Arnould, Von der Decken and Susi (eds), *The Cambridge Handbook of New Human Rights* (2020).

⁸ Human Rights Council, *Neurotechnology and human rights*, 29 September 2022 (A/HRC/51/L.3); Report of the Advisory Committee of the Human Rights Council on its twenty-eight session, 7 September 2022 (A/HRC/AC/28/2), Annex III, part II Assessing the human rights impact of neurotechnology: towards the recognition of neurorights.

of Europe,⁹ the Organization of American States,¹⁰ the United Nations Educational, Scientific and Cultural Organisation (UNESCO),¹¹ and the Organisation for Economic Co-operation and Development (OECD).¹² As is known, the Human Rights Council has recently adopted a resolution on Neurotechnology and human rights.¹³ In that regard, it has requested the Advisory Committee to examine the impact, opportunities and challenges of neurotechnology for the promotion and protection of human rights, and to produce recommendations on how these opportunities, challenges, and potential gaps in human rights law, could best be addressed by the Council. In this regard, the Advisory Committee has noted that

It is true that specific standards may be needed to ensure protection against interference and misuse of certain mental aspects, such as cognitive freedom, mental privacy, mental integrity and psychological continuity.¹⁴

Likewise, in November 2019, the Council of Europe launched a Strategic Action Plan on Human rights and Technologies in Biomedicine (2020-2025). One of the concrete action points concerns an assessment of the relevance and sufficiency of existing human rights in view of emerging threats posed by neurotechnology:

Applications in the field of neurotechnology raise issues of privacy, personhood, and discrimination. It therefore needs to be assessed whether these issues can be sufficiently addressed by the existing human rights framework or whether new human rights pertaining to cognitive liberty, mental privacy, and mental integrity and psychological continuity, need to be entertained in order to govern neurotechnologies. Alternatively, other flexible forms of good governance may be better suited for regulating neurotechnologies.¹⁵

In October 2021, a comprehensive report was published in this respect, concluding that the protection of mental privacy, mental integrity, and the prevention of external manipulation of

⁹ Committee on Bioethics of the Council of Europe, *Strategic Action Plan on Human Rights and Technologies in Biomedicine (2020-2025)*, Adopted by DH-BIO, 16th meeting (19-21 November 2019); Ienca, Common human rights challenges raised by different applications of neurotechnologies in the biomedical field, Report commissioned but the Committee on Bioethics of the Council of Europe (2021).

¹⁰ Declaration of the Interamerican Juridical Committee on Neuroscience, Neurotechnologies and Human Rights: New Legal Challenges for the Americas, CJI/DEC. 01 (XCIX-O/21, August 11, 2021).

¹¹ Report of the International Bioethics Committee of UNESCO, Ethical Issues of Neurotechnology, SHS/BIO/IBC28/2021/3Rev.(15 December 2021); Navarro et al. supra n. 1.

¹² OECD, *Recommendation on Responsible Innovation in Neurotechnology*, Adopted by the OECD Council on 11 December 2019.

¹³ Human Rights supra n 8.

¹⁴ Advisory Committee of the Human Rights Council, supra n 8.

¹⁵ Committee on Bioethics of the Council of Europe, supra n 9, at 7.

internal mental states, is as-yet insufficiently specified in existing human rights instruments, such as the Universal Declaration of Human Rights and the European Convention on Human Rights.¹⁶

As briefly alluded to above, the necessity of new human rights for the mind has been challenged, particularly by legal scholars.¹⁷ One of the central arguments against the recognition of specific ‘neurorights’, is that most of the proposed rights are already covered by the established framework of human rights law. Creating new ‘neurorights’ would be repetitive of existing human rights and bear the risk of rights inflation. For instance, it has been argued that a right to mental privacy is covered by the general right to privacy and by the freedom of expression.¹⁸ The right to freedom of thought is considered able to protect cognitive liberty.¹⁹ And a right to mental integrity is explicitly guaranteed, for instance, by Article 3 of the Charter of Fundamental Rights of the European Union,²⁰ and is also part of the broader right to respect for private life such as guaranteed by Article 8 of the European Convention on Human Rights.²¹

Meanwhile, whether and to what extent the proposed right to *psychological continuity* is covered by, or could be derived from existing human rights law, has nearly received any scholarly attention.²² Meanwhile, this right is often referred to in debates on recognising novel rights for the mind, also in the recent project of the Human Rights Council. This submission aims to clarify the current human rights protection of a person’s psychological continuity. It will argue that the notion of psychological continuity receives considerable protection within the existing framework of human rights. From that perspective, the creation of a new, specific human right to psychological continuity would be unnecessary. Meanwhile, there is a need for conceptual clarification about the exact meaning and scope of the human rights relevant to the protection of psychological continuity, and about how these rights (should) relate to each other and, more broadly, to the legal protection of the human mind.

From here, this submission proceeds as follows. First, I will discuss the recent call for a right to psychological continuity, i.e., what the right should consist of and how it is grounded in one specific, moral philosophical conception of personal identity. Next, I examine how a right to psychological continuity relates to, and is covered by, respectively, (1) the right to personal

¹⁶ Ienca supra n 9.

¹⁷ Supra n 7.

¹⁸ Lighthart, ‘Mental Privacy as Part of the Human Right to Freedom of Thought?’, in Blitz and Bublitz (eds.), *The Law and Ethics of Freedom of Thought Vol. 2: Cognitive Liberty and Privacy* (forthcoming); Lighthart et al., ‘Forensic brain-reading and mental privacy in European human rights law’ (2021) 14 *Neuroethics* 191. See also Susser and Cabrera, ‘Brain Data in Context: Are New Rights the Way to Mental and Brain Privacy?’, (2023) Online ahead *AJOB Neuroscience*, 1.

¹⁹ Hertz supra n 7; Bublitz, ‘Cognitive Liberty or the International Human Right to Freedom of Thought’, in Clausen and Levy (eds.), *Handbook of Neuroethics* (2014).

²⁰ See also Article 5(1) of the American Convention on Human Rights and Article 17 of the UN Convention on the Rights of Persons with Disabilities.

²¹ Lighthart et al. supra n 1; Michalowski supra 7.

²² Ienca and Andorno supra n 1; Gilbert, Ienca and Cook, ‘How I became myself after merging with a computer: Does human-machine symbiosis raise human rights issues?’, (2023) 16 *Brain Stimulation* 783.

identity, (2) the right to self-determination, and (3) the right to personal integrity, followed by a brief discussion and conclusion.

2. The Proposed Right to Psychological Continuity

2.1 Towards Human Rights Protection for the Mind: A Right to Psychological Continuity

Since the turn of the millennial, lawyers and ethicists have been debating the legal and moral implications of emerging digital and neurotechnologies that make our mental lives tangible and transparent in ways that were previously inconceivable.²³ One specific concern in this debate, is whether existing human rights, established in the mid-1990s, will be able to address these novel challenges raised by emerging technologies – challenges that the ‘founding fathers’ of traditional human rights could not have envisaged.²⁴ Some authors have argued that established human rights, such as the right to respect for private life, the freedom of thought, and the freedom of expression, are well-equipped to address these challenges, offering robust protection against emerging technologies that threaten the autonomy over our personal mental states.²⁵ Meanwhile, others contend that existing human rights may in fact be insufficient to respond, adequately, to these (neuro)technological threats of the 21st century and beyond.²⁶

For example, in a recent report by the NeuroRights Foundation, which was referred to by the Advisory Committee of the Human Rights Council,²⁷ Yuste, Genser and Herrmann conclude that “existing international human rights treaties are currently unprepared to protect neurorights. Nevertheless, (...) rapid advances in neurotechnology are no longer science fiction – they are science. It is urgent that the UN play a leading role globally to embrace these exciting innovations while protecting human rights and ensuring the ethical development of neurotechnology.”²⁸ Among other things, the authors argue that of all potential ‘neurorights’, the right to identity is, today, “worst protected” within the current framework of human rights.²⁹ Whereas this claim is, at best, doubtful,³⁰ others have delivered more serious arguments and

²³ Boire, ‘On cognitive Liberty’, (1999) 1 *Journal of Cognitive Liberties* 7; Sententia, ‘Neuroethical considerations: cognitive liberty and converging technologies for improving human cognition’, (2004) 1013 *Annals of the New York Academy of Sciences* 221.

²⁴ Bublitz and Merkel supra n 1; Ienca and Andorno, supra n 1.

²⁵ Supra n 7.

²⁶ Supra n 4.

²⁷ Advisory Committee of the Human Rights Council, supra n 8, at 10: “In a recent report, the Neurorights Foundation called upon the United Nations Organization to play a leading role globally in embracing these innovations while protecting human rights and ensuring the ethical development of neurotechnology. To our knowledge, however, the Secretary-General’s statement has not triggered any specific follow-up action.”

²⁸ Genser, Hermann and Yuste, *International Human Rights Protection Gaps in the Age of Neurotechnology* (2022).

²⁹ Ibid, at 8. See also Yuste, Genser and Herrmann, supra n 4.

³⁰ See, e.g., Marshall (ed.), *Personal Identity and the European Court of Human Rights* (2022); Tiedemann (ed.), *Right to Identity: Proceedings of the Special Workshop "Right to Identity" held at the 27th World Congress of the International Association for Philosophy of Law and Social Philosophy in Washington DC* (2015). For a critical

proposals to strengthen the protection of personal identity in view of emerging (neuro)technology.³¹ One of those proposals comes from Ienca and Andorno, who have argued for the recognition of a human right to psychological continuity.³² As mentioned in the Introduction, the Advisory Committee of the Human Rights Council and the Committee on Bioethics of the Council of Europe have now also alluded to the possibility of developing such a right to psychological continuity.³³

In their seminal article *Towards new human rights in the age of neuroscience and neurotechnology*, Ienca and Andorno make a case for reinforcing human rights protection of the mind. Among other things, the authors defend the recognition of a right to psychological continuity.³⁴ When doing so, they refer to emerging technologies and techniques that enable the stimulation and modulation of human brain functions. An example is transcranial direct current stimulation (tDCS), which delivers a constant low current to specific brain areas via electrodes on the scalp, in order to modulate brain functioning. Other examples to which the authors refer are deep brain stimulation (DBS) and transcranial magnetic stimulation (TMS). Brain modulating techniques like these are being used in day-to-day medical practices, for example, to treat neural disorders such as Parkinson's disease and epilepsy. Moreover, researchers are increasingly examining the possibilities brain stimulation may offer beyond the context of ordinary medicine, for instance, to reduce aggressiveness in certain forensic populations.³⁵ Furthermore, Ienca and Andorno point at the context of the military and intelligence agencies, where (potential) human rights violations have been reported in relation to experiments involving brain electrodes, psychoactive drugs, hypnosis, and brainwashing.³⁶

Ienca and Andorno emphasise that changing a person's brain functioning through brain modulation, might sometimes cause alternations in mental states critical to personality, having the potential to affect the individual's personal identity. One could think, for instance, of cases

reflection on the report of the NeuroRights Foundation, see Lighthart and Bublitz, 'Are New Human Rights Needed for Neurotechnologies?', (2022) *Neuroethics & Law Blog*.

³¹ For example, Jotterand, *The Unfit Brain and the Limits of Moral Bioenhancement* (2022); Goering et al., *supra* n 4.

³² Ienca and Andorno, *supra* n 1.

³³ *Supra* n 8, 9. Cf. Report of the International Bioethics Committee of UNESCO, *Ethical Issues of Neurotechnology*, SHS/BIO/IBC28/2021/3Rev., 15 December 2021, at par III.1.2.

³⁴ In addition, they propose the recognition of three other human rights, that is, a right to mental privacy, to mental integrity, and a right to cognitive liberty.

³⁵ Sergiou et al., 'Transcranial direct current stimulation targeting the ventromedial prefrontal cortex reduces reactive aggression and modulates electrophysiological responses in a forensic population', (2022) 7 *Biological Psychiatry: CNNI* 95; Knehans et al., 'Modulating Behavioural and Self-Reported Aggression with Non-Invasive Brain Stimulation: A Literature Review', (2022) 12 *Brain Sci.* 1.

³⁶ Ross, 'Ethics of CIA and military contracting by psychiatrists and psychologists', (2007) 9 *Ethical Hum Psychol Psychiatry* 25. See also Rickli and Ienca, 'The Security and Military Implications of Neurotechnology and Artificial Intelligence', Friedrich et al. (eds.), *Clinical Neurotechnology meets Artificial Intelligence. Advances in Neuroethics* (2021).

where patients report not being themselves anymore after or during DBS treatment,³⁷ or where patients have reported that treatment with a brain-computer-interface “made me a different person”.³⁸ Likewise, in a recent study on the normative implications of emerging neurotechnology, adopted by the Executive Board of UNESCO, it is highlighted that

Neurotechnology could also possibly alter personal identity. For example, through memory modification techniques individuals may choose to alter the content of a memory, and therefore modify personal identity. Deep Brain Stimulation (DBS) which allows individuals to regain autonomy in movements can also pose a threat to an individual’s authentic self, as the mind can be disoriented by the active presence of a technical device.³⁹

Moreover, it has been stressed in the literature that the increased knowledge and technological developments in the field of neuroscience, offer new and more efficient possibilities for employing *unconsented* personality changes. For example, brain implants like DBS bear the risk of being hacked by third parties, aiming to exert malicious control over the user’s brain activity.⁴⁰ In view of the increasing developments in brain stimulation technology and the accompanied normative concerns, Ienca and Andorno argue for the recognition of a right to psychological continuity, which:

ultimately tends to preserve personal identity and the coherence of the individual’s behavior from unconsented modification by third parties. It protects the continuity across a person’s habitual thoughts, preferences, and choices by protecting the underlying neural functioning.⁴¹

In a recent report commissioned by the Committee on Bioethics of the Council of Europe, it is stated that a human right to psychological continuity would offer solid normative ground to

³⁷ Ienca and Andorno, supra n 1, at 20, referring to various cases reported in the scientific literature, where DBS had led to behavioral and personality changes such as increased impulsivity, aggressiveness, changes in sexual behaviour, feelings of strangeness, unfamiliarity with oneself, and increased impulsivity.

³⁸ Gilbert, Ienca and Cook supra n 22, at 786.

³⁹ UNESCO, Executive Board, Preliminary study on the technical and legal aspects relating to the desirability of a standard-setting instrument on the ethics of neurotechnology (6 April 2023), at par 7.

⁴⁰ Ienca and Andorno, supra n 1, at 21; Farahany supra note 1, at 109 et seq; Pycroft et al., ‘Brainjacking: implant security issues in invasive neuromodulation’, (2016) 92 *World neurosurgery* 454; Ienca and Haselager, ‘Hacking the brain’, (2016) 18 *Ethics and Information Technology* 117-129; Pugh et al., ‘Brainjacking in deep brain stimulation and autonomy’, (2018) 20 *Ethics and Information Technology* 219. See also: UN Special Rapporteur on Torture and other cruel, inhuman or degrading treatment or punishment, 20 March 2020, A/HRC/43/49, at 31-32

⁴¹ Ienca and Andorno, supra n 1, at 21.

preserve a person's self-determination and sense of personal identity from subconscious manipulation.⁴² The report emphasises that a right to psychological continuity

may become particularly important in the context of national security and military research, where neurotechnology applications that modulate personality traits (e.g., neurostimulation techniques) are currently being tested for combatant enhancement and other strategic purposes, e.g., to increase the ability of soldiers and other military personnel to perform with motivation and determination even under stress or in the absence of sleep.⁴³

'Psychological continuity' is not a terming that human rights law is yet quite familiar with. As the report for the Committee on Bioethics of the Council of Europe notes, this terminology is borrowed from a specific moral philosophical understanding of personal identity.⁴⁴ It is grounded in the psychological-continuity account of personal identity.⁴⁵ To better understand the meaning, scope, and (potential) legal implications of a right to psychological continuity, the next section briefly discusses the psychological-continuity account of personal identity.

2.2 *The Psychological-Continuity Account of Personal Identity*

One of the most famous and influential accounts of personal identity has been developed by John Locke.⁴⁶ In his *Essay Concerning Human Understanding*, Locke discusses a relational account of identity.⁴⁷ Such relational accounts maintain that persons at different times are identical to one another in virtue of some psychological or physical relation between them.⁴⁸ They concern the question of whether, for instance, Paul at the age of 64 is the same person as Paul at the age of 23. Locke's understanding of personal identity appeals to a specific *psychological* relation that is essential to the preservation of personal identity. It appeals to the idea of self-reflective consciousness. He argues that a person's persisting consciousness is essential for that person to continue to exist. As Shoemaker phrases it, in Locke's view, "a person – a moral agent – Y at t_2 is

⁴² Ienca, supra 9, at 61.

⁴³ Ibid, at 62.

⁴⁴ Ibid, at 61. Referring to Van Inwagen, 'Materialism and the psychological-continuity account of personal identity' (1997) 11 *Philosophical Perspectives* 305. See also Report of the International Bioethics Committee of UNESCO, *Ethical Issues of Neurotechnology*, SHS/BIO/IBC28/2021/3Rev., 15 December 2021, at par III.1.2.

⁴⁵ Gilbert, Ienca and Cook, supra n 22, at 787.

⁴⁶ Schechtman, *Staying Alive: Personal Identity, Practical Concerns, and the Unity of a Life* (2014), at 10; Gordon-Roth, 'Locke on Personal Identity', in Zalta, *The Stanford Encyclopedia of Philosophy* (Winter 2021).

⁴⁷ Locke, 'Of Identity and Diversity', in *Essay Concerning Human Understanding* (1694).

⁴⁸ Shoemaker, 'Personal Identity and Ethics', in Zalta, *The Stanford Encyclopedia of Philosophy* (2021), at par. 1.

identical to a person X at t_1 when Y 's consciousness 'can be extended backwards' to X , and this is typically taken to mean that Y *remembers* X 's thoughts and experiences".⁴⁹

Locke's conception of personal identity has, however, faced various theoretical objections.⁵⁰ For example, one of the objections is that on Locke's view, a person will lose her identity each time she loses consciousness, like when she falls asleep. Trying to avoid these objections, one of the most popular views of personal identity in contemporary philosophy, is a (significantly) amended version of Locke's memory criterion – that is: a *psychological-continuity* account of personal identity.⁵¹ Such a view on personal identity incorporates more psychological features than just memory into the identity-preserving relation between two people at different times. It includes, for instance, also our present-past and present-future relations to ourselves in terms of intentions fulfilled in action, goals, beliefs, desires, and similarity of character.⁵² This approach to personal identity maintains that for X and Y to be the same person at different times, there must be an overlapping chain of enough – that is, *strong* – psychological connectedness between X today and Y sometime in the past or future.⁵³ For instance, to say that X now is the same person as Y twenty years ago, this would require that between X today and Y at that time, there has been, each day in relation to the previous one, a strong chain of overlapping psychological features like desires, beliefs and intentions. Such an overlapping chain of strong psychological connectedness across time, is what Parfit calls *psychological continuity*.⁵⁴ In the words of Shoemaker:

X at t_1 is the same person as Y at t_2 if and only if X is uniquely psychologically continuous with Y , where psychological continuity consists in overlapping chains of strong psychological connectedness, itself consisting in significant numbers of direct psychological connections like memories, intentions, beliefs/goals/desires, and similarity of character.⁵⁵

⁴⁹ Ibid.

⁵⁰ Ibid; Gordon-Roth, supra n 46.

⁵¹ Shoemaker, supra n 48, at par. 2.1; Oslon, 'Personal Identity, in Zalta, The Stanford Encyclopedia of Philosophy (Supper 2022), at par. 4. See, for example, Shoemaker, 'Persons and Their Pasts', (1970) 7 *American Philosophy Quarterly* 269; Parfit, *Reasons and Persons* (1984), at 204.

⁵² Ibid.

⁵³ Parfit, supra n 53, at 206. According to Parfit, there is enough (strong) connectedness "if the number of connections, over any day, is *at least half* the number of direct connections that hold, over every day, in the lives of nearly every actual person."

⁵⁴ Ibid.

⁵⁵ Shoemaker, supra n 48, at par. 2.3.

In moral philosophy, the psychological-continuity account of identity is often distinguished from a biological and a narrative view on identity.⁵⁶ Very briefly, instead of the idea that identity depends upon the continuity of psychological connections to oneself, a biological view holds that identity consists in the continuity of *physical* relations; the continuity of being the same biological organism across time.⁵⁷ This view holds that what really determines our essence, is our existence as a biological entity.⁵⁸ Meanwhile, narrative identity concerns the (characterization) question of which beliefs, values, desires and other psychological features make someone the person she is.⁵⁹ The answer to this question is to be found in the narratives that people tell about themselves to make sense of who they are. Unlike the psychological-continuity account and the biological view, narrative identity is not about the person's essence or metaphysical identity. Rather, on this view, identity is about a psychological unity; about the incorporation of experiences over time into an evolving self-told story about a person's sense of self.⁶⁰ As Pugh describes, on the narrative view, identities are inherently dynamic, as individuals constantly change and evolve, while making sense of themselves by reconciling these changes into a coherent self-narrative.⁶¹

The psychological-continuity account of Parfit has, according to Pugh, been the most widely discussed in the literature on modifying neural and mental states through brain modulation such as DBS.⁶² The central concern, then, is that emerging neurotechnology has the ability to modify psychological features essential to the continuity of a person; that neurotechnology is able to induce profound changes to different psychological relations we have with ourselves, so as to destroy our relational identity and make us to become another person.⁶³ For example, Holmen illustrates that some mental features central to psychological continuity – such as preferences, desires, beliefs, and memories – seem already malleable through both pharmaceutical and neurotechnological means.⁶⁴ For instance, Holmen refers to a study that

⁵⁶ Shoemaker, supra n 48, at par. 2; Olson, supra n 51, at par. 3; Pugh, 'Clarifying the Normative Significance of 'Personality Changes' Following Deep Brain Stimulation', (2020) 26 *Science and Engineering Ethics* 1655, at 1658 et seq.

⁵⁷ Schechtman, 'Personal identity', in Routledge Encyclopedia of Philosophy (2011), at par. 7; See, e.g., Olson, *The Human Animal: Personal Identity without Psychology* (1997).

⁵⁸ For instance, according to this view, someone who falls into a vegetative state continues to exist as a *human being*, while, according to the psychological-continuity approach, one would cease to exist as a *person*: Schechtman, supra n 57, at par. 7.

⁵⁹ Schechtman, *The Constitution of Selves* (1996); Schechtman, 'The Narrative Self', in Gallagher (ed.), *The Oxford Handbook of The Self* (2011).

⁶⁰ Shoemaker, supra n 48, at 2.3; Pugh, supra n 56, at 1662.

⁶¹ Pugh, supra n 56, at 1662.

⁶² Pugh, supra n 56 at 1659.

⁶³ For example, Holmen, 'A note on psychological continuity theories of identity and neurointerventions', (2022) 48 *Journal of Medical Ethics* 742; Klaming and Haselager, 'Did My Brain Implant Make Me Do It? Questions Raised by DBS Regarding Psychological Continuity, Responsibility for Action and Mental Competence', (2013) 6 *Neuroethics* 527.

⁶⁴ Holmen, supra n 62, at 743-744.

found that downregulating brain activity in a specific brain area by non-invasive TMS, was able to alter the subjects' political and religious beliefs.⁶⁵

Likewise, Klaming and Haselager discuss a study about a patient suffering from Tourette's Syndrome, who received DBS.⁶⁶ Although the treatment was successful, twelve months after the operation, it turned out that when the amplitude of the brain stimulation was increased, the patient developed an alternate, childish identity state. When the amplitude of the stimulation was decreased again, the patient's responses became back to 'normal' and he was unable to recall what exactly had happened during the increased stimulation of his brain.⁶⁷ As Klaming and Haselager argue, cases like these demonstrate that deep brain stimulation has the ability to disrupt psychological continuity through disconnecting a person's memory, thereby affecting one's personal identity.⁶⁸ In the same vein, Vincent has argued that there are "non-insignificant grounds to worry that direct brain interventions which implement large-scale changes in one fell swoop could sever psychological continuity."⁶⁹ She emphasizes that "mounting empirical evidence substantiates the worry that direct brain interventions might have adverse effects on such things as authenticity and personal identity by significantly altering character and personality."⁷⁰

Meanwhile, others have challenged the assumption that neurotechnological brain modulation is already able to induce global and radical effects on a person's psychological functioning, so as to threaten a sufficient number of psychological connections able of disrupting the person's psychological continuity.⁷¹ For this reason, Pugh argues that it is far from clear whether a psychological-continuity understanding of identity should be the central concern in normative discussions about brain stimulation and identity.⁷² According to Pugh, "[i]f DBS threatens identity at all, it is far more plausible that it might threaten narrative identity."⁷³

⁶⁵ Holbrook et al., 'Neuromodulation of group prejudice and religious belief', (2016) 11 *Social Cognitive and Affective Neuroscience* 387.

⁶⁶ Klaming and Haselager, supra n 63, at 530.

⁶⁷ Goethals et al., 'Brain activation associated with deep brain stimulation causing dissociation in a patient with Tourette's Syndrome', (2008) 9 *Journal of Trauma & Dissociation* 543.

⁶⁸ Klaming and Haselager, supra n 63, at 530. See in this regard also Wilt, 'Does Personality Change Follow Deep Brain Stimulation in Parkinson's Disease Patients?', (2021) 12 *Frontiers in Psychology* 1; Witt et al., 'Deep Brain Stimulation and the Search for Identity', (2013) 6 *Neuroethics* 499; Schüpbach, 'Neurosurgery in Parkinson disease: a distressed mind in a repaired body?', (2006) 66 *Neurology* 1811.

⁶⁹ Vincent, 'Restoring Responsibility: Promoting Justice, Therapy and Reform Through Direct Brain Interventions', (2014) 8 *Criminal Law and Philosophy* 21, at 34.

⁷⁰ Ibid, at 30.

⁷¹ Pugh, supra n 56, at 1661. Cf. Gilbert, Viaña and Ineichen, 'Deflating the "DBS causes personality changes" bubble', (2021) 14 *Neuroethics* 1.

⁷² Pugh, supra n 56, at 1661. Cf. Report of the International Bioethics Committee of UNESCO, *Ethical Issues of Neurotechnology*, SHS/BIO/IBC28/2021/3Rev., 15 December 2021, at par III.1.2.

⁷³ Ibid. See, for example, Schechtman, *Philosophical Reflections on Narrative and Deep Brain Stimulation*, (2010) 21 *The Journal of Clinical Ethics* 133.

In sum, this section explained how the proposed right to psychological continuity reflects a specific account on personal identity – that is, a psychological continuity-account, which maintains that a person is the same person at different times, if and only if a strong psychological connection exists between the person at those times. Different scholars have argued that emerging neurotechnology is able to disrupt such strong psychological connections to ourselves, and, therefore, threaten personal identity. When defending a human right to psychological continuity, lenca and Andorno highlight that

[i]n particular, it has been observed that brain stimulation may have an impact on the psychological continuity of the person, i.e. the crucial requirement of personal identity consisting in experiencing oneself as persisting through time as the same person.⁷⁴

As briefly touched upon above, one could object to this claim and the accompanied idea of developing a human right to psychological continuity, by arguing, from a scientific perspective, that neurotechnology is not yet able to disrupt psychological continuity. Furthermore, from a moral philosophical point of view, one may contend that instead of a psychological-continuity account of identity, other understandings of personal identity are likely more appropriate to address the normative concerns of neurotechnological brain modulation, such as narrative identity. For example, one could argue that how people *experience* themselves is essential to narrative identity, though not, primarily, to identity in the sense of psychological continuity.

Considering these objections is, however, not the primary aim of this submission. Rather, it will challenge the idea of recognising a new human right to personal continuity from a legal point of view. While acknowledging the importance of specifying human rights protection to the mind, I will argue that a person’s psychological continuity already receives considerable protection within the established framework of human rights law. If emerging neurotechnology appears able to threaten psychological continuity, existing human rights are likely to offer robust protection against non-consensual alternations of this type of personal identity. In what follows, I will consider how a human right to psychological continuity would relate to, consecutively, the right to personal identity, the right to self-determination, and the right to personal integrity.

3. Psychological Continuity and the Rights to Personal Identity and Self-Determination

According to lenca and Andorno, “the right to psychological continuity can be seen as a special neuro-focused instance of the right to identity.”⁷⁵ Hence, when examining whether the protection of a person’s psychological continuity might be covered by existing human rights, it makes sense to consider, first, the protective scope of the right to personal identity.

⁷⁴ lenca and Andorno, *supra* n 1, at 20.

⁷⁵ lenca and Andorno, *supra* n 1, at 21.

Securing peoples' personality and identity has a profound legal basis in contemporary human rights law.⁷⁶ For example, Article 22 of the Universal Declaration of Human Rights (UDHR) safeguards some essential conditions for dignity and the free development of personality.⁷⁷ Article 17 ICCPR supports the protection of the individual's identity and self-autonomy.⁷⁸ And Article 8 of the UN Convention on the Rights of the Child recognises the right of children to preserve their identity. In the Inter-American context, a right to identity has been derived from the right to privacy under Article 11 ACHR.⁷⁹ In the European context, Article 1 of the Oviedo Convention prescribes that the parties "shall protect the dignity and identity of all human beings and guarantee everyone, without discrimination, respect for their integrity and other rights and fundamental freedoms with regard to the application of biology and medicine." Furthermore, the ECtHR has recognised a right to identity under the umbrella right to respect for private life pursuant to Article 8 ECHR.⁸⁰

More specifically, according to the ECtHR, the notion of private life encompasses the 'right to identity' and the 'right to personal development', either in terms of personality or personal autonomy.⁸¹ The protection of peoples' personal identity has many appearances in the case law of the ECtHR,⁸² ranging from the protection of gender, genetic and biological identity,⁸³ over ethnic and religious identity,⁸⁴ to the protection of social and national identity.⁸⁵

Marshall observes that the case law of the ECtHR reflects, in general, a kind of self-determined and fluid version of identity and personal freedom.⁸⁶ The Strasbourg jurisprudence acknowledges "the importance of building and retaining an ability and capacity that is each person's domain, to enable them to think reflectively without interference, to be in control of

⁷⁶ For some critical reflections on the need for a human right to identity, see Tiedemann, *supra* n 30.

⁷⁷ See also Articles 26 and 29 UDHR.

⁷⁸ Taylor, *A Commentary on the International Covenant on Civil and Political Rights* (2020), at 4.

⁷⁹ Inter-American Court of Human Rights, *Obligaciones Estatales en Relación Con el Cambio de Nombre, la Identidad de Género, Y los Derechos Derivados de un Vínculo Entre Parejas del Mismo Sexo* (24 November 2017), par 87. See also Tiedemann, *supra* n 30.

⁸⁰ Marshall, *Human Rights Law and Personal Identity* (2016), at 36

⁸¹ *Reklos and Davourlis v Greece* Application No 1234/05, Merits and Just Satisfaction, 15 January 2009, at par 39. Cf. *Basu v Germany* Application No. 215/19, Merits and Just Satisfaction, 18 October 2022, at par 2; *Breyer v Germany* Application No 50001/12, Merits and Just Satisfaction, 30 January 2020, at par 73.

⁸² *Harris et al, Harris, O'Boyle and Warbirck Law of the European Convention on Human Rights* (2023), at 521-524; Marshall, *supra* n 80; Marshall, *supra* n 30; Tamimi, 'Human Rights and the Excess of Identity: A Legal and Theoretical Inquiry into the Notion of Identity in Strasbourg Case Law', (2018) 27 *Social & Legal Studies* 283.

⁸³ For example, *A.D. and Others v Georgie* Applications Nos. 57864/17, 79087/17 and 55353/19, Merits and Just Satisfaction, 1 December 2022, at par 48; *Parrillo v. Italy* Application No. 46470/11, Merits and Just Satisfaction, 27 August 2015, at par 158-159. See also Marshall *supra*, n 80, at 89 et seq.

⁸⁴ For example, *Ciubotaru v Moldova* Application No. 27138/04, Merits and Just Satisfaction, 27 April 2010, at par 53; *Leyla Şahin v Turkey* Application No. 44774/98, Merits and Just Satisfaction, 10 November 2005, at par 104. See also Marshall *supra*, n 80, at 142 et seq.

⁸⁵ For example, *S.V. v Italy* Application No. 55216/08, Merits and Just Satisfaction, 11 October 2018, at par 54; *Ghoumid and Others v. France* Application No. 52273/16 and 4 others, Merits and Just Satisfaction, 25 June 2020, at par 43. See also Tamimi, *supra* n 82.

⁸⁶ Marshall, *Personal Freedom through Human Rights Law?* (2009), at 96; Marshall, *supra* n 80, at 241.

their own faculties, to decide their own plan of life.”⁸⁷ When considering the case law of the ECtHR on the right to personal identity, Marshall identifies at least three preconditions of identity formation, relating to our minds, bodies, and their intersubjective relationship within social environments.⁸⁸

Interestingly, these preconditions – especially the one relating to the mind – seem to link very closely to the preservation of, what Parfit has called, a person’s ‘psychological continuity’. For example, in the case of *Odièvre v France*, the Grand Chamber reiterated that Article 8 ECHR protects a right to identity and personal development. In that context, the Court emphasised that the preservation of *mental stability* is an indispensable precondition to effective enjoyment of the right to respect for private life.⁸⁹ As Marshall writes, our inner mind, the personal space that produces our thoughts, needs security and legal protection so as to enable us to be our own person. Humans need the ability to fulfil their capacities; they need a personal space to develop themselves. If that space is the mind, or, more specifically and less Cartesian, the brain, then, Marshall argues,

how that brain develops or is allowed to develop in and through the societies or social spaces it finds itself in, are surely included, or ought to be, in the legal protection of any right to personal identity. This is in line with the right to private life protected in human rights treaties’ provisions; an understanding that we have integrity in our own thoughts and conscience, within our body. Each person is entitled to retain an ability and capacity to enable them to think reflectively without interference; to be in control of their own faculties.⁹⁰

Put differently, the formation and development of personal identity requires, among other things, the ability to freely develop and control our personal thoughts, beliefs, desires, and other mental faculties, without external restrictions or interference. It requires, in the words of the ECtHR, ‘mental stability’, as an indispensable precondition to an effective enjoyment of private life.

If the right to personal identity implies the preservation of a person’s *mental stability*, and if it aims to guarantee *control of one’s own mental faculties*, then such a right seems (perfectly able) to cover the protection of a person’s *psychological connections* to oneself, in terms of

⁸⁷ Marshall, *supra* n 30, at 13.

⁸⁸ Marshall, *supra* n 30, at 18-19. Also, Marshall, *supra* n 80, at 237.

⁸⁹ *Odièvre v France* Application No 42326/98, Merits, 13 February 2003, at par 29. See also *Bensaid v the United Kingdom* Application No 44599/98, Merits and Just Satisfaction, 6 February 2001, at par 47.

⁹⁰ Marshall, *supra* n 30, at 18-19. And indeed, as it appears from the case law of the ECtHR, which will further be discussed in the next section, preserving mental stability is also essential regarding the protection of mental health as part of the right to personal integrity under Article 8 ECHR. See, for example, *Dolenec v Croatia* Application No 25282/06, Merits and Just Satisfaction, 26 November 2009, at par 165; *Khan v Germany* Application No 38030/12, Merits and Just Satisfaction, 23 April 2015, at par 35.

memories, intentions, beliefs, goals, desires, similarity of character, et cetera. In other words: the right to personal identity is, then, likely to cover the protection of *psychological continuity*.

Surely, one could object to this claim by defending an alternative interpretation of (a right to) psychological continuity, or by arguing that the preservation of ‘psychological continuity’ is not completely identical to preserving ‘mental stability’. But such semantic arguments do not contribute much to the actual debate on human rights protection for the mind. Whether the proposed right to psychological continuity is or can be completely absorbed by the right to personal identity, need not be our ultimate concern. Rather, the central question is whether recognising a right to psychological continuity would be necessary to protect against the threats that emerging neurotechnologies pose to personal identity; whether there is a gap in human rights law that needs to be filled by this proposed new right.

As discussed in section 2, the aim of recognising a human right to psychological continuity would be to guarantee “the continuity across a person’s habitual thoughts, preferences, and choices by protecting the underlying neural functioning.”⁹¹ It aims to protect against emerging technologies that could modify brain functioning and, ultimately, pursues to guarantee the coherence of peoples’ behaviour and the preservation of their personal identity.⁹² As it appears, preserving personal identity by protecting the individual’s mental capacities to think reflectively and be in control of their own faculties, is also one of the objectives of the right to personal identity pursuant to Article 8 ECHR. Moreover, as Marshall writes in the quotation above, the legal protection offered by the right to personal identity also includes the protection of the human brain and how the brain develops within different social spaces. As such, the right to personal identity pursues, among other things, the same objectives as the proposed right to psychological continuity: protecting the stability of our mental faculties in order to preserve personal identity, *inter alia* by protecting the brain from external interferences so as to enable people to think reflectively and exercise control over their own faculties and behaviour.

Admittedly, a clear and well-developed approach on the protection of mental stability as a precondition of personal identity cannot yet be found in the case law of the ECtHR. But such an approach is likely to emerge as soon as neurotechnology is further developing and complaints about human rights violations due to brain modification reach the Court. As is known, human rights are to be considered a living instrument, which should be interpreted in view of present-day conditions, including societal, bioethical, and technological developments.⁹³ In a recent document that was published on the website of the ECtHR, it is emphasised that the Court’s dynamic interpretation makes the Convention “extremely modern”. By adopting this dynamic approach, “the Court has extended the rights set out in the Convention, such that its provisions

⁹¹ Ienca and Andorno, *supra* n 1, at 21.

⁹² *Ibid.*

⁹³ Harris et al., *supra* n 82, at 7-8, 508.

apply today to situations that were totally unforeseeable and unimaginable at the time it was first adopted, including issues related to new technologies, bioethics or the environment.”⁹⁴

So, indeed, the authors of existing human rights instruments may not have envisaged the present-day challenges raised by emerging neurotechnology for the preservation of peoples’ personal identity. However, when confronted with complaints about this matter, the ECtHR, for example, is likely to interpret and redefine the right to personal identity in a way that fits its purpose in the 21st century. In that case, the Court will likely consider the possibilities that new neurotechnologies offer to intervene into the human brain and mind, and what they would mean for our understanding of the right to personal identity, also in view of the comprehensive reflections on these developments in bioethical and neuroethical scholarship.⁹⁵ To facilitate and inform this kind of jurisprudence, further debate – ideally in close collaboration between lawyers, ethicists, and neuroscientists – is much needed, as some ground notions and concepts, such as ‘mental stability’ or ‘personality’, are still ill-defined in jurisprudence and legal scholarship, and the moral concerns about emerging neurotechnologies have not yet been fully translated into concrete legal challenges and potential solutions in human rights law.⁹⁶

Interestingly, the beginning of a re-understanding of the right to personal identity in view of novel technologies, seems, in fact, already been marked in the case law on technological surveillance.⁹⁷ For example, in the case of *Reklos and Davourlis v Greece*, the ECtHR argued that a person’s image, captured in a photograph, is one of the characteristics attached to one’s personality. Its effective protection presupposes, in principle, obtaining peoples’ consent when taking a picture. Otherwise, “an essential attribute of personality would be retained in the hands of a third party and the person concerned would have no control over any subsequent use of the image.”⁹⁸ Likewise, referring to the importance for individuals to construct their ‘social identity’, the ECtHR has decided that employers are not allowed to surveil the complete electronic workplace communications of their employees,⁹⁹ nor may universities install video surveillance in the auditoriums without consent of the lectures.¹⁰⁰

Cases like these illustrate that the introduction of new technology is sometimes accompanied with novel challenges to the formation and development of personality and personal identity. According to Fiedl, these cases and alike seem reflective of a broader trend, “namely that (re-)equipping individuals with the material faculties to live their lives according to the (social) identities they wish to adopt should be a guiding principle of Article 8

⁹⁴ ECtHR, Public Relations Unit, *The European Convention on Human Rights – A living instrument* (2022), at 7.

⁹⁵ Cf. Michalowski *supra* n 7, at 406.

⁹⁶ See also section 5. Cf. Ligthart et al., *supra* n 1.

⁹⁷ See Friedl, ‘Privacy Law and the Social Construction of Identity: An Interrelated History’, in Marshall *supra* n 30, at 71-72; Marshall *supra*, n 30, at 16-17.

⁹⁸ *Reklos and Davourlis v Greece* Application No 1234/05, Merits and Just Satisfaction, 15 January 2009, at par 40.

⁹⁹ *Bărbulescu v Romania* Application No 61496/08, Merits and Just Satisfaction, 5 September 2017, at par 69-81.

¹⁰⁰ *Antović and Mirković v Montenegro* Application No 70838/13, Merits and Just Satisfaction, 28 November 2017, at par 40-45.

jurisprudence.”¹⁰¹ This “emancipatory, capabilities-oriented approach” to privacy rights, seems, according to Friedl, better equipped to tackle today’s challenges to personal identity, like those accompanied with the increased use in modern societies of algorithmic technologies and digital data analysis.¹⁰² Likewise, such a capabilities-oriented approach to Article 8 ECHR, guided by the right to personal identity and recognizing the importance of preserving people’s mental stability, seems, in general, well-equipped to address the normative challenges raised by technologies that may enter and alter our mental faculties and, ultimately, change who we are or who we will become.

Moreover, next to the right to personal identity, changing who a person is and who she will become, might, without valid consent, also potentially interfere with the broader right to self-determination. In the above-mentioned report for the Committee on Bioethics of the Council of Europe, it has been argued that a right to psychological continuity, together with the right to identity, would, among other things, offer solid normative ground for the protection of a person’s self-determination, as these rights can help people retaining control over their own behaviour.¹⁰³ Following this line of thought – i.e., that a person’s psychological continuity is conducive to self-determination – it is arguable that the legal protection of psychological continuity is already absorbed by the general right to self-determination. This right has been recognised as part of the right to respect for private life under Article 8 ECHR,¹⁰⁴ and stands in a close relation to the right to personal identity.¹⁰⁵ For example, according to Marshall, the Court’s interpretation of the right to personal identity corresponds to a form of human freedom as self-determination: the freedom to be and become the person one chooses.¹⁰⁶ Furthermore, the right to self-determination is intertwined with the right to personal integrity. According to Michalowski, the ECtHR seems to “regard integrity and self-determination as closely linked, in that the reason behind the protection of integrity is precisely that of safeguarding that person’s right to self-determination.”¹⁰⁷ In the same vein, Marshall observes that most of the ECtHR’s case law supports a view on personal integrity that connects to the self-determination freedom of living a life of one’s own choosing.¹⁰⁸ As will be argued in the following section, next to the rights to personal identity and self-determination, the right to personal integrity is able to offer profound legal protection to a person’s psychological continuity.

¹⁰¹ Friedl, *supra* n 97, at 73.

¹⁰² Friedl, *supra* n 97, at 73.

¹⁰³ Ienca, *supra* n 9, at 61.

¹⁰⁴ *Parrillo v Italy* Application No 46470/11, Merits and Just Satisfaction, 27 August 2015, at par 153; *Pretty v UK* Application No 2346/02, Merits, 29 April 2002, at par 61. See also Michalowski, *supra* n 7.

¹⁰⁵ See, for example, *S.V. v Italy* Application No 55216/08, Merits and Just Satisfaction, 11 October 2018, at par 54; *Van Kück v Germany* Application No 35968/97, Merits and Just Satisfaction, 12 June 2003, at par 69, 73. See also Marshall, *supra* n 86, at 122.

¹⁰⁶ Marshall, *supra* n 80, at 241; Marshall *supra* n 86, at 121.

¹⁰⁷ Michalowski, *supra* n 7, at 405.

¹⁰⁸ Marshall, *supra* n 86, at 201.

4. Psychological Continuity and the rights to Personal Integrity

Apart from the general right to personal identity, human rights law also offers more specified protection to various preconditions for the formation, preservation, and development of personal identity.¹⁰⁹ Particularly relevant to the purpose of this submission, is the human right to personal integrity, which includes, in general terms, the protection of a person's physical and mental integrity. For example, Marshall emphasizes that the interpretation of a right to personal identity is intertwined with the right to personal integrity as is recognized in the case law of the ECtHR.¹¹⁰ Likewise, Tiedemann notes that "[s]ome human rights protect physical and mental integrity whose severe violation leads to the loss of personal identity."¹¹¹

A right to personal integrity has been recognised under different international and regional human rights instruments. At the international level, neither the UDHR nor the ICCPR guarantee this right explicitly. However, General Comment No. 35, on Article 9 ICCPR, stresses that "Security of person concerns freedom from injury to the body and the mind, or bodily and mental integrity". Furthermore, Article 17 of the UN Convention on the Rights of Persons with Disabilities (CRPD) prescribes that "Every person with disabilities has a right to respect for his or her physical and mental integrity on an equal basis with others." Within the Inter-American context, Article 5(1) ACHR states that "Every person has the right to have his physical, mental, and moral integrity respected." In the European context, a similar right is guaranteed by Article 3 of the Charter of Fundamental Rights of the European Union, aiming to provide comprehensive protection of the person, especially against new technologies.¹¹² Safeguarding the person's physical and mental integrity is furthermore essential to the absolute prohibition of torture, inhuman and degrading treatment pursuant to Article 3 ECHR. In addition, the ECtHR has recognized that the protection of personal integrity is also covered by the qualified right to respect for private life under Article 8 ECHR.¹¹³

More specifically, the ECtHR holds that the right to respect for one's private life comprises a right to physical and psychological integrity.¹¹⁴ Sometimes, the Court also refers to a right to 'mental' and 'moral' integrity. Meanwhile, the case law suggests that psychological, mental, and

¹⁰⁹ Tiedemann, *supra* n 30. Marshall, *supra* n 30, 80, 86.

¹¹⁰ Marshall, *supra* n 30, at 13. Also Marshall, *supra* n 80, at 41.

¹¹¹ Tiedemann, *supra* n 30, at 27.

¹¹² Bublitz, 'The Nascent Right to Psychological Integrity and Mental Self-Determination', in Von Arnald, Von der Decken and Susi (eds.) *The Cambridge Handbook of New Human Rights: Recognition, Novelty, Rhetoric* (2020), at 395.

¹¹³ Harris et al., *supra* n 82, at 525; De Vries, 'Right to Respect for Private and Family Life', in Van Dijk et al. (eds.) *Theory and Practice of The European Convention on Human Rights* (2018), at 690.

¹¹⁴ *Bédat v Switzerland* Application No 56925/08, Merits, 29 March 2016, at par 72.

moral integrity are interchangeable terms.¹¹⁵ In general, the right to *physical* integrity covers a right against non-consensual interferences with one's body, which is, according to the Court, "the most intimate aspect of private life."¹¹⁶ The right encompasses a broad scope of physical intrusions.¹¹⁷ These range from minor non-consensual medical interventions such as taking saliva,¹¹⁸ blood,¹¹⁹ urine,¹²⁰ and obliging an X-ray,¹²¹ to physical searches by the police,¹²² gynaecological examination in prison,¹²³ and rape.¹²⁴

The contours of the right to *psychological*, *moral*, and *mental* integrity are less clear.¹²⁵ The ECtHR usually refrains from providing a further definition of these notions.¹²⁶ But we do know that these rights cover, at least, the protection of mental health as a crucial part of private life.¹²⁷ Furthermore, they apply to cases about bullying at school and in the workplace,¹²⁸ well-founded fear for physical abuse,¹²⁹ and loss of honour and reputation.¹³⁰

Meanwhile, not just any interference with a person's body and mind by a non-state actor necessarily infringes Article 8 ECHR. The Court has emphasised "that not every act or measure of a private individual which adversely affects the physical and psychological integrity of another will interfere with the right to respect for private life guaranteed by Article 8 (...). It reiterates that a severity threshold is necessary for the applicability of Article 8 in such a situation."¹³¹ To infringe the right to personal integrity under Article 8 ECHR, an interference with the body or mind should have 'sufficiently adverse effects' on the person's physical or psychological

¹¹⁵ De Vries, *supra* n 113, at 690 See, for example, Špadijer v Montenegro Application No 31549/18, Merits and Just Satisfaction, 9 November 2021, at par 79-90. See also Beizaras and Levickas v Lithuania Application No 41288/15, Merits and Just Satisfaction, 14 January 2020, at par 128 in relation to Panayotova and Others v Bulgaria Application No. 12509/13, Decision, 7 May 2019, at par 58-59.

¹¹⁶ Y.F. v Turkey Application No 24209/94, Merits and Just Satisfaction, 22 July 2003, at par 33.

¹¹⁷ For overviews, see Marshall, *supra* n 86, at 168-201; De Vries, *supra* n 113, at 690-697; Rainey, McCormick & Ovey, *The European Convention on Human Rights* (2021), at 411-414.

¹¹⁸ Caruana v Malta Application No 41079/16, Decision, 15 May 2018.

¹¹⁹ Schmidt v Germany, Application No 32352/02, Decision, 5 January 2006.

¹²⁰ Peters v The Netherlands Application No 21132/93, Decision, 6 April 1994.

¹²¹ Acmanne and others v Belgium Application No 10435/83, Decision, 10 December 1984.

¹²² Gillan and Quinton v UK Application No 4158/05, Merits and Just Satisfaction, 12 January 2010.

¹²³ Juhnke v Turkey Application No 52515/99, Merits and Just Satisfaction, 13 May 2008.

¹²⁴ M.C. v Bulgaria Application No 39272/98, Merits and Just Satisfaction, 4 December 2003.

¹²⁵ Bublitz, *supra* n 112; Michalowski, *supra* n 7.

¹²⁶ De Vries, *supra* n 113, at 690.

¹²⁷ Dolenc v Croatia Application No 25282/06, Merits and Just Satisfaction, 26 November 2009, at par 165;

Bensaid v the United Kingdom Application No 44599/98, Merits and Just Satisfaction, 6 February 2001, at par 47.

¹²⁸ Đorđević v Croatia, Application No 41526/10, Merits and Just Satisfaction, 24 July 2012, at par 97-98; Špadijer v Montenegro Application No 31549/18, Merits and Just Satisfaction, 9 November 2021, at par 79-83.

¹²⁹ Hajduová v Slovakia, Application No 2660/03, Merits and Just Satisfaction, 30 November 2010, at par 49.

¹³⁰ Ion Cârstea v Romania, Application No 20531/06, Merits and Just Satisfaction, 28 October 2014, at par 38;

Putistin v Ukraine Application No 16882/03, Merits and Just Satisfaction, 21 November 2013, at par 32.

¹³¹ Nicolae Virgiliu Tănase v Romania Application No 41720/13, Merits and Just Satisfaction, 26 June 2019, at par 128.

integrity.¹³² However, this severity threshold has not yet been further elaborated upon in the case law.¹³³ As a consequence, its implications for the human rights protection against relatively minor interferences with the person's body and mind by private individuals are, as yet, largely unclear.

The right to physical and psychological integrity overlap, to a considerable extent, with the proposed right to psychological continuity.¹³⁴ The latter seems to be a specification of the former. Whereas the rights to physical and psychological integrity protect against non-consensual interferences with, broadly speaking, the body and the mind, a right to psychological continuity would only protect a particular aspect of the body and the mind – that is, the brain and the continuity across specific mental faculties such as habitual thoughts, preferences, and choices.¹³⁵

Moreover, both a right to psychological continuity and the right to physical and psychological integrity, would serve as a similar precondition for the effective protection of a right to personal identity. As discussed in section 2, a right to psychological continuity aims to protect against non-consensual modifications of brain functioning and, thereby, guarantee the preservation of personal identity.¹³⁶ According to the psychological-continuity account on personal identity, the continuity of a person's psychological connections is the essential requirement for the preservation of personal identity. The ECtHR does not refer to psychological continuity as a condition for personal identity. It does, however, acknowledge the importance of preserving mental stability in this regard.¹³⁷ Furthermore, the Grand Chamber appears to consider the preservation of a person's physical and psychological integrity as a prerequisite for the protection of personal identity:

The concept of “private life” is a broad term which is not susceptible to exhaustive definition. It covers the physical and psychological integrity of a person, *and can therefore embrace* multiple aspects of the person's identity such as, for example, gender identification, sexual orientation, name and elements relating to a person's right to his or her image.¹³⁸

¹³² Király and Dömötör v Hungary Application No 10851/13, Merits and Just Satisfaction, 17 January 2017, at par 42; Costello-Roberts v UK Application No 13134/87, Merits and Just Satisfaction, 25 March 1993, at par 36.

¹³³ Harris et al., *supra* n 82, at 825.

¹³⁴ Ienca and Androno, *supra* n 1, at 22.

¹³⁵ *Ibid*, at 21.

¹³⁶ *Ibid*.

¹³⁷ Odièvre v France Application No 42326/98, Merits, 13 February 2003, at par 29; Bensaid v the United Kingdom Application No 44599/98, Merits and Just Satisfaction, 6 February 2001, at par 47.

¹³⁸ Bédât v Switzerland Application No 56925/08, Merits, 29 March 2016, at par 72 (emphasis added). Also: Denisov v Ukraine Application 76639/11, Merits and Just Satisfaction, 25 September 2018, at par 95. Cf. Mubilanzila Mayeka and Kaniki Mitunga v Belgium Application No 13178/03, Merits and Just Satisfaction, 12 October 2006, at par 80.

As Marshall notes, today, in the age of neuroscience and genetics, many discussions concerning the soul, rationality, and the core of what it is to be human, are shifting towards debates over the brain and DNA.¹³⁹ Personal identity requires mental stability. And since our mental states and processes are considered a product of the brain, it's a logical step to argue that the protection of personal identity requires the protection of neural functioning – especially if it appears that emerging neuroethology may enable others to manipulate our neural and mental activities.

It is, however, unclear, why the protection of our brains and mental functioning against unwanted intrusions by others, would require the recognition of a new, specified right to psychological continuity, over and above the general and robust protection that is offered to both the body and mind by the right to physical, psychological, mental, and moral integrity. These rights protect against a wide range of severe and less severe interferences with the brain, psychological well-being, and aspects central to moral integrity, such as a person's choices to live one's life in accordance with one's own ethical standards.¹⁴⁰ Hence, these rights are likely to offer adequate legal protection against unconsented alternations of peoples' brain functioning and, ultimately, of their memories, intentions, beliefs, desires, character, and alike.¹⁴¹ For example, the ECtHR considers that under Article 8 ECHR, States have a positive obligation to protect the physical, psychological and moral integrity of an individual, by creating and applying an adequate legal framework that protects against acts of violence by private individuals. Effective protection against (severe) attacks to peoples' physical integrity requires efficient criminal-law mechanisms. The protection of psychological integrity may also consist of civil-law remedies, capable of affording sufficient protection.¹⁴² Similar obligations follows from the right to liberty and security pursuant to Article 9 ICCPR (General Comment No. 35, par. 9).

Ienca and Andorno accept that a right to psychological continuity would pursue, to a considerable extent, similar aims as the right to mental (or psychological) integrity. Meanwhile, they argue that unlike mental integrity rights, a right to psychological continuity would, desirably, also extend to those cases where psychological changes have been induced, but no physical or mental *harm* has been inflicted. They write:

¹³⁹ Marshall, *supra* n 80, at 111.

¹⁴⁰ Marshall, *supra* n 86, at 167-168; Feldman, 'The developing scope of Article 8 of the European Convention on Human Rights, (1997) 3 *European Human Rights Law Review* 265, at 270.

¹⁴¹ Michalowski, *supra* n 7; Bublitz, "'The Soul is in the Prison of the Body" – Mandatory Moral Enhancement, Punishment & Rights against Neuro-rehabilitation', in Birks and Douglas (eds.), *Treatment for Crime: Philosophical Essays on Neurointerventions in Criminal Justice* (2018); Lighthart et al., 'Closed-Loop Brain Devices in Offender Rehabilitation: Autonomy, Human Rights, and Accountability', (2021) 30 *Cambridge Quarterly of Healthcare Ethics* 669; Craig, 'Incarceration, Direct Brain Intervention, and the Right to Mental Integrity – a Reply to Thomas Douglas', (2016) 9 *Neuroethics* 107.

¹⁴² *Špadijer v Montenegro* Application No 31549/18, Merits and Just Satisfaction, 9 November 2021, at par 86-89; *Nicolae Virgiliu Tănase v Romania* Application No 41720/13, Merits and Just Satisfaction, 26 June 2019, at par 126-27.

The right to psychological continuity is closely related to the right to mental integrity, and may factually overlap with it. Both rights stand to protect people from abusive and unconsented alterations of their mental dimension. However, they differ to the extent that the right to psychological continuity also applies to emerging scenarios that do not directly involve neural or mental harm. In contrast (...) the presence of harm is a necessary condition for an action to qualify as an offence to a person's mental integrity. To appreciate this difference, it is important to consider that psychological continuity could be threatened not only by misused brain stimulation but also by less invasive, even unperceivable interventions. A good example is unconscious neural advertising via neuromarketing.¹⁴³

The distinction between harmful and harmless interferences with peoples' mental faculties seems appealing in normative evaluations of emerging neurotechnology. Meanwhile, whether this descriptive differentiation is compelling to distinguish a right to psychological continuity from the right to mental, psychological, and moral integrity, might be challenged.

First, it is doubtful whether the right to physical and psychological integrity would only cover interferences that result in physical and/or psychological harm.¹⁴⁴ Indeed, the *absolute* protection of bodily and mental integrity under Article 3 ECHR will normally only apply to cases of (severe) physical or mental suffering.¹⁴⁵ However, this seems no general requirement for the application of the *qualified* right to respect for private life under Article 8 ECHR. For instance, Bublitz notices that the right to psychological integrity in the meaning of Article 8 ECHR seems conceptually broader, as it may capture interferences that do not amount to setbacks to mental health or mental stability, like in cases on prejudiced honour and reputation.¹⁴⁶ In Bublitz' view, integrity rights cover all kind of alternations that disrupt the preservation of the integrity right's object. As he argues: "Although there is no settled understanding, a right to the integrity of X seems to denote the preservation of the intactness, unity or identity of X. Alterations of these features then constitute interferences."¹⁴⁷ Likewise, considering the right to physical integrity,

¹⁴³ Ienca and Andorno, *supra* n 1, at 22.

¹⁴⁴ Which would, obviously, also depend on how one defines, exactly, physical and psychological harm. As mentioned above, the meaning of the threshold of having 'sufficiently adverse affects' on a person's physical or psychological integrity, to which the Courts refers in cases on interference between private individuals, is as yet largely unclear.

¹⁴⁵ Harris et al., *supra* n 82, at 243; Vermeulen and Battjes, 'Prohibition of Torture and other Inhuman or Degrading Treatment or Punishment', in Van Dijk et al. (eds.) *Theory and Practice of The European Convention on Human Rights* (2018), at 384.

¹⁴⁶ Bublitz, *supra* n 112, at 396. Also: Biber and Capasso, 'The Right to Mental Integrity in the Age of Artificial Intelligence: Cognitive Human Enhancement Technologies', in Custers and Fosch-Villaronga (eds.), *Law and Artificial Intelligence* (2022), at 511. See, for example, *Ion Cârstea v Romania*, Application No 20531/06, Merits and Just Satisfaction, 28 October 2014, at par 38.

¹⁴⁷ Bublitz, *supra* n 112, at 397.

Marshall neither seems to endorse the requirement that infringements should entail physical harm. Rather, she connects the right to bodily integrity to the philosophical idea of ownership of one's own body, which is "certainly not being for anyone else to interfere with".¹⁴⁸ Illustrative in this regard are infringements of the right to physical integrity by the non-consensual acquisition of saliva for DNA analysis via a buccal swab, which "usually causes no bodily injury or any physical or mental suffering."¹⁴⁹ Likewise, in ethical discussions over the *moral* right to bodily integrity, the infliction of physical harm neither seems a clear nor universal requirement for infringing the right.¹⁵⁰ For example, according to some interpretations, mere bodily contact, like touching, without consent, could already infringe the moral right to bodily integrity.¹⁵¹ In the same vein, the moral right to *mental* integrity has been defined, on a minimalist conception, as a right against (certain kinds of) non-consensual interferences with one's mind.¹⁵² On this account, infringements need not necessarily entail either neural or mental harm.

Secondly, it is questionable whether a right to psychological continuity would actually apply to scenarios that do not directly involve any neural or mental harm, such as unconscious advertisement through neuromarketing. At least, such an understanding of the right seems not fully consistent with the psychological-continuity account on personal identity. As discussed in section 2.2, this account maintains that for *X* and *Y* to be the same person at different times, there must be an overlapping chain of *strong* psychological connectedness between *X* today and *Y* sometime in the past or future. According to Parfit, such a strong connectedness exists if the number of psychological connections to oneself, "over any day, is at least half the number of direct connections that hold, over every day, in the lives of nearly every actual person."¹⁵³ This means that a person's identity will only be disrupted if one loses more than half the number of psychological connections to oneself. As Pugh rightly points out, this is quite a high threshold, which might not even be met in the case of neurogenerative diseases like Alzheimer's.¹⁵⁴

If a person's psychological continuity is only disrupted when over half of one's psychological connections have been destroyed, it seems unconvincing to argue that a right to psychological continuity would apply to interferences that do not involve any kind of neural or mental harm. After all, a disruption of psychological continuity in this sense would in itself imply substantial harm to the person's psychological or intellectual functioning, as it requires a radical and detrimental effect on the person's psychological economy, impairing more than half of one's psychological connections like memories, intentions, beliefs, and desires.

¹⁴⁸ Marshall, supra n 86, at 170.

¹⁴⁹ Caruana v Malta Application No 41079/16, Decision, 15 May 2018, at par 41 (see also par 27-28). Cf. Nicolae Virgiliu Tănase v Romania Application No 41720/13, Merits and Just Satisfaction, 26 June 2019, at par 130.

¹⁵⁰ Lavazza and Giordi, 'Philosophical foundations of the right to mental integrity in the age of neurotechnologies', (2023) 16 *Neuroethics* 10; Ryberg, *Neurointerventions, Crime, and Punishment* (2020), at 75 et seq.

¹⁵¹ Ryberg, supra n 150, at 75 et seq.

¹⁵² Ligthart et al., supra n 1, p. 6.

¹⁵³ Parfit, supra n 53, at 206.

¹⁵⁴ Pugh, supra n 56, at 1661.

In fact, the intentional infliction upon another person of such an acute and global mental deterioration, may, potentially, even attain a minimum level of severity so as to violate the absolute prohibition of torture, inhuman and degrading treatment. As Tiedemann notes, severe violations of human rights that protect physical and mental integrity could lead to the loss of personal identity, which is, according to Tiedemann, evidenced by the ban of torture and inhuman and degrading treatment and punishment.¹⁵⁵ Illustrative in this regard is a recent statement of the UN Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment. In his report on psychological torture and ill-treatment, the Rapporteur explicitly refers to the potential threats of neurotechnology in relation to profound disruptions of a person's mental identity, capacity or autonomy. Drawing attention to the rapid advances in medical, pharmaceutical and neurotechnological science, the Rapporteur highlights the difficulty of predicting to what extent future techniques of torture, as well as the human enhancement of people's mental and emotional resilience, may allow the manipulation, circumvention, or suppression of the subjective experiences of pain and suffering, while still attaining the dehumanizing, debilitating and incapacitating effects of torture.¹⁵⁶ Meanwhile, States must interpret and exercise the prohibition of torture in good faith and in the light of the evolving values of democratic societies. In that light, the Rapporteur would find it

irreconcilable with the object and purpose of the universal, absolute and non-derogable prohibition of torture, for example, to exclude from the definition of torture the profound disruption of a person's mental identity, capacity or autonomy only because the victim's subjective experience or recollection of "mental suffering" has been pharmaceutically, hypnotically or otherwise manipulated or suppressed.¹⁵⁷

In the European context, one could quite easily imagine the ECtHR to qualify the disruption of over half a person's psychological connections to oneself through neurotechnology as, to say the least, 'degrading', which the Court defines as a treatment that "humiliates or debases an individual, showing a lack of respect for, or diminishing, his or her human dignity, or when it arouses feelings of fear, anguish or inferiority capable of breaking an individual's moral and physical resistance."¹⁵⁸

In sum, this section argued that the legal protection that a right to psychological continuity should offer, is, by and large, covered by the broader, existing rights to physical and psychological integrity. These rights offer robust – both qualified and absolute – protection

¹⁵⁵ Tiedemann, *supra* n 30 at 27.

¹⁵⁶ UN Special Rapporteur on Torture and Cruel, Inhuman or Degrading Treatment or Punishment, Report on psychological torture and ill-treatment, UN Doc. A/HRC/43/49 (2020), at par 32.

¹⁵⁷ *Ibid.*

¹⁵⁸ *Svinarenko and Slyadnev v Russia* Application No 32541/08 and 43441/08, Merits and Just Satisfaction, 17 July 2014, at par 115.

against severe and less severe interferences with the brain and mental functioning by third parties. They serve as an essential precondition for the effective protection and preservation of personal identity.

5. Concluding Thoughts

As Ienca and Andorno have rightly pointed out, the human rights protection of personal identity and, more specifically, psychological continuity, gains increasing significance in the in the age of emerging neurotechnologies, which enable others to enter our minds and change our personal mental faculties. In this submission, I have argued that the ECHR offers robust protection to the notion of psychological continuity. This protection is covered, or is at least able to be covered, by the rights to personal identity, self-determination, and the right to psychological and physical integrity. As such, recognising a right to psychological continuity would be repetitive of existing human rights. From a European perspective, there is, therefore, no need to develop a new human right to psychological continuity.¹⁵⁹ Regarding pending reviews of other human rights instruments in view of emerging neurotechnology, like the current project of the Human Rights Council Advisory Committee, it is highly advisable to examine, first, the protective scope of, at least, the right to identity and the right to personal integrity, before recognising a novel human right for the protection of psychological continuity.

Meanwhile, much of the central notions and concepts that are relevant to the protection of psychological continuity, are still underdeveloped and ill-defined in case law and legal scholarship. For example, the ECtHR refers to the right to psychological, mental, and moral integrity, without clarifying the meaning, scope, and distinctive functions of these, ostensibly, different rights. Likewise, it develops and applies, on a case-by-case basis, a right to personal identity and personality, referring to the importance of preserving mental stability, though without defining these notions and elucidating a clear conception of what identity and personality require and consist of. To address the legitimate concerns about the sustainability of human rights in view of emerging neurotechnology, it is much needed to provide more conceptual clarity about the existing legal concepts relevant to the legal protection of the human mind, and how these concepts (should) relate to each other.¹⁶⁰

Indeed, these issues may well be become clearer as soon as regional human rights courts or UN treaty bodies have to decide on individual complaints about unwanted intrusions with a person's mental faculties and identity, for example, induced by neurotechnology. Meanwhile, one could question whether we should leave this kind of conceptual clarification entirely to this kind of casuistic decisions and jurisprudence. Human rights protection of the mind is a relatively new and complex area of legal thinking. It is deeply intertwined with moral philosophical ideas

¹⁵⁹ Cf. Tiedemann, *supra* n 30, at 28; Bublitz, *supra* n 7; Michalowski, *supra* n 7, at 407, 409.

¹⁶⁰ Cf. Ligthart, *supra* n 18.

on rights, freedoms, and the mind. It also relates to metaphysical issues, such as free will and ontological dualism between body and mind. These are not normally the primary concerns of regional human rights courts, neither is the clarification of an in-depth theoretical, conceptual understanding of (emerging) rights and freedoms. Rather, these courts pursue to solve individual human rights disputes on a case-by-case basis, by examining complains about alleged rights violations in specific situations.¹⁶¹

In this light, it seems desirable, too, to anticipate and discuss the development of a legal doctrinal approach on the human rights protection of the mind, outside of the courtroom, which can, in turn, inform the jurisprudence of human right courts. Given the complexity and interdisciplinary nature of this topic, close collaboration between lawyers, philosophers, and neuroscientists is likely to be most beneficial. In fact, some very important groundwork has already been done in this regard.¹⁶² In view of the running project of the Human Rights Council Advisory Committee, it is much needed to continue and intensify this discussion, clarifying the meaning, scope, and potential implications of human rights that are relevant to protect our inner mental spheres – including the right to personal identity, self-determination, and the right to personal integrity. Among other things, this could be achieved pro-actively and in a general way by UN treaty-based bodies issuing general comments on this matter or by way of a resolution of the UN Human Rights Council.

¹⁶¹ Occasionally, the Court does, however, provide some ‘general principles’ that aim to clarify its interpretation on a certain issue. See on this: Gerards, *General Principles of the European Convention on Human Rights* (2019), at 31 et seq.

¹⁶² Ienca and Andorno, *supra* n 1; Farahany, *supra* n 1; Blitz and Bublitz (eds.), *The Law and Ethics of Freedom of Thought Vol. 1: Neuroscience, Autonomy, and Individual Rights* (2021); Blitz and Bublitz (eds.), *The Law and Ethics of Freedom of Thought Vol. 2: Cognitive Liberty and Privacy* (forthcoming). See also Lighthart et al., *supra* n 1.