3

The Right to Personal Integrity

Protecting Bodies and Minds

3.1 INTRODUCTION

For a long time, criminal justice typically operated through the human body.[1] Historically, the intentional infliction of severe physical harm, such as through quartering and the rack, has been central to both criminal investigation and punishment. This centrality of the human body in criminal justice arguably changed with the rise of carceral punishment and, as of the mid 1900s, with the emergence of human rights protection to the integrity of persons. Yet, it is still the case that nowadays the use of physical force by state officials makes many appearances in modern criminal justice, ranging from handcuffing, taking bodily material for DNA analysis and using pepper spray on arrest, to physical force strip searches in prison and mechanical restraint in forensic hospitals.[2] Moreover, capital punishment, as the supreme corporal sanction,[3] is permitted under international human rights law[4] and still applies in many jurisdictions worldwide.

Given the particularly vulnerable position of the human body when in the hands of the powerful State, it is not surprising that human rights offer strong and robust protection to the integrity of the body, such as through the absolute prohibition of torture, inhuman and degrading treatment and the right to security of person. These rights play a central role in delimiting permissible state interference with the body, including within prison settings. In fact, a considerable portion of the violations of human rights over the body arise from the criminal justice context, such as through the forced feeding of prisoners, beating up defendants and employing medical interventions to obtain physical evidence of a crime.[5]

Apart from the body, modern criminal justice systems also operate through the human mind. As Foucault argued, disciplinary mechanisms of imprisonment have shifted focus from the body to the "soul", transforming punishment into an

[1] Foucault 1975.
[2] See, e.g., Guide on Article 3 of the European Convention on Human Rights, 31 August 2024.
[3] Nowak & Schabas 2019, p. 196.
[4] See, e.g., Article 6 ICCPR. See, in contrast, Protocol No. 6. to the ECHR.
[5] See, for example, Taylor 2020, Ch. 7; Harris et al. 2023, Ch. 6.

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instrument of control over the convicted person's mind and, ultimately, their behaviour.[6] As briefly touched upon in the previous chapter, according to some theories of criminal punishment, its very aim is to reform convicted persons, for example, by improving their moral character and setting their minds free to realise the immorality of their behaviour.[7] In addition, imprisonment is notoriously known for its adverse psychological side effects. Furthermore, next to punishment, modern criminal justice systems employ a variety of preventive measures aiming to reduce the risk of future harm, by interfering with the convicted person's mental states and capacities.[8] These measures range from rehabilitation programmes and cognitive behavioural therapy to antilibidinal medication as a mandatory condition for parole and coercive psychiatric interventions, including the administration of neuropharmaceuticals. In the future, this may also include some forms of brain stimulation, such as transcranial direct current stimulation (tDCS) or transcranial magnetic stimulation (TMS).

Although human rights protect the integrity of the mind next to the body, *mental* changes induced through the criminal justice system via (proportionate) punishment or preventive measures are seldom conceived of as infringing or violating human rights that pertain to the mind. This may, in part, be explained by the lack of clarity and controversy surrounding the question of how human rights regulate – or should regulate – interferences with people's inner mental processes, feelings and emotions.[9] For example, the contours of a right to mental integrity are still relatively underdeveloped and, therefore, less clear compared to the right to bodily integrity, which may hamper its application in concrete cases and policy-making. However, this may soon change. With the emergence of brain-stimulating technologies that aim to influence mental processes, scholars are increasingly endeavouring to define the meaning, scope and permissible limitations of the right to mental integrity.

In this chapter, we investigate the relevance and implications of the right to personal integrity – that is, the right to bodily and mental integrity – for the neurorehabilitation of convicted persons. How could neurotechnological brain stimulation in this context infringe these rights? And could such infringements be permissible in some instances? Regarding the right to bodily integrity, we closely stick to the interpretation of the right as follows from human rights law, particularly the International Covenant on Civil and Political Rights (ICCPR) and the European Convention on Human Rights (ECHR). Under both treaties, a right to bodily integrity is clearly defined and developed. For our analysis of the right to mental integrity, we also rely on the philosophical literature aiming to define a moral right to mental integrity and explore some possible understandings of the

[6] Foucault 1975.
[7] Ellis 2012, p. 74; Ewing 2013, p. 83.
[8] Ashworth & Zedner 2014.
[9] For debate, see Bublitz & Merkel 2014; Ienca & Andorno 2017; Ligthart et al. 2023a; Istace 2024.

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right in human rights law, using insights from this literature. Along the way, we consider the implications of the right to bodily and mental integrity for the neurorehabilitation of convicted persons.

We proceed as follows. In section 3.2, we discuss the right to personal integrity's legal foundations and consider its meaning, scope and permissible limitations under established human rights law – also in relation to neurorehabilitation in criminal justice. In section 3.3, we explore possible constructions of the human right to mental integrity and consider the possibility of brain stimulation of convicted persons in that regard. Section 3.4 draws conclusions.

3.2 HUMAN RIGHTS PROTECTION OF PERSONAL INTEGRITY

The protection of personal integrity makes many appearances in human rights law. For example, a "right to integrity of the person" is laid down in Article 3 of the European Charter of Fundamental Rights, prescribing that "Everyone has the right to respect for his or her physical and mental integrity." Likewise, Article 5(1) of the American Convention on Human Rights states that "Every person has the right to have his physical, mental, and moral integrity respected." A similar right to the protection of the integrity of the person follows from Article 17 of the Convention on the Rights of Persons with Disabilities, stating that "Every person with disabilities has a right to respect for his or her physical and mental integrity on an equal basis with others."

Neither the ICCPR nor the ECHR explicitly recognises a right to personal (i.e., bodily and mental) integrity. Meanwhile, implicitly, they offer robust protection to the integrity of both the human body and mind, via other rights. We consider the protection provided by, respectively, (1) the right to security of person, (2) privacy rights, (3) the prohibition of torture, inhuman and degrading treatment, and (4) the right to freedom of thought and opinion.

3.2.1 *The Right to Security of Person*

Looking first to the right to personal security pursuant to Article 9 ICCPR, it is clear that both bodily and mental integrity are protected. According to General Comment No. 35, this right "concerns freedom from injury to the body and the mind, or bodily and mental integrity".[10] It protects individuals "against intentional infliction of bodily or mental injury" but also against "foreseeable threats" to the same.[11] Physical and mental integrity in this context are understood quite narrowly: infringements require at least some kind of physical or mental *injury*, which we can

[10] CCPR General Comment No. 35, par. 3.

[11] CCPR General Comment No. 35, pars. 3, 9. Primarily by private persons. States should take appropriate measures to ensure the security of person: Nowak & Schabas 2019, pp. 24–242.

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understand as physical or mental *harm* or *damage*.[12] 'Injury' under Article 9 ICCPR is understood as denoting only harms or damage that pass a certain level of severity. The above mentioned General Comment stipulates that "the right to security of person does not address *all* risks to physical or mental health".[13] This Comment also specifically refers to *violent behaviours* when discussing security of the person.[14]

A wide range of actions can, however, still pass this threshold of severity. Think of a gunshot wound, a death threat or an assassination attempt.[15] Deep brain stimulation (DBS) also plausibly causes physical injury in the sense required for Article 9 ICCPR, in that it requires surgery for the implantation of electrodes in a person's brain – which involves making a small hole in the skull and placing a neurostimulator under the collarbone. Consequently, if performed in the absence of valid consent, this physical injury caused by DBS *could* infringe Article 9 ICCPR. Whether DBS also inflicts *mental* harm or injury is less clear. This probably depends on the precise stimulation and its accompanied (side) effects. But insofar as the placement of electrodes in a person's brain is non-consensual, it seems plausible that undergoing such a procedure could in and of itself be mentally distressing in a way that infringes Article 9 ICCPR, on at least some occasions.[16]

Non-invasive interventions such as tDCS and TMS, on the other hand, seem less likely to infringe the right to security of the person by causing physical or mental injury, though infringements are not impossible. The direct physical side effects of these interventions are minor, such as causing itchiness and a tingling sensation.[17] The intended mental effects, meanwhile, may be substantial, such as reducing depression, aggressiveness or increasing emphatic abilities. However, in our view, such mental effects can hardly be considered mental *injury* of the kind protected under Article 9 ICCPR. We say this because the abovementioned mental effects are not obviously antithetical to mental/psychological health or well-being, or detrimental to a person's mental or cognitive capacities – features that we might expect to be required for something to constitute a mental *injury*. That said, we cannot rule out the possibility of mental injury even with these non-invasive approaches. If delivered non-consensually, these interventions may cause mental distress in at

[12] Note that this right applies regardless of whether the person is detained or not, despite the reference to arrest and detention within Article 9 (CCPR General Comment No. 35, par. 9). As the Human Rights Committee has stressed, "[a]n interpretation of article 9 which would allow a State party to ignore threats to the personal security of non-detained persons within its jurisdiction would render totally ineffective the guarantees of the Covenant": *Páez/Colombia*, No. 195/1985, CCPR/C/39/D/195/1985 (1990).

[13] CCPR General Comment No. 35, par. 9.

[14] CCPR General Comment No. 35, par. 9.

[15] *Leehong/Jamaica*, No. 613/1995, CCPR/C/66/D/613/1995 (12 August 1999); Nowak & Schabas 2019, p. 242 with further references. Note that the right is broader than the right to life, as it also addresses injuries that are not life-threatening, such as the use of excessive force by law enforcement officials: Taylor 2020, p. 247.

[16] And perhaps also qualify as inhuman or degrading treatment (see section 3.2.3).

[17] Knehans 2022.

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least some circumstances, particularly if the recipient failed to identify with the mental changes these techniques brought about.[18] There is also the possibility of unforeseen, harmful side effects with tDCS and TMS, as with DBS.

3.2.2 *Privacy Rights*

The scope of the protection of personal integrity by the right to privacy (Article 17 ICCPR) and the right to respect for private life (Article 8 ECHR) is arguably broader, in that these rights also seem to protect against actions that can be expected to induce smaller physical or mental changes, without the necessary requirement of causing physical or mental injury.[19] Regarding Article 17 ICCPR, Nowak/Schabas write that the right to privacy covers "the protection of personal integrity", which, for example, is at stake in cases of body searches, withdrawal of blood samples, non-consensual medical treatments, national prohibitions of pregnancy termination, intentional trivial insults by executive organs and minor quarrels.[20] Although these interventions could all potentially cause minor physical or mental harm, in most of these examples, severe bodily or mental injury seems unlikely or at least is not foreseeable.[21] Infringements of personal integrity under Article 17 ICCPR thus do not seem to be limited to actions that induce severe bodily or mental injury.

The ECtHR has explicitly stated that the right to respect for private life pursuant to Article 8 ECHR "provides for the protection of physical and mental integrity".[22] For the interpretation of these Article 8 guarantees, the ECtHR considers personal autonomy an "important principle".[23] The right to physical integrity under Article 8 ECHR covers a variety of severe and less severe interferences with the body, ranging from minor non-consensual medical interventions, such as taking saliva with a buccal swab[24] and withdrawing blood samples,[25] to more serious interferences, including forced medication,[26] strip searches[27] and gynaecological examination in prison.[28] The right to mental integrity, also referred to as "psychological" and

[18] Recall our discussion of identity and self-estrangement in the previous chapter.
[19] Cf. Nowak 2006, p. 36.
[20] Nowak & Schabas 2019, p. 469.
[21] To clarify, although some of these examples may sometimes cause mental distress, causing physical or mental injury is not an explicit requirement for the right's application – like in cases of "trivial insults".
[22] ECtHR 11 May 2023, 11148/18 (*Bojar/Poland*), par. 12. See also: ECtHR 12 October 2006, 3178/03 (*Mayeka and Kaniki Mitunga/Belgium*), par. 83.
[23] ECtHR (GC) 5 September 2017, 61496/08 (*Bărbulescu/Romania*), § 70; ECtHR (GC) 15 March 2012, 4149/04 and 41029/04 (*Aksu/Turkey*), § 58.
[24] ECtHR 14 April 2020, 75229/10 (*Dragan Petrović/Serbia*); ECtHR 15 May 2018, 41079/16 (*Caruana/Malta*).
[25] ECtHR 5 January 2006, 32352/02 (*Schmidt/Germany*).
[26] ECtHR 3 July 2012, 34806/04 (*X/Finland*).
[27] ECtHR 26 September 2006, 12350/04 (*Wainwright/UK*).
[28] ECtHR 13 May 2008, 52515/99 (*Juhnke/Turkey*).

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"moral" integrity,[29] is associated with the protection of mental health.[30] But its protective scope is arguably broader,[31] as the right also pertains to bullying at school,[32] well-founded fear for physical abuse,[33] and loss of honour and reputation, for example, by others publishing defamatory statements and erotic pictures of a person in the media.[34]

Still, application of the right to *mental* integrity specifically in court cases is yet relatively scarce. Consequently, much remains unclear about the right's meaning and scope under Article 8 ECHR. For example, it is unsettled whether the infliction of mental harm or distress is required for infringing the right; or whether the right also covers interferences that do not directly harm mental well-being (such as making a person happier through secretly administering antidepressants, or changing their preferences or beliefs through subliminal advertising).

One guiding point is that Article 8 ECHR applies when the effects of an interference on personal integrity are "sufficiently adverse".[35] As De Vries explains, "Article 8 only applies when a person's physical or psychological integrity is adversely affected to a certain degree. Thus, the obligation to wear a seatbelt does not come within the scope of the right to private life."[36] Yet, this jurisprudential criterion is still vague and has not been further developed in case law yet.[37] What does the ECtHR mean by *adverse* effects? Would making people happier, less aggressive or more emphatic qualify as such? And when are the effects of an interference *sufficiently* adverse so as to infringe the right to personal integrity?

Regarding bodily integrity, many interferences seem to meet this 'sufficiently adverse' requirement: "even a minor interference with the physical integrity of an individual must be regarded as an interference with the right to respect for private life under Article 8 if it is carried out against the individual's will".[38] Taking a buccal swab, for instance, infringes the right to bodily integrity under Article 8 ECHR if performed non-consensually, although it "is an act of a very short duration, it usually causes no bodily injury or any physical or mental suffering, and thus is of minor importance".[39] Mandatory x-ray for tuberculosis screening and the obligation of imprisoned persons to provide a urine sample for drug testing also infringe this

[29] These terms are used interchangeably, without any further general definition: De Vries 2018, p. 690.
[30] ECtHR 6 February 2001, 44599/98 (*Bensaid/UK*), par. 47; ECtHR 26 November 2009, 25282/06 (*Dolenec/Croatia*), par. 165; Marshall 2009, p. 184; Ienca & Andorno 2017, p. 18; Istace 2023, p. 329.
[31] De Vries 2018, pp. 690–691; Michalowski 2020.
[32] ECtHR 24 July 2012, 41526/10 (*Đorđević/Croatia*), par. 97–98.
[33] ECtHR 30 November 2010, 2660/03 (*Hajduová/Slovakia*), par. 49.
[34] ECtHR 28 October 2014, 531/06 (*Ion Cârstea/Romania*), par. 38; ECtHR 21 November 2013, 16882/03 (*Putistin/Ukraine*), par. 32.
[35] ECtHR 6 February 2001, 44599/98 (*Bensaid/UK*), par. 46.
[36] De Vries 2018, p. 691, referring to EComHR 13 December 1979, 8707/79 (*X./Belgium*). See also ECtHR 25 March 1993, 13134/87 (*Costello-Roberts/UK*).
[37] Harris et al. 2023, p. 525.
[38] ECtHR 16 June 2005, 61603/00 (*Storck*/Germany), par. 143.
[39] ECtHR 15 May 2018, 41079/16 (*Caruana/Malta*), par. 41.

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right.[40] Furthermore, regarding medical treatment, Harris et al. write that without consent such treatment raises serious issues within the scope of private life, "however slight the intervention".[41] Apparently, "slight" interferences with the body that are "of minor importance" can still qualify as "sufficient" and thus infringe the right to bodily integrity. Perhaps the implicit reasoning behind this is that non-consensual bodily interference, although minor, reduces the person's control over their body, thus interfering with personal autonomy in that regard, which is, as said, an important principle underlying the interpretation of Article 8 ECHR.

Non-consensual brain stimulation thus may infringe the right to *bodily* integrity as protected by the right to privacy and private life, even if the physical effects of the intervention are minor (as they would likely be in the case of tDCS or TMS).[42] We say "may infringe" because clearly not all bodily interferences of minor significance infringe this right. We often cause non-consensual yet minor effects in other people's bodies that cannot plausibly be held to infringe the right to bodily integrity – for instance, tapping someone on the shoulder, raising the room temperature significantly[43] or telling a disgusting story that causes one to wretch or vomit.[44] Yet, given that the case law pertaining to the right to bodily integrity under Article 8 ECHR and Article 17 ICCPR indicates that (very) minor bodily interferences performed non-consensually (e.g., mandatory x-ray and the obligation to provide urine samples) *can* infringe the right, it is not too far of a stretch to expect human rights courts to find non-invasive, non-consensual brain stimulation to infringe the right to bodily integrity too. DBS would certainly be judged to infringe this right, given that, as said, the physical interference involved in DBS is significant.

Still, that the right to bodily integrity is *infringed* need not imply that the right is *violated*. Recall that the right to privacy (Article 17 ICCPR) and the right to respect for private life (Article 8 ECHR) are qualified rights. Infringements can be justified when, generally speaking,[45] they have an accessible and foreseeable legal basis, pursue a legitimate purpose – such as preventing crime and disorder – and are proportionate in relation to that purpose.[46] The slightness of a bodily interference through non-invasive brain stimulation is legally significant here, particularly with regard to the requirement of proportionality.

In general, the more severe an infringement of a human right, the more substantial the reasons must be to justify such an infringement.[47] Conversely, less intrusive

[40] EComHR 10 December 1984, 10435/83 (*Acmanne and others/Belgium*); EComHR 6 April 1994, 21132/93 (*Peters/The Netherlands*).
[41] Harris et al. 2023, p. 528. See also De Vries 2018, p. 693.
[42] Note that TMS, unlike tDCS, does not even require physical touching, operating via a magnetic field placed close to the head.
[43] Bublitz 2024, p. 786, footnote 31.
[44] Douglas & Forsberg 2021, p. 186.
[45] Indeed, this is very general and rather simplified.
[46] Lavrysen 2018; Nowak & Schabas 2019, p. 465.
[47] Christoffersen 2009, p. 208; Gerards 2023, p. 355.

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interferences require less weighty reasons for their justification. Minor bodily interference caused by non-invasive brain stimulation thus can plausibly be held proportionate for the prevention of serious criminal offences – including abuse, murder and rape – *even if* they infringe the qualified right to bodily integrity. Many criminal justice practices that interfere with the body (e.g., handcuffing and strip searches) are not typically conceived of as violating the right to bodily integrity as they aim to prevent harm to others and can therefore be justified.[48] Sometimes even more severe bodily effects are considered proportionate to prevent harm, at least in some jurisdictions (for instance, the oft-severe physical effects and side effects of antilibidinal medication), though this is controversial.[49] Moreover, although the Human Rights Committee was "concerned at the lack of clarity on the frequency and circumstances surrounding the use of coercive electroconvulsive treatment" in Norwegian mental health-care institutions, it did not rule out the permissible use of these coercive interventions, concluding that Norway "should increase procedural safeguards for patients and stipulate in law the circumstances allowing for the limited use of coercive electroconvulsive treatment".[50]

Does this mean that the right to personal integrity under Articles 17 ICCPR and 8 ECHR only offers *weak* protection against non-invasive brain stimulation? Not necessarily. While the *bodily* interference might be of minor gravity, the *mental* interference may – at least in some instances – be much more severe.[51] As Bublitz stresses, what really matters are the *mental effects* of brain stimulation, encompassed by the right to mental integrity.[52] Likewise, according to Craig, "there are strong reasons to believe that the most compelling arguments against non-consensual [direct brain interventions] do not rest on the right to bodily integrity, but on the more fundamental right to 'mental integrity'".[53]

As said, the right to mental integrity as covered by the abovementioned privacy rights is relatively underdeveloped. We therefore do not yet have the legal resources to assess whether the right to mental integrity might afford persons greater protection against non-consensual brain stimulation than that which is afforded by the right to

[48] Provided that they have an accessible and foreseeable basis in the law.

[49] As earlier indicated, in some jurisdictions, antilibidinal interventions can be administered as a mandatory condition of parole or probation, where the validity of consent is open to debate; see Sifferd 2020; Forsberg 2021; Shaw 2022, pp. 1414–1416, for discussion. Traditional forms of punishment, such as incarceration, also sometimes appear to give rise to non-consensual alterations of neural processes in the brain, and these alterations are not typically thought to violate the right to bodily integrity.

[50] Concluding Observations, Norway, CCPR/C/NOR/CO/7, pars. 22–23. Cf. Concluding Observations, Latvia, CCPR/C/LVA/CO/3, par. 16; Concluding Observations, USA, CCPR/C/USA/CO/4, par. 18.

[51] Also, how significant the interference is may depend on how one measures "significance" in this regard. For example, Tesink et al. 2023 have argued that the mental and behavioural effects of neurointerventions could in some cases be relevant to determining the severity of infringements of the right to bodily integrity.

[52] Bublitz 2024, pp. 785–786. See also Mendlow 2018, p. 2368; Ryberg 2020, p. 83; Shaw 2022.

[53] Craig 2016, p. 111.

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bodily integrity, under Articles 17 ICCPR and 8 ECHR. Nonetheless, if the scope of the right to mental integrity turns out to be *analogous* to the scope of the right to bodily integrity under these provisions – that is, as a right against sufficiently adverse effects on the mind – neurointerventions that alter mental states or processes may be considered to regularly infringe the right to mental integrity.[54] We delve deeper into this issue in section 3.3, discussing three different approaches to further construct the protective scope of the right to mental integrity, and consider some of their implications for the right's permissible limitations.

3.2.3 *The Prohibition of Torture, Inhuman, and Degrading Treatment*

On top of the qualified protection offered by the right to personal integrity pursuant to Articles 17 ICCPR and 8 ECHR, some severe interferences with physical and mental integrity could also breach the *absolute* and non-derrogable prohibition of torture, inhuman and degrading treatment and punishment. Nowak/Schabas equate the prohibition of torture of Article 7 ICCPR with "the right to physical and spiritual integrity".[55] In the General Comment on Article 7 ICCPR, the Human Rights Committee clarifies that the aim of this provision "is to protect both the dignity and the physical and mental integrity of the individual" and that it "relates not only to acts that cause physical pain but also to acts that cause mental suffering".[56] The ICCPR does not provide a clear definition of the concepts covered by Article 7 ICCPR, "nor does the [Human Rights] Committee consider it necessary to draw up a list of prohibited acts or to establish sharp distinctions between the different kinds of punishment or treatment".[57] In general, the distinction between torture, cruel, inhuman and degrading treatment and punishment depends on the nature, purpose and severity of the treatment inflicted.[58] The assessment of what constitutes inhuman or degrading treatment as prohibited by Article 7 ICCPR "depends on all the circumstances of the case, such as the duration and manner of the treatment, its physical or mental effects as well as the sex, age and state of health of the victim".[59]

The same applies *mutatis mutandis* to the prohibition of torture, inhuman and degrading treatment of Article 3 ECHR, which prohibits, in absolute terms, serious interferences with bodily and mental integrity,[60] ranging from the intentional

[54] Bublitz 2024, p. 788. See Advisory Committee, UNHRC, Impact, opportunities and challenges of neurotechnology with regard to the promotion and protection of all human rights, A/HRC/AC/31/CRP.1 (8 August 2024), par. 27: "Neurotechnologies can lead to violations of the right to personal integrity (…) when endangering individuals' autonomous control over their body and mind."

[55] Nowak & Schabas 2019, p. 170. Cf. Taylor 2020, p. 199.

[56] CCPR General Comment No. 20, par. 2 and 5.

[57] CCPR General Comment No. 20, pars. 2–5.

[58] CCPR General Comment No. 20, pars. 2–5.

[59] *Vuolanne/Finland*, No. 265/1987, CCPR/C/35/D/265/1987 (8 July 1987), par. 9.2.

[60] For the use of these terms, see, e.g., ECtHR (GC) 11 July 2006, 54810/00 (*Jalloh/Germany*), par. 82. See also ECtHR (GC) 2 February 2021, 22457/16 (*X and Others/Bulgaria*), par. 179.

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infliction of severe physical and mental suffering (i.e., torture) to treatment that arouses feelings of fear, anguish and inferiority, capable of humiliating and debasing the person (i.e., degrading treatment).[61] To infringe – and therefore violate – Article 3 ECHR, treatment or punishment must attain a "minimum level of severity".[62] Whereas the prohibition of ill-treatment is itself absolute, this severity threshold is relative. It depends on all the circumstances of the individual case, including the nature and context of the treatment, the manner and method of its execution, its duration, its purpose, its physical or mental effects and, sometimes, the sex, age and state of health of the victim and their vulnerable status.[63]

No doubt the surgical implantation of electrodes in a person's brain to control some of their brain processes will, without valid consent, qualify as inhuman or degrading treatment (and perhaps even torture). Such practices are likely prohibited across the board by Articles 7 ICCPR and 3 ECHR. Meanwhile, regarding *non-invasive* neurointerventions, including tDCS and TMS, the relevance of the absolute prohibition of ill-treatment is plausibly far more limited.[64] After all – provided that these interventions are safe and effective – their application should not typically cause bodily injury, physical pain or mental suffering. Rather, they are of short duration and may influence mental features, such as empathic abilities, through minor and painless bodily alterations (an effect that future technologies may have). These 'subtle' interferences with the body and mind are, in and of themselves, unlikely to attain the severity threshold of the prohibition of ill-treatment.[65] They are plausibly not severe enough to elicit the absolute protection of physical and mental integrity from Articles 7 ICCPR and 3 ECHR.

However, next to physical and mental integrity, the prohibition of ill-treatment also aims to protect human dignity. Regarding Article 3 ECHR, Harris et al. observe that for "degrading treatment" the emphasis is on humiliation and debasement, rather than on physical and mental suffering.[66] According to the ECtHR there is a strong link between respect for human dignity and the concept of "degrading" treatment.[67] The latter being defined sometimes as treatment that "humiliates or debases an individual, showing a lack of respect for, or diminishing, his or her

[61] Harris et al. 2023, pp. 247–264.

[62] ECtHR (GC) 1 June 2010, 22978/05 (*Gäfgen/Germany*), par. 101; ECtHR (GC) 26 October 2000, 30210/96 (*Kudła/Poland*), par. 91.

[63] Harris et al. 2023, p. 243; ECtHR (GC) 1 June 2010, 22978/05 (*Gäfgen/Germany*), par. 88.

[64] For a more nuanced analysis, see Van de Pol 2023, highlighting, among other things, that "If a medical necessity exists, the treatment will most likely fail to reach the minimum level of severity, even when the person involved did not consent to the treatment" (p. 469).

[65] Cf. Vermeulen & Battjes 2018, p. 400, considering some examples of "unpleasant or even harsh" treatments that did not amount to inhuman or degrading treatment. Cf. also Duffy 1983, p. 319, stating that although views and reactions of the victim are important considerations, States should not be liable for actions that a victim finds degrading "merely because of his own unreasonable attitudes or exceptionally sensitive nature".

[66] Harris et al. 2023, p. 264.

[67] ECtHR (GC) 28 September 2015, 23380/09 (*Bouyid/Belgium*), par. 90.

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human dignity, or when it arouses feelings of fear, anguish or inferiority capable of breaking an individual's moral and physical resistance".[68] At the international level, the protection of human dignity by Article 7 ICCPR[69] is complemented by the right of detainees to be treated with humanity and dignity pursuant to Article 10 ICCPR.[70] In human rights law, human dignity features different understandings, including "inherent dignity" – that is, the worth of every person by virtue of being a human.[71] One core aspect of human dignity is the care for and protection of human beings as subjects and as specific individuals with personality.[72]

Subjecting a convicted person to brain stimulation in order to change their behaviour by modifying their neural and mental functioning could be argued to reduce the person to an object rather than a subject, which disrespects human dignity and could therefore violate the legal norms laid down in Articles 7, 10 ICCPR and 3 ECHR.[73] The ECtHR, in *Tyrer/UK* – a case about the infliction of corporal punishment by the police – considered that treating a person as an object could indeed interfere with human dignity, stating that

> although the applicant [in this case] did not suffer any severe or long-lasting physical effects, his punishment – *whereby he was treated as an object in the power of the authorities* – constituted an assault on precisely that which it is one of the main purposes of [Article 3 ECHR] to protect, namely a person's dignity and physical integrity.[74]

One way of objectifying persons, Bublitz argues, is by reducing them to their corporal existence, to their bodies, such as through "reductive forms of neuroscience which seek to explain and address mental aspects exclusively at the level of the brain".[75]

If we follow this line of thought, the use of non-consensual brain stimulation to induce behavioural change in convicted persons can at least in some situations raise concerns about human dignity. For example, this could be the case when forensic behavioural interventions would *exclusively* operate through modifying a convicted person's brain, purely treating the person as a means, rather than as an end in themselves.[76] Meanwhile, concerns about objectification and disrespecting

[68] ECtHR (GC) 17 July 2014, 32541/08 and 43441/08 (*Svinarenko and Slyadnev/Russia*), par. 115.
[69] CCPR General Comment No. 20, par. 2.
[70] Taylor 2020, p. 174. To infringe Article 10, a minimum level of severity is also required: *Brough/Australia*, No. 1184/2003, CCPR/C/86/D/1184/2003 (2006), par. 9.2.
[71] Le Moli 2021.
[72] Bublitz 2024, pp. 793–795. Meanwhile, the meaning and scope of inherent dignity protection have not comprehensively been specified, and it is often criticized for being (too) vague and abstract.
[73] Cf. Bublitz & Merkel 2014, p. 73; Kirchmair 2019.
[74] ECtHR 25 April 1978, 5856/72 (*Tyrer/UK*), par. 33 (emphasis added). See also ECtHR (GC) 28 September 2015, 23380/09 (*Bouyid/Belgium*), par. 90.
[75] Bublitz 2024, p. 794. See also Bublitz & Merkel 2014, p. 73.
[76] We doubt whether neurointerventions would ever acquire such a unique and absolute position within rehabilitation practice though.

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human dignity may diminish when the use of neurointerventions complements – or is complemented by – rehabilitation programmes that respect subjectivity.[77]

Often, rehabilitation programmes in criminal justice entail a wide spectrum of services and activities that engage with the convicted person.[78] These include education, work training, therapy and probation on a variety of conditions, ranging from substance abuse counselling to pharmacological interventions for reducing sexual drive. Embedding non-invasive brain stimulation as a complementary element in such larger and diverse rehabilitation programmes would likely negate or at least diminish concerns about objectification and human dignity.

Interestingly, for a treatment or punishment to violate Article 3 ECHR, the ECtHR holds that the suffering and humiliation involved "must in any event go beyond that inevitable element of suffering or humiliation connected with a given form of legitimate treatment or punishment",[79] such as imprisonment or, in this context, existing accepted pharmacotherapeutic practices. Regarding present forms of non-invasive brain stimulation, such as tDCS and TMS, we do not see a clear and compelling reason why the suffering or humiliation involved would exceed the level of suffering and humiliation entailed by accepted pharmacological interventions – provided that they are incorporated within a broader rehabilitation programme.

3.2.4 *The Right to Freedom of Thought and Freedom of Opinion*

Finally, depending on its conceptualisation, *mental* integrity could also be implicitly protected by the right to freedom of thought and, to some extent, by the right to freedom of opinion. Under Articles 18 ICCPR and 9 ECHR, the right to freedom of thought is generally considered an absolute right.[80] Infringements are never permissible. The same applies to the right to freedom of opinion in the meaning of Article 19 ICCPR.[81] Whether the freedom to hold opinions under Article 10 ECHR is also absolute is less clear. Whereas the text of Article 10 ECHR suggests qualified protection, it has been argued that the freedom of opinion in this provision "enjoys an almost absolute protection in the sense that the possible restrictions set forth in paragraph 2 are inapplicable".[82]

The right to *freedom of thought* is typically taken to protect against the "impermissible alteration" of thought, thereby protecting some aspects of persons' "mental autonomy".[83] According to the Council of Europe's *Human rights handbooks*, the internal dimension of Article 9 ECHR seeks at its most basic level "to prevent state

77 Cf. Bublitz 2024, pp. 794–795 and footnote 86.
78 McNeil 2012; Ugwudike et al. 2020; Coppola & Martufi 2024.
79 ECtHR (GC) 26 October 2000, 30210/96 (*Kudła/Poland*), par. 92.
80 CCPR General Comment No. 22, par. 3; Vermeulen & Roosmalen 2018, p. 738. But the absolute nature of the right has recently been challenged: Ligthart 2025c.
81 CCPR General Comment No. 34, pars. 5 and 9.
82 Bychawska-Siniarska 2017, p. 13. See also Van Rijn 2018, p. 811.
83 UN Special Rapporteur on the Freedom of religion or belief, 5 October 2021, A/76/380, par. 28.

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indoctrination of individuals by permitting the holding, development, and refinement and ultimately change of personal thought, conscience and religion".[84] Vermeulen and Roosmalen write that the internal dimension of Article 9 ECHR guarantees that States may never interfere with the most intimate and inner sphere of their citizens. They are not allowed to dictate what people should believe, nor may they use coercion to make individuals change their beliefs, such as through "brainwashing".[85] As examples of possible infringements of the right to freedom of thought pursuant to Article 18 ICCPR, the Special Rapporteur on Freedom of Religion or Belief has considered, among other things, psychological torture, re-education of political prisoners, involuntary treatment for mental disorders, non-consensual conversion practices and – interestingly for our present purposes – neurotechnological interventions that alter mental states.[86]

An essential element of the right to *freedom of opinion* is the freedom to form and develop opinions by way of reasoning.[87] It protects the holding of an opinion without interference,[88] which requires among other things freedom from coercion in the development of beliefs, ideologies, reactions and positions.[89] The Special Rapporteur on Freedom of Opinion and Expression writes that violations of Article 19(1) ICCPR could consist in "forced 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".[90]

According to Bublitz, taken together, the essence of the rights to freedom of thought and opinion "lies in the protection of the most important mental states, processes, and abilities, i.e. in mental actions such as thinking, reasoning, decision-making, imagining, or remembering, as well as forming and revising of beliefs, opinions, attitudes, and related mental states and processes".[91] Regarding both Articles 18 and 19 ICCPR, Nowak/Schabas consider that they require "[s]tate parties to refrain from interfering with an individual's spiritual and moral existence – whether this be through indoctrination, 'brainwashing', influencing of the conscious or subconscious mind with psychoactive drugs or other means or manipulation".[92]

[84] Murdoch 2012, p. 18.
[85] Vermeulen & Roosmalen 2018, p. 738.
[86] UN Special Rapporteur on the Freedom of religion or belief, 5 October 2021, A/76/380.
[87] UN Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, 29 August 2018, A/73/348, par. 23.
[88] CCPR General Comment No. 34: Article 19, par. 9.
[89] *Yong Joo-Kang/Republic of Korea*, CCPR/C/78/D/878/1999, 16 July 2003. CCPR General Comment No. 34, par. 9.
[90] UN Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, 29 August 2018, A/73/348, par. 23.
[91] Bublitz 2024, p. 792.
[92] Nowak & Schabas 2019, pp. 503, 546. In this context, Nowak & Schabas highlight the difficulty of delineating between impermissible interferences and permissible means of influence to which we are regularly exposed in daily life, such as by the media, advertising and propaganda. We come back to this in section 3.3.

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In the literature on the human rights implications of neurotechnology, the main focus is on the freedom of thought (rather than the freedom of opinion). Non-consensually modifying mental states and processes through neurointerventions in criminal justice has been argued in the scholarly literature to infringe the absolute right to freedom of thought such that it should be "prohibited across the board".[93] The plausibility of this claim, however, very much depends on how one defines the scope of the right,[94] which partly depends, in turn, on how one interprets "thought" in this context – a question that is currently under debate.[95] Roughly, three interpretations can be distinguished.[96]

First, according to what we could call the "narrow view", "thought" under Article 18 ICCPR and Article 9 ECHR is confined to thoughts originating from religion.[97] This narrow understanding does not receive much (if any) support in recent scholarly literature – even if, in past practice, Article 18 ICCPR "had been generally interpreted as safeguarding only the freedom of religion and the freedom of thought and belief associated with religion".[98]

A second position, referred to as the "moderate view",[99] holds that "thought" denotes especially significant thoughts, with great personal importance.[100] On this view, the right to freedom of thought offers absolute protection not to just *any* thought, opinion, idea or other mental state. Rather, it protects those thoughts that have a major impact on a person's way of living, including political, cultural, philosophical and scientific thought, and, arguably, a person's deepest wishes and sexual desires.

According to a third position, referred to as the "robust-scope view", thought means *any* mental state with content as well as thinking as a mental process.[101] On this view, all thoughts and thinking are protected, including political thoughts, a person's thought to have a cup of coffee, and their thoughts about what colour socks to wear.[102]

On the first two positions, brain stimulation for the rehabilitation of convicted persons is unlikely to infringe the right to freedom of thought in most cases, as these interventions do not typically interfere with a person's religious adherence nor with significant personal conceptions such as their political or philosophical views. There may be an infringement of the right to freedom of thought on the moderate view,

93 Bublitz 2014, 2018, p. 301.
94 Cf. Advisory Committee, UNHRC, Impact, opportunities and challenges of neurotechnology with regard to the promotion and protection of all human rights, A/HRC/AC/31/CRP.1 (8 August 2024), par. 22.
95 See for example Bublitz 2025 and Ligthart 2025b.
96 Cf. Bublitz 2025, who considers six possible understandings.
97 De Jong 2000, p. 22.
98 CCPR/C/SR.1162, par. 43. Cf. EComHR 23 March 1993, 19459/92 (*F.P./Germany*).
99 Ligthart 2025a.
100 Partsch 1981, pp. 213–214; Istace 2024, p. 28; Ligthart 2022, 2025a, 2025b; De Jong 2000, pp. 23–33.
101 Bublitz 2025.
102 Alegre 2017, 2022; McCarthy-Jones 2019; O'Callaghan et al. 2024; Bublitz 2025; Hertz 2025.

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however, if an intervention interferes with, for example, sexual desires – insofar and to the extent that a person's sexual desires are of great personal importance to them.

On the robust-scope view, neurointerventions may more regularly infringe the right, given that this view sees all thoughts as coming under the scope of freedom of thought. So, brain stimulation to change a person's antisocial attitude towards criminality, for example, would constitute an infringement on this view.[103]

Note, however, that also on this view, interference with mental phenomena that are not considered "thoughts" in ordinary language will not reasonably infringe the right.[104] One could think of *feelings*, *tendencies*, *behavioural control*, *risk taking*, *empathic abilities* and *emotional responses* – typical targets for the rehabilitation of convicted persons. The general rule of interpretation of Article 31(1) of the Vienna Convention seems to oppose the qualification of such mental phenomena as protected "thoughts", prescribing that "ordinary meaning" should be given to the terms of a treaty in light of its object and purpose. As Bublitz writes when defending the robust-scope view, "[i]n common usage, 'thought' refers to specific mental entities. This meaning must therefore be integrated into the interpretation of Article 18(1) ICCPR".[105] Since mental phenomena such as feelings, behavioural inclinations and emphatic abilities are not normally captured by the common understanding of "thought", interfering with such mental phenomena through neurotechnology will plausibly fall *outside* the scope of the right to freedom of thought.

To substantiate a broad interpretation of "thought", proponents of the robust-scope view often refer to the General Comment on Article 18 ICCPR, highlighting that "[t]he right to freedom of thought (. . .) is far-reaching and profound; it encompasses freedom of thought on all matters".[106] Furthermore, a recent report on the right to freedom of thought by the UN Special Rapporteur on Freedom of Religion and Belief can be interpreted as endorsing a robust understanding of thought.[107]

Whereas the robust-scope view gets arguable support regarding the interpretation of Article 18 ICCPR, it appears to lack support with regard to Article 9 ECHR. Rather, the case law on Article 9 ECHR suggests an interpretation along the lines of the moderate view.[108] For example, in *F.P./Germany*, the EComHR considered that Article 9 ECHR "is essentially destined to protect religions or theories on

[103] Bublitz 2014, 2018.

[104] Bublitz 2025, stating that the robust-scope view may exclude "mental states and processes without intentional objects such as moods or activities such as feeling".

[105] Bublitz 2025, p. 8.

[106] CCPR General Comment No. 22, par. 1. Whether this statement is indeed compelling for supporting the Robust-scope view can be challenged: Ligthart 2025a.

[107] UN Special Rapporteur on the Freedom of religion or belief, 5 October 2021, A/76/380; Ligthart et al. 2022; O'Callaghan et al. 2023.

[108] Ligthart 2022, 2025b.

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philosophical or ideological universal values".[109] Moreover, the ECtHR's Grand Chamber has repeatedly considered that, in general,

> as guaranteed by Article 9 of the Convention, the right to freedom of thought, conscience and religion denotes only those views that *attain a certain level of cogency, seriousness, cohesion and importance*.[110]

This means that Article 9 ECHR does not protect just any thought, opinion or idea.[111] To be protected by this provision, personal or collective views must meet a certain threshold, which supports the moderate view.

One could argue that this threshold only applies to the freedom to *manifest* thought, conscience and religion.[112] However, this is unlikely for at least two reasons.[113] First and foremost, in the above quote the ECtHR clearly refers to Article 9 ECHR, and Article 9 ECHR does not protect *external manifestations* of thought. The manifestation/expression of thought is instead protected by the right to freedom of expression.[114] Hence, referring to "thought" in the meaning of Article 9 ECHR can only pertain to *unexpressed* thought.

Second, the very first sentence of Article 9 ECHR – Everyone has the right to freedom of thought, conscience and religion – is generally taken to comprise *forum internum* protection.[115] This right is "largely exercised inside the individual's heart and mind" and receives absolute protection.[116] The *forum externum* protection is encompassed by the addition that "this right includes freedom (. . .) to manifest his religion or beliefs".[117] Hence, if the ECHR refers to "the right to freedom of thought, conscience and religion", as it does in the quotation above, then this must at least cover *forum internum* protection. If the ECHR's consideration on cogency, seriousness, cohesion and importance would only have applied to the *forum externum*, they would not have referred to the right to "freedom of thought, conscience and religion" but rather to the "freedom to manifest one's religion or beliefs".

The ECtHR, admittedly, has provided little guidance on how to understand and apply the threshold requirements of cogency, seriousness, cohesion and importance.[118] Neither has it applied them in cases concerning the protection of inner "thought", instead

[109] EComHR 23 March 1993, 19459/92 (*F.P./Germany*). See also EComHR 15 December 1983, 10358/83 (*C./UK*), par. 147; EComHR 11 October 1991, 16311/90, 16312/90 and 16313/90 (*Hazar and Açik/Turkey*).

[110] ECtHR (GC) 26 April 2016, 62649/10 (*İzzettin Doğan and others v. Turkey*), par. 68 (emphasis added). See also ECtHR (GC) 1 July 2014, 43835/11 (*S.A.S./France*), par. 55; ECtHR 8 June 2021, 48329/19 (*Ancient Baltic religious association Romuva/Lithuania*), par. 125; ECtHR 9 November 2021, 9476/19 (*De Wilde/the Netherlands*), par. 51; ECtHR 22 November 2022, 20921/21 (*Nikolaus ALM/Austria*), par. 9.

[111] Unlike Article 10 ECHR, which has a very broad scope.

[112] Bublitz 2025; Hertz 2025.

[113] Ligthart 2025b.

[114] Evans 1997, p. 285.

[115] Harris et al. 2023, p. 578.

[116] Godien 2005, p. 95.

[117] Harris et al. 2023, p. 578.

[118] Wolff 2023.

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focusing on the *manifestation* of religion and beliefs. The precise implications of this threshold are thus largely uncertain and we are left to speculate. Nonetheless, some remarks voiced within the United Kingdom's House of Lords on the matter may prove at least somewhat instructive. In the case of *R. (Williamson)* v. *Secretary of State for Education and Employment*, Lord Nicholls observes that, with respect to "seriousness" and "importance", a manifested view or belief that comes under the protective scope of Article 9 ECHR "must be a belief on a fundamental problem".[119] And with respect to "cogency" and "cohesion", Lord Nicholls observes that these requirements relate to "being intelligible and capable of being understood", while also emphasising that "being intelligible" is not the same as being "susceptible to (. . .) rational justification".[120]

These observations arguably only push the problem back, given that we still have to figure out what "a fundamental problem" and "intelligible" mean. But it is plausible that some thoughts, views and beliefs more obviously pertain to fundamental problems – again, philosophical and religious beliefs about how, for example, (one ought) to live one's life or organise society. Everyday thoughts about the kind of socks to wear or whether to grab a cup of coffee, on the other hand, seem far less likely to do so (and hence seem unlikely to be covered by Article 9 ECHR) – notwithstanding that these thoughts relate in some small way to how the relevant individual chooses to live their life.[121]

When it comes to mental phenomena that might be relevant targets for neurorehabilitation, such as certain desires or preferences, their relation to fundamental problems is not entirely clear. One perspective, again voiced by Lord Nicholls, might be that these mental phenomena only pertain to fundamental problems if they "relate to an aspect of human life or behaviour of comparable importance to that normally found with religious beliefs".[122] A similar idea is voiced by Cecile Laborde in her interpretation of the "importance" requirement as being reached when a given thought or belief "actually occupies a pivotal place in [individuals'] lives as they want to live it, and is not simply a peripheral, incidental or occasional commitment".[123] These comments suggest that what is at issue is whether a given view is something its bearer strongly identifies with or holds dear.[124]

Some desires or predilections that are relevant from a rehabilitation perspective – for example, paedophilic or violent sexual desires – may assume as important a role in a person's life as their political or religious beliefs. If these kinds of thoughts or desires sometimes assume such importance, then it may be that, on the

[119] *R. (on the application of Williamson) v Secretary of State for Education and Employment*; UKHL 15 [2005] 2 A.C. 246, par. 23. Cf. EComHR 10 March 1981, 8741/79 (*X/Germany*), p. 138.

[120] *R. (on the application of Williamson) v Secretary of State for Education and Employment*; UKHL 15 [2005] 2 A.C. 246, par. 23. Cf. EComHR 10 March 1981, 8741/79 (*X/Germany*), p. 138.

[121] Which could depend on the precise context: Ligthart & Van de Pol 2025. Cf. Bublitz 2025, p. 13.

[122] *R. (on the application of Williamson)* v. *Secretary of State for Education and Employment*; UKHL 15 [2005] 2 A.C. 246, par. 24.

[123] Laborde 2017, p. 207.

[124] Cf. ECtHR (GC) 8 April 2021, 47621/13 (*Vavřička and Others/the Czech Republic*), pars. 334–335.

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moderate-scope view, some sexual preferences enjoy absolute protection under Article 9 ECHR.

That said, the mental states and processes typically targeted by neurointerventions for purposes of rehabilitation may often fall short of engaging absolute protection form Article 9 ECHR: either because they do not meet its threshold or because they cannot be considered "thoughts" in the first place (e.g., empathic abilities, behavioural control, risk-taking tendency).

3.2.5 *Brief recap*

The integrity of the person consists of two elements: the protection of the human body and mind. Grave interferences that cause severe physical or mental suffering can elicit *absolute* protection from the prohibition of ill-treatment. The same applies to interferences that are humiliating or disrespect human dignity. Regarding the neurorehabilitation of convicted persons, this protection seems especially relevant in relation to invasive forms of brain stimulation, such as DBS. Non-invasive interventions are, by contrast, generally less likely to meet the severity threshold of this absolute prohibition. Still, they could engage absolute protection by infringing the right to freedom of thought. Whether they do, largely depends on how "thought" is defined in the meaning of the right, which is yet unsettled.

The broadest protection against unsolicited bodily and mental interference is offered by the right to privacy and respect for private life, providing *qualified* protection against severe and less severe interferences with physical and mental integrity. Presumably, the right to bodily integrity will not offer strong protection against non-invasive brain stimulation for rehabilitation purposes, as the bodily interference of these interventions will often be minor. Meanwhile, their mental effects could be significant. Hence, non-invasive brain stimulation may well severely infringe the right to mental integrity. Whether they do not only depends on the mental effects of a specific neurointervention, but also on our understanding of the right to mental integrity, in particular its scope and permissible limitations. In the next section, we explore three possible constructions of the right's scope and consider some of their implications for the right's permissible limitations.

3.3 CONSTRUCTING THE RIGHT TO MENTAL INTEGRITY: SCOPE AND PERMISSIBLE LIMITATIONS

3.3.1 *Meaning and Scope*

While the right to mental integrity has received little attention in the law so far,[125] in philosophical literature, constructing the right is an important topic in discussions

[125] Bublitz & Merkel 2014; Michalowski 2020; Ligthart 2025d.

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concerning the regulation of neurotechnologies.[126] Whereas some philosophers are especially interested in the moral underpinnings of a *legal* right to mental integrity,[127] others consider the contours and significance of mental integrity as a *moral* right.[128] We acknowledge that a moral right to mental integrity need not straightforwardly imply nor correspond to its legal counterpart, even though human rights are often considered to reflect moral guarantees. Still, when aiming to construct the meaning and scope of a legal right to mental integrity, the philosophical literature could provide some guidance.[129] In what follows, drawing from both legal and philosophical perspectives, we distinguish three general understandings of a right to mental integrity and consider their suitability for constructing the right within human rights law.[130] Consecutively, we consider the right to mental integrity as (1) a freedom to control mental states and processes, (2) a freedom from direct and harmful mental interference and (3) a freedom from significant mental interference.[131]

3.3.1.1 Freedom to Control Mental States and Processes

A first way of constructing the right to mental integrity holds that every person has the liberty to *control* what happens to their own mind and the neural parameters of mental states and processes – focusing more on how a right to mental integrity might be justified rather than on delineating its scope. For example, 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 read, spread, or alter such states and data in order to condition the individual in any way".[132] In the same vein, Hildt holds that the "right to mental integrity stresses a person's right to *control* their brain states".[133] According to the Advisory Committee of the UN Human Rights Council, "neurotechnologies could violate the right to personal integrity (. . .) when endangering individuals' *autonomous control* over their body and mind".[134]

Such understandings of the right to mental integrity come close to the right to "mental self-determination" defended by Bublitz and Merkel. The principal

[126] Douglas 2024; Ryberg 2020; Shaw 2022; Lavazza & Giorgi 2023; Tesink et al. 2024; Cassinadri 2025.
[127] Douglas & Forsberg 2021; Douglas 2024.
[128] Lavazza 2018; Craig 2016; Zohny et al. 2023; Ratoff 2024.
[129] Cf. Ligthart et al. 2023a.
[130] That is, as part of the qualified right to privacy and respect for private life.
[131] The discussion in the next section draws on Ligthart 2025d.
[132] Lavazza 2018, p. 4 (emphasis added). Cf. Committee on Bioethics, Strategic Action Plan on Human Rights and Technologies in Biomedicine, 19–21 November 2019, par. 22, where they state regarding the person's integrity that this "is understood as the ability of individuals to exercise control over what happens to them with regard to, inter alia, their body, their mental state, and the related personal data". See also Lwoff 2020.
[133] Hildt 2022, p. 88 (emphasis added).
[134] Advisory Committee, UNHRC, Impact, opportunities and challenges of neurotechnology with regard to the promotion and protection of all human rights, A/HRC/AC/31/CRP.1 (8 August 2024), par. 27 (emphasis added).

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premise of this right is that one has a right to control one's own state of mind.[135] In the negative dimension, the right to mental self-determination protects *from* severe mental interference by others: anyone should "refrain from interventions severely interfering with another's mental integrity by undermining mental control or exploiting pre-existing mental weaknesses".[136]

Bublitz and Merkel ground this right to mental self-determination partly in the idea of self-ownership over our minds: "what is even more constitutive of a subject than her body is her mind. So, whoever grants self-ownership of persons over their bodies has a compelling reason to concede self-ownership over minds".[137] Douglas and Forsberg likewise state that "we might think that considerations of self-ownership and personal sovereignty in fact provide stronger support to a moral right to mental integrity than to a moral right to bodily integrity".[138]

Whereas "self-ownership" and "control" might be plausible moral *justifications* for the right to mental integrity,[139] referring to these notions will not clarify much about the right's *scope*. Which interferences would infringe a right to "the individual's mastery of his mental states" or to "control their brain states"? And what exactly would qualify as a control-undermining interference?

As Zohny et al. write, there are numerous possible interpretations of what "full control" over one's own mental states, or of controlling one's own consciousness, means.[140] One such interpretation, which they take to be the least plausible, is that "full control" means the ability to organise and deliberately select our mental states, such as thoughts, and the broader contents of our consciousness. However, they argue, this seems an incorrect description of how mental states arise from a subjective standpoint. We do not consciously select our thoughts, desires and emotions. Rather, they usually arise unbidden in the mind.[141] This process can be considered *spontaneous*, rather than under full control. Likewise, Bublitz and Merkel highlight that our factual powers to control our minds are much more limited than we may often assume. We cannot concentrate as we wish, remember all we may want or alter our preferences by efforts of will. Neither can we avoid hating, liking or loving someone else nor change our beliefs just by wanting them to be different.[142]

Against this background, Zohny et al. assume that for the interpretation of mental integrity, any reference to "full control" of mental states cannot pertain to mental

[135] Bublitz & Merkel 2014. It aims to guarantee to its right-holder the "liberty to self-determine or control what is in and on her mind" (Bublitz 2020b, p. 69, emphasis added).

[136] Bublitz & Merkel 2014, p. 68. In the positive dimension, meanwhile, the right protects the freedom to self-determine one's inner realm, such as the content of one's thoughts and other mental phenomena, which we will discuss in Chapter 5.

[137] Bublitz & Merkel 2014, p. 62. Cf. Vallentyne 2018.

[138] Douglas & Forsberg 2021, p. 191.

[139] Identifying moral justifications of a legal right to mental integrity is not our primary aim here. See for this Douglas & Forsberg 2021; Lavazza & Giorgi 2023; Douglas 2024. See also Zuk 2024, p. 2.

[140] Zohny et al. 2023, p. 3.

[141] Zohny et al. 2023, p. 3.

[142] Bublitz & Merkel 2014, p. 65.

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control in a comprehensive sense, "because this is the kind of control that we lack anyway".[143] More plausibly, they argue, reference to control in the context of mental integrity relates to the more modest interpretation of being free from others *interfering* with our mental states. Such an understanding of the right to mental integrity – which aligns with the legal interpretation of a right to bodily integrity – seems to reflect the majority view in the literature on constructing the right,[144] to which some explicitly refer as a "right against mental interference".[145]

So, a first way of constructing the right to mental integrity justifies the right by arguing that our putative rights of self-ownership and control entitle us to *freedom from unsolicited mental interference*. Such a conceptualisation, however, still leaves us with many questions about the right's scope. For example, *what types* of interference would count as an infringement? And *which kinds of mental phenomena* may not be interfered with?[146] The next two possible ways of constructing the right tell us more about the right's potential scope (and less about its justificatory underpinnings).

3.3.1.2 Freedom from Direct and Harmful Mental Interference

In view of emerging neurotechnology, Ienca and Andorno have suggested understanding the human right to mental integrity as a right to protect people's mental dimension from potential harm.[147] They propose:

> For an action X, to qualify as a threat to mental integrity, it has to: (i) involve the direct access to and manipulation of neural signalling (ii) be unauthorized – i.e. must occur in absence of the informed consent of the signal generator, (iii) result in physical and/or psychological harm.[148]

Thus, to infringe the right to mental integrity on this account, a non-consensual mental interference must operate *directly* through the brain and result in physical and/or psychological *harm*. Apart from providing examples of neurotechnological interference that may infringe the right this way, including malicious brain-hacking, BCI technology for soldier enhancement, invasive brain-washing interventions and DBS in medicine, Ienca and Andorno do not further elaborate upon the meaning and normative significance of the two central aspects of their construction of the right, that is, "directness" and "harm".[149] What exactly is meant by "direct" access

[143] Zohny et al. 2023, p. 3.
[144] Bublitz & Merkel 2014; Douglas & Forsberg 2021; Ligthart et al. 2023a; Lavazza & Giorgi 2023; Bublitz 2024.
[145] Ryberg 2020, p. 83; Douglas 2024; Ratoff 2024, p. 258.
[146] Ryberg 2020, pp. 84–89; Douglas 2024; Tesink et al. 2024.
[147] Ienca & Andorno 2017, p. 18.
[148] Ienca & Andorno 2017, p. 18. See also Cassinadri 2025, who aims to expand and refine Ienca and Andorno's conceptualization of the right to mental integrity.
[149] They do mention that the right would probably be qualified rather than absolute.

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and manipulation? Why should the right to mental integrity only protect from *direct* interferences but not from *indirect* alterations of mental states?[150] And against what types of physical or psychological "harm" would the right protect? Moreover, why should the infliction of physical and/or psychological harm be a condition for infringing the right in the first place?[151]

Let us start by considering the requirement of directness, which refers to the *manner* through which an interference causes mental effects. There has been a discussion about the moral and legal significance of direct versus indirect interventions in a person's mental states and processes. Bublitz and Merkel describe these two different ways of intervening with the mind as follows:

> Tentatively, indirect (or external) interventions are those stimuli which are perceived sensually (i.e. heard, seen, smelled, felt, even if not apprehended or reflected upon consciously) and pass through the mind of the person, being processed by a host of psychological mechanisms. Thus, conscious communication in all its forms is an indirect intervention. By contrast, direct (or internal) interventions are stimuli reaching the brain by other routes than sensual perception. The main difference is that direct interventions can be primarily understood as electro-chemical or physical reactions following the laws of nature whereas indirect interventions involve psychological laws (or dynamics) and relate to what is being perceived.[152]

Arguments over the normative significance of this distinction typically appeal to the *level of control* people have over either direct or indirect interventions – that is, the extent to which people can resist their influence. The general assumption is that people have greatest control over *indirect*, sensory interventions that are *consciously perceived*.[153] Such interventions give people the opportunity to (critically) think about what they hear, see or smell, reflect upon those stimuli and process them – as one is consciously aware of them. This process opens the possibility to decide about how one integrates perceived information into one's own psychological framework, for example, by deliberating, questioning or challenging the information, before it will shape the person's beliefs, desires or traits.[154]

The level of control is generally thought to be reduced when stimuli operate indirectly and are *subconsciously* processed, such as through subliminal stimuli in advertisement or political campaigns. At the most extreme end of the spectrum, non-sensory *direct* interventions are considered to *bypass* any psychological process. They operate via purely physical-biological processes in the brain, such as psychopharmaceuticals and brain stimulation, over which the amount of conscious control people have is typically low (if any).[155]

[150] Douglas 2018; Bublitz 2020b; Zohny et al. 2023.
[151] Zohny et al. 2023.
[152] Bublitz & Merkel 2014. See also Bublitz 2020b.
[153] Though see Douglas 2018 and Levy 2020 for scepticism about this assumption.
[154] Bublitz & Merkel 2014; Bublitz 2020b; Zohny et al. 2023, p. 7.
[155] Bublitz & Merkel 2014; Bublitz 2020b.

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These distinctions in levels of control are in turn considered normatively relevant in relation to rights that aim to protect the *autonomy* over mental states and processes, including the right to mental integrity.[156] For example, according to Ratoff, the moral "right to mental autonomy (. . .) is your right to form attitudes in light of overt reasons – that is, in light of reasons that have their influence on your thinking without circumnavigating your consciousness or awareness".[157] Considering the moral right to mental integrity, Zohny et al. argue that the threat to mental integrity posed by some neurotechnologies "is that they stimulate the nervous system in a way that side-steps the opportunity to rationally evaluate their potential influence on mental states or traits, and thereby to control the degree to which they do in fact influence (or interfere with) them".[158] From a legal point of view, Bublitz argues that

> the scope of the right against mind-interventions has to be confined to interferences that undermine mental self-determination to a degree that fails a test of what is reasonable in a highly cooperative, interactive, and communicative society. And this, I claim, is true of interventions that bypass mental control. (. . .) In light of this premise, the relevance of mental control and integrity – and the direct versus indirect distinction – becomes evident. The more control, the better.[159]

In view of a legal "right against unwanted mind-interventions", Bublitz considers interventions that undermine or bypass mental control "particularly troublesome".[160]

Note that not everyone agrees upon the moral significance of this direct-indirect distinction. For example, considering neural and environmental modulation of mental states, Douglas has challenged the idea that non-perceptual interventions are more objectionable in terms of the mental interference they involve than perceptual interventions.[161] According to Levy, indirect interventions often produce effects that bypass a person's capacity to control as well. Moreover, he argues that, generally, indirect interventions are responsible for far more injustice, harm and inequality than direct interventions.[162]

Here, we will not embark upon discussing the arguable moral significance of direct versus indirect mental influence. For our present purpose, we just assume that, in general, direct interventions, such as brain stimulation, leave less room for mental *control* than indirect interventions, such as cognitive behavioural therapy. The extent to which an intervention impairs rational or conscious control can be

[156] As Zuk 2024, p. 2 writes: "According to most theorists, MI [mental integrity] is principally about autonomy or something in the near vicinity, such as self-determination, authentic choice, or self-ownership and personal sovereignty."
[157] Ratoff 2024, p. 282.
[158] Zohny et al. 2023, p. 8. Cf. Focquaert & Schermer 2015.
[159] Bublitz 2020b, p. 70.
[160] Bublitz 2020b, p. 70.
[161] Douglas 2018.
[162] Levy 2020. See also Levy 2007. Cf. Ryberg 2020, pp. 90–91.

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relevant to human rights that protect the *autonomy* over mental states and processes, including the right to mental integrity.

However, in our view, the legal relevance of this distinction does not so much relate to the *scope* of a right to mental integrity – that is, to the question of whether an intervention infringes the right – but rather to the right's *permissible limitations*: the question of whether infringements of the right can be justified or, rather, constitute a violation (see section 3.3.2). For example, as it emerges from the case law of the ECtHR, inducing psychological effects in others through *indirect* means *can* infringe the right to mental integrity. For instance, causing well-founded anxiety or fear by threats of violence or harassment against a person themselves or their close relatives can infringe the right to psychological and moral integrity protected under Article 8 ECHR.[163] Furthermore, publishing defamatory statements and sexual photographs of a person in the media can harm the person's psychological integrity.[164] These are clearly no direct interferences with a person's mental states and feelings, but they nevertheless infringe the right to mental integrity under Article 8 ECHR.

Hence, apparently, for infringing the right to mental (moral or psychological) integrity under Article 8 ECHR, it appears not decisive whether the mental effects have been induced by either direct or indirect means. The same appears to apply to other human rights that protect mental autonomy, such as the right to freedom of thought. Various *indirect* means of influencing mental states are often referred to as paradigmatic violations of this right, including indoctrination, brainwashing and re-education camps.[165] Moreover, the Special Rapporteur on Freedom of Religion or Belief has highlighted that "[a] growing body of legal scholarship supports the claim that freedom of thought includes freedom from manipulation. While modification bypasses psychological processes to directly alter biological function, manipulation engages and controls psychological processes".[166] In other words, next to directly interfering with a person's thoughts, indirect interventions into a person's psychological processes fall within the scope of the right to freedom of thought too.

In sum, for determining the scope of human rights that protect mental autonomy, including the right to mental integrity, the direct-indirect distinction appears not particularly helpful. This distinction may be relevant to the permissible limitations of the right, however (section 3.3.2).

Let us now turn to the other central requirement of Ienca and Andorno's proposal to construct the right to mental integrity: for an infringement, the interference must result in physical and/or psychological *harm*. As Zohny et al. point out, what counts

[163] ECtHR 30 November 2010, 2660/03 (*Hajduová/Slovakia*), par. 49 ECtHR 24 July 2012, 41526/10 (*Đorđević/Croatia*), par. 97.
[164] ECtHR 28 October 2014, 531/06 (*Ion Cârstea/Romania*) par. 38.
[165] Vermeulen & Roosmalen 2018, p. 738; Nowak & Schabas 2019, p. 503.
[166] UN Special Rapporteur on the Freedom of religion or belief, 5 October 2021, A/76/380, par. 35.

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as being harmed or made worse of in this regard, is, however, hard to settle: "[f]or instance, it cannot be that the concern over mental integrity comes down to being protected from any harmful mental interference. People interfere with our mental states all the time in ways that harm us on any plausible sense of that term, and in ways no one thinks we have a moral or legal right to be protected from".[167] Zohny et al. mention the example of being sincerely told by a loved one that you are a disappointment. Although these words likely lead to mental suffering in devastating ways, it does not follow that a right to mental integrity protects against others telling us things like these. By contrast, some brain interventions may well induce significant mental change, bypassing rational control, though without causing any physical or psychological harm. Think, for example, of non-consensual tDCS or TMS to increase a convicted person's emphatic abilities and reduce aggressive traits. Such interventions, which we might conceive of as paradigmatic infringements of the right to mental integrity,[168] would likely fall outside of the right's scope if infringements require either physical or psychological harm, as Ienca and Andorno suggest.

From a legal point of view, it is doubtful whether the right to mental integrity would only cover interferences that result in some kind of physical and/or psychological harm.[169] Indeed, the *absolute* protection of bodily and mental integrity as part of the prohibition of torture and ill-treatment only applies in cases of severe physical or mental suffering.[170] However, harm does not appear to be required for the application of the *qualified* right to personal integrity, inherent in Article 8 ECHR and 17 ICCPR. For instance, according to Bublitz, the right to mental integrity in the meaning of Article 8 ECHR seems conceptually broader, capturing interferences that do not amount to setbacks to mental health, like in cases of prejudiced honour and reputation, for example, through defamation.[171] Likewise, Biber and Capasso write that "the ECtHR has broadly interpreted the terms mental and psychological integrity. According to the case-law, these terms do not cover only the setbacks in mental capabilities but also situations in which no clinical-pathological mental disorders occur".[172]

Against this backdrop, we ought to be careful not to exclude too quickly the possibility that interferences with people's minds could infringe the right to mental integrity without causing physical or psychological harm.[173] This is, however, not to say that the harm caused by a mental interference is legally irrelevant to the right to mental integrity. Similar to the direct-indirect distinction, we think that its relevance primarily relates to the right's permissible limitations and the ultimate balancing of

[167] Zohny et al. 2023, p. 4.
[168] Bublitz 2024, p. 788.
[169] Ligthart 2024.
[170] Vermeulen & Battjes 2018, pp. 387, 384; Harris et al. 2023, p. 243.
[171] Bublitz 2020a, p. 396.
[172] Biber & Capasso 2022, p. 511.
[173] Which would in turn depend on how one operationalizes harm in this context.

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competing interests, rather than to defining the right's scope. We come back to this in section 3.3.2.

In conclusion, we believe that neither the requirement of "direct" interference nor that of physical and/or psychological "harm" is compelling for delineating the scope of the right to mental integrity. Since the normative significance of these requirements is largely unclear, and as the current human right to mental integrity seems conceptually broader, we think that categorically excluding all indirect and harmless mental alterations from the right's scope is unwarranted.

But what if we reject both harm and directness as essential requirements for infringing the right to mental integrity? Wouldn't this extend the right's scope too much, to almost every direct and indirect mental influence by others, including a broad range of everyday, undoubtedly permissible social interactions that affect other people's minds, for example, by causing anxiety, disappointment or anger?[174] To prevent the right from being too broad, some kind of threshold should apply. This brings us to a third possible construction of the right.

3.3.1.3 Freedom from Significant Mental Interference

Douglas and Forsberg understand a legal right to mental integrity as "a right against (certain kinds of) non-consensual interference with the mind".[175] Analogous to the right to bodily integrity, they consider it plausible that some types of non-consensual mental influence will not infringe the right to mental integrity, because the effects are *not significant* enough:

> If I wave my hand near your arm, causing the hairs on your arm to quiver, I have not infringed your right to bodily integrity, even if I do this without your consent; the effect of the influence is not significant enough. Similarly, there may be mental influences that fail to infringe the right to mental integrity because their mental impact is too insignificant.[176]

Exactly how significant an influence must be to infringe the right, Douglas and Forsberg set aside for further investigation. Elsewhere, Douglas suggests that a mental interference might be too trivial to infringe the right in virtue of "falling below some threshold of magnitude".[177] In the same vein, Bublitz has proposed, also in analogy with bodily integrity, to define interferences with mental integrity as "actions that detrimentally affect the mind, i.e., mental states, processes, functions, and abilities, above a threshold of seriousness".[178] This includes the infliction of pain

[174] Cf. Ligthart et al. 2023a, p. 6; Zohny et al. 2023, p. 4; Bublitz 2024, p. 788; Zuk 2024, p. 3.
[175] Douglas & Forsberg 2021, p. 182. See also Ligthart et al. 2023a, p. 6; Douglas 2024.
[176] Douglas & Forsberg 2021, p. 186.
[177] Douglas 2024, p. 6, adding in footnote 16 that "we might suppose that this will depend on how many mental states or parts are interfered with, on the centrality and/or importance of those mental states or parts, and on the magnitude of any interferences with them".
[178] Bublitz 2024, p. 788.

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and mental injury, causing detriment to mental health and other undesirable, non-trivial changes to the mind. Regarding neurotechnology, Bublitz writes that the right to mental integrity comprises neurointerventions that cause "non-trivial detrimental mental effects". More specifically, the right would apply to "[s]ubstantive alterations of mental functioning, capacities, or important mental states",[179] including "non-consensual 'improvements' of mental functioning, such as coercive treatments in forensic or psychiatric settings, or coercive cognitive enhancement".[180]

The scope of such a right against *significant* mental interference is plausibly broader compared to a right against *direct harmful* mental interference (discussed above). Meanwhile, requiring a certain *threshold of seriousness or significance* could prevent the right from being too expansive. For instance, in both Douglas' and Bublitz' interpretations, inducing trivial mental effects does not qualify as a rights infringement.[181]

Constructing the right to mental integrity as a right against mental interference above a certain level of seriousness, seems to align well with how the ECtHR understands the right to personal integrity under Article 8 ECHR. As previously discussed, generally, Article 8 ECHR applies when the effects of an interference on the person's physical or mental integrity are "sufficiently adverse".[182] Where exactly this "sufficiently adverse" threshold is placed is largely unclear yet.[183] However, as discussed in section 3.2, for interferences with bodily integrity, the threshold appears not very demanding.

This may feed the objection that constructing the right to mental integrity as a right against "significant" mental interference – that is, interferences above a threshold of seriousness – is unpersuasive, because the threshold is (I) unclear and ambiguous and (II) bears the risk of being too low, possibly encompassing all kinds of significant, yet undoubtedly permissible, everyday mental influences inherent in social interaction.[184] Let us explain why we think that, from a legal perspective, this objection is not compelling.

First, using unspecified and open norms and thresholds is a typical feature of the law – human rights law in particular. For instance, regarding the protection of "private life" within the meaning of Article 8 ECHR, the ECtHR holds that "[t]he concept of 'private life' is a broad term not susceptible to exhaustive definition".[185] Likewise, regarding the prohibition of "torture", "inhuman" and "degrading" treatment of Article 7 ICCPR, the Human Rights Committee does not see the need for specifying these terms by drawing up a list of prohibited acts or by establishing sharp

[179] Cf. Douglas 2024, footnote 16 (considering a moral right to mental integrity).
[180] Bublitz 2024, p. 788.
[181] Bublitz 2024; Douglas 2024. As Bublitz writes, "all neurointerventions with *non-trivial* effects fall under the [right's] scope" (p. 7, emphasis added).
[182] ECtHR 6 February 2001, 44599/98 (*Bensaid/UK*), par. 46.
[183] Harris et al. 2023, p. 525.
[184] Ratoff 2024, p. 264; Blumenthal-Barby & Ubel 2024. Cf. Ryberg 2020, pp. 84–92.
[185] E.g., ECtHR (GC) 25 September 2018, 76639/11 (*Denisov/Ukraine*), § 95.

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distinctions between the different forms of prohibited treatment.[186] Such open and unspecified concepts are not at all problematic for interpreting, applying and developing human rights on a case-by-case basis. On the contrary: they enable the dynamic and evolutive interpretation and formation of freedoms and rights that is typical of human rights law.

The same applies *mutatis mutandis* to the use of loosely defined thresholds for determining rights infringements, such as the threshold of "sufficiently adverse" effects for infringing the right to personal integrity under Article 8 ECHR and the "minimum level of severity" threshold of the prohibition of ill-treatment under Article 3 ECHR. Because these thresholds are formulated in general terms, they can adapt to ongoing developments in society. For example, regarding Article 3 ECHR, Harris et al. observe that over time, in practice, "the 'threshold' has been lowered to cover certain intermediate forms of ill-treatment (...) that would not have been in the minds of the Convention drafters".[187] Hence, objecting to the use of a *general* threshold for delimiting the right to mental integrity on grounds of vagueness and lack of specificity makes, in our view, little sense from a legal perspective.

Still, one could argue that such a general and unspecified threshold may lead to an overinterpretation of the right's scope – applying the right to an extremely broad range of both exceptional and everyday non-trivial mental influences, including those stemming from the news, advertisement, education and interpersonal relations and conversations. Our response to such an argument would be as follows.

First, we challenge the idea that a broad scope of the right to mental integrity would imply that all kinds of everyday non-trivial mental influences infringe the right. Only *non-consensual* interferences will do so. Much of the mental influences we expose ourselves to every day, including the news, advertisement and conversations with others, are influences of which we are generally aware and hence to which we are *capable* of consenting – unlike influences that operate below the level of our awareness. In fact, many of these everyday influences are ones to which we do indeed consent, either implicitly or explicitly. In choosing to read the news or to continue listening to others' reasons and arguments, for instance, we at least implicitly consent to being influenced by the information, views and ideas to which we are exposed. It is thus implausible to hold that all, or even most, of the everyday non-trivial interferences with our minds to which we are exposed would infringe the right to mental integrity (broadly conceived); though, of course, some such interferences *might* infringe the right– for example, if we are repeatedly exposed to others' persuasive efforts despite having requested or indicated that we do not wish to be, or if we are repeatedly exposed to pop-up ads to which we did not consent.

[186] CCPR General Comment No. 20, par. 4.
[187] Harris et al. 2023, p. 244.

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Moreover, even if we assume that the threshold of a "significant" or "serious" mental interference would indeed be low and could therefore imply a broad scope of the right to mental integrity, we still do not think that this would lead to an overinclusive prohibition of all kinds of prima facie permissible acts and mental influences. A broad *scope* of the qualified right to mental integrity need not necessarily imply overprotection by the right. In the law, the scope of fundamental rights, including human rights, is typically broad. For example, Article 8 ECHR protects a person's sphere of privacy and personal autonomy, the scope of which "has expanded substantially over the years as the Court has interpreted the notion of private life to cover a broad range of interests".[188] Likewise, in domestic legal systems, constitutional rights are often formulated in broad and general terms, protecting many different aspects of people's private and public lives. For example, the right to freely develop one's personality laid down in Article 2(1) of the German Basic Law even includes the right to feed pigeons in the park and to go riding in the woods.[189] However, a broad scope of fundamental rights does not mean that every interference with the protected interest will *violate* the right and be therefore prohibited. Recall that most human rights, including the rights to privacy and respect for private life (Articles 17 ICCPR, 8 ECHR), are *qualified* rights. They permit limitations when necessary for and proportionate to protecting certain public interests or the right and freedoms of others.

In sum, to us, it seems implausible that a broad scope of the right to mental integrity would ipso facto imply overprotection by categorically prohibiting a broad range of mental influencing inherent to social interaction.[190] First, because much of these mental influences will not infringe the right due to (implicit) consent, and second, because infringements will often be justified based on a balancing of competing rights and interests.

What could the implications of the right to mental integrity, constructed as a right against *non-consensual significant* mental interference, be for the neurorehabilitation of convicted persons? Plausibly, most forms of non-consensual brain stimulation for reducing recidivism risks will infringe the right to mental integrity on this understanding. The mental effects of these interventions are typically non-trivial. Studies indicate that electrical stimulation of certain brain areas with tDCS can have significant effects on a convicted person's emphatic abilities, aggressive traits, and decision-making, such as risk-taking.[191] Non-consensually inducing such mental changes plausibly infringes the right against non-consensual significant mental interference. However, as mentioned, this does not say much yet about the *permissibility* of such interventions. The answer to this question depends largely on the

[188] De Vries 2018.
[189] Möller 2012, p. 4.
[190] Provided that the right to mental integrity is a qualified right.
[191] Sergiou et al. 2022; Knehans et al. 2022; Kuhn et al. 2024.

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permissible limitations of the right, that is, on the ultimate balancing of competing interests allowed for by the right.[192] We explore this issue in the next section.

3.3.2 *Permissible Limitations*

Inducing mental changes in others is not exceptional in our everyday social lives. We do so all the time – in some social domains more than others. One could think of the compulsory education of children, the provision of psychopharmaceuticals to psychiatric patients, and the reformation and rehabilitation of convicted persons. When not consented to, many such mental influences plausibly infringe a right against significant mental interference. However, presumably, not all of them are legally (or morally) impermissible. There could be good reasons for legally allowing the bringing about of mental changes in persons for different purposes in different contexts. Again, one could think of educating children, treating forensic psychiatric patients and rehabilitating convicted persons. But how should the law distinguish permissible from impermissible interferences with mental integrity? As Bublitz writes, "[t]he key challenge for the construction of the right to mental integrity lies in developing a taxonomy that sorts the many examples of everyday and undoubtedly permissible social interactions adversely affecting minds of others (causing disappointment, anger, anxiety, etc.) from the supposedly impermissible ones. The legal criteria for this distinction have not been established".[193]

Developing such a taxonomy would exceed the scope of this book. Meanwhile, as the issue of permissible versus impermissible limitations of the right to mental integrity is essential to the permissibility of neurorehabilitation, we wish to briefly explore the following question here: How should judges determine whether an infringement of the right to mental integrity – understood as a right against nonconsensual significant mental interference – would be justified, or whether it would rather violate this right?[194]

Whether an infringement of the right to mental integrity is also a *violation* largely depends on an ultimate balancing of the competing interests at stake, which, in turn, will largely depend on the facts and circumstances of the individual case. In the preceding section, we concluded that neither the direct-indirect distinction nor the infliction of physical and/or psychological harm appear decisive factors for determining the *scope* of the human right to mental integrity. However, we think these factors would be relevant to the question of justification – and, consequently, the possible violation of the right. Let us recall that interferences with a person's body

[192] See also Bublitz 2024, p. 788.

[193] Bublitz 2024, p. 788. Cf. Nowak & Schabas 2019, p. 503.

[194] In analogy with the right to bodily integrity, we here assume that a human right to mental integrity is typically a qualified right, which aligns with the qualified protection offered to mental integrity by Article 8 ECHR and 17 ICCPR. Cf. Ryberg 2020, p. 92; Mendlow 2018; Craig 2016. Meanwhile, some types of significant mental inference may also trigger absolute protection by the prohibition of ill-treatment or the right to freedom of thought.

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and mind can infringe the right to personal integrity to different degrees, with different severities. The more *severe* the infringement, the more substantial the reasons must be to justify such an infringement.[195] For example, regarding *bodily* integrity, non-consensually inserting a needle in a person's body will less severely infringe the right compared to non-consensually performing surgery, the latter requiring stronger reasons to be justified. The same plausibly applies to *mental* integrity.[196]

This is where the direct-indirect distinction and the level of harm become relevant. If the primary aim of a right to mental integrity is to protect *autonomy* over mental states and processes, then it is plausible that the less mental *control* an intervention leaves to the affected person, the more severe the infringement of the right to mental integrity is. If we assume that, generally, direct interventions leave less control over mental states than indirect interventions, this will imply that, in general, stronger reasons are needed to justify infringements through direct interventions compared to indirect interventions. From that point of view, Bublitz may be right in saying that interventions that undermine or bypass mental control are "particularly troublesome" – they may be more difficult to justify.

The same applies *mutatis mutandis* to the issue of psychological harm. When an infringement of the right to mental integrity also entails some kind of (severe) psychological harm, such as stress or depression as a side effect of medication or brain stimulation, it is reasonable to suppose that this will contribute to the severity of the rights infringement, therefore requiring more substantial reasons for justification. Moreover, if the level of harm attains a certain severity threshold, absolute protection from the prohibition of ill-treatment could be engaged (see section 3.2).

What could all this mean for the use of non-consensual neurointerventions in criminal justice? These interventions are of direct nature, such as tDCS, TMS and psychopharmaceuticals. Hence, the mental changes they induce may leave little (if any) room for mental control by the person involved, and as such, they may interfere with the person's mental autonomy to a significant degree. Therefore, they will likely be considered to severely infringe the right to mental integrity, thus requiring weighty reasons to be justified. The need for such substantial reasons may further increase when the intervention entails harmful psychological side effects. If any such reasons exist, the prevention of severe crimes – such as abuse, rape and murder – is a likely candidate.

Although we think the above analysis makes sense in principle, it is unclear how strict the requirements for justification will be in practice. Recall that the context of criminal punishment and crime prevention allows for a wide range of severe and less severe interferences with both bodily and mental integrity (e.g., strip searches

[195] Christoffersen 2009, p. 208; Gerards 2023, p. 355.
[196] De Vries 2018, p. 691.

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in prison,[197] collection of blood samples,[198] antilibidinal interventions to sex offenders[199]). In general, regarding potential violations of Article 8 ECHR – which includes the right to mental integrity – in the context of imprisonment, the ECtHR holds that

> normal restrictions and limitations consequent on prison life and discipline during lawful detention are not matters which would constitute a violation of Article 8 either because they are considered not to constitute an interference with the detainee's private and family life (. . .) or because any such interference would be justified.[200]

This is an important point, which may be used to substantiate at least two different arguments, both in another direction.

First, one could argue that imprisonment, in and of itself, often severely affects the incarcerated person's well-being and psychological functioning and may have serious impact on a variety of mental phenomena that are protected by the right to mental integrity, such as feelings, emotions, traits and desires. As touched upon earlier in this and the previous chapter, incarceration is notoriously known for its potential negative effects on the persons' psychological well-being, for example, by the traumatic experiences or mental harm incarceration can cause. Furthermore, research suggests that imprisonment has significant adverse effects on brain areas associated with self-control. Recent studies reported that neuropsychological capacities in incarcerated persons declined after three to four months in prison.[201] Meijers et al. hypothesize that the cause of the decline may be, at least in part, the *impoverished* prison environment, which is supported by the findings in animal studies (and some studies in humans) on the influence of the environment on brain and behaviour.[202] Recall, furthermore, that a recent study on the public attitudes towards incarceration and neurointerventions found that the participants considered neurointerventions "to be a weaker form of mind control than incarcerations and would lead to more change for the better".[203]

Against this background, one could argue that, if the effects on the mind caused by "normal restrictions and limitations" consequent on lawful incarceration normally do not raise any issues regarding the right to mental integrity, it is unpersuasive to oppose non-consensual neurorehabilitation by appealing to the right to mental integrity – provided that the mental effects are either of similar gravity or less severe compared to incarceration.[204]

[197] ECtHR 7 October 2022, 49529/12 (*Syrianos/Grèce*), par. 79; UN Counter-terrorism implementation task force, *Basic Human Rights Reference Guide: The Stopping and Searching of Persons in the Context of Countering Terrorism*, OHCHR 2014.
[198] ECtHR 15 May 2018, 41079/16 (*Caruana/Malta*).
[199] Forsberg 2021.
[200] ECtHR 16 May 2002, 39474/98 (*D.G./Ireland*), par. 105.
[201] Meijers et al. 2018; Umbach, Raine & Leonard 2018; Meijers, Harte & Scherder 2023. See also Ligthart et al. 2019; Coppola 2019.
[202] Meijers, Harte & Scherder 2023.
[203] Denson, Griffiths & Smith 2024, p. 7.
[204] Cf. Ryberg 2020, p. 73; Douglas 2018.

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On the other hand, it can be argued that the mental changes entailed by imprisonment differ from those induced through neurointerventions in a way that is normatively significant, and, therefore, that neurointerventions may violate the right to mental integrity while imprisonment would normally not. For example, Birks and Buyx argue that although both neurointerventions and incarceration may involve equal interference with the person's mental states, harming the person to the same extent in the same respect, "it does not follow that the harm-doing is morally equivalent. There could be a difference in terms of *intention* between some of the harm-doings caused".[205] If intentional harm is harder to justify than unintentional but merely foreseen harm, Birks and Buyx argue, "then this could account for the view that neurointerventions are morally objectionable in one respect that incarceration is not".[206] Put differently: mental alterations that are a result of *unintended side effects* (e.g., of incarceration) are morally less objectionable than *intended* mental changes of similar intensity, such as those caused by neurointerventions that *aim* to induce mental change. In the same vein,[207] Shaw suggests that "intended effects and side effects may lie on a spectrum, and the closer the mental-integrity-undermining effects of a punishment or neurointervention fall toward the intended end of the spectrum, the harder the punishment or neurointervention may be to justify".[208]

Intuitively, the idea that unintended interference with mental integrity is less objectionable than intended interference may sound appealing.[209] However, in our view, the moral or – for the present purpose – legal significance of this distinction strongly depends on conceptualisation of (the right to) mental integrity that one follows. Birks and Buyx understand the "interest in mental integrity" as "a person's interest in not having at least some of his mental states *intentionally* altered by others in certain ways".[210] Likewise, Shaw proposes that the moral right to mental integrity "can be infringed by *intentionally* interfering with a person's mental states through nonrational means".[211]

Indeed, if the right to mental integrity is understood as a right against some forms of *intentional* mental interference, the "level of intentionality" is plausibly relevant for determining the severity of the rights infringement, which in turn affects its potential justification. This could mean that *knowingly* causing mental alterations by sending someone to prison less severely infringes the right to mental integrity than *purposely* inducing mental change of similar intensity, for example, by brain stimulation. However, if one adopts an understanding of the right to mental integrity that

[205] Birks & Buyx 2018, p. 134 (emphasis added).
[206] Birks & Buyx 2018, p. 134.
[207] Though without arguing that neurointerventions are more objectionable than incarceration.
[208] Shaw 2022.
[209] Philosophers have long debated whether there is a morally significant difference between intentionally versus foreseeably causing harm. For a candidate view that holds that there is not, see Kagan 1991, Chapter 4. For a defence of this distinction, see Moschella 2023.
[210] Birks & Buyx 2018, p. 136 (emphasis added).
[211] Shaw 2022, p. 1418 (emphasis added).

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does not include the requirement of intentionality, such as the "right against significant mental interference" we discussed in the previous section, the normative significance of the distinction between intentional versus side effects is at least questionable, also because, typically, to be justified, infringements of the right to mental integrity *need to be* intentional: they must pursue a 'legitimate aim' and be proportionate to that aim, such as the prevention of crime or the protection of the health of others. Moreover, including an "intentionality-requirement" into the scope of the right, may well result in reduced human rights protection against (neuro)interventions that have serious side effects on people's minds, just because those effects were not intended.

3.4 CONCLUDING REMARKS

International and European human rights offer robust protection to the integrity of persons. This includes the protection of bodily and mental integrity through different human rights, including the right to privacy, the right to security of person, the freedom of thought and the prohibition of ill-treatment. The non-consensual administration of invasive forms of brain stimulation that require (neuro)surgery, such as DBS, will severely interfere with a person's bodily integrity. They may even violate the prohibition of ill-treatment and the right to security of person. Meanwhile, regarding non-invasive forms of brain stimulation, such as tDCS and TMS, the bodily interference will often be minimal. Still, the mental alterations these interventions induce can be significant. In theory, such a mental interference may infringe the absolute right to freedom of thought in some cases in at least some cases. A central question in this regard is whether the targeted mental phenomena reasonably qualify as a "thought" in the meaning of this right. We argued that the typical targets of neurointerventions will probably be phenomena such as empathy, tendencies and behavioural control, which are more related to emotion and behaviour responses and less likely to be considered "thoughts".

Most non-consensual neurointerventions will likely infringe the qualified right to mental integrity, inherent in Articles 17 ICCPR and 8 ECHR. Legally, the meaning and scope of this right are currently unclear. Therefore, we looked at both legal and philosophical literature to tentatively construct the right as "a right against significant mental interference". Whether an infringement of this right is justified or constitutes a violation depends on an ultimate balancing of competing private and public interests, to which the notion of proportionality is central. For that balancing, we showed that the direct nature of neurointerventions is legally significant, as direct interventions can be considered to bypass mental control and therefore to infringe the right to mental integrity more severely, requiring weightier reasons for their justification. The same plausibly applies to neurointerventions that entail (severe) psychological harm, for example, as a consequence of unintended side effects.

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