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Crim Law and Philos (2014) 8:51–77
DOI 10.1007/s11572-012-9172-y

ORIGINAL PAPER

Crimes Against Minds: On Mental Manipulations, Harms and a Human Right to Mental Self-Determination

Jan Christoph Bublitz · Reinhard Merkel

Published online: 3 August 2012

Abstract The neurosciences not only challenge assumptions about the mind's place in the natural world but also urge us to reconsider its role in the normative world. Based on mind-brain dualism, the law affords only one-sided protection: it systematically protects bodies and brains, but only fragmentarily minds and mental states. The fundamental question, in what ways people may legitimately change mental states of others, is largely unexplored in legal thinking. With novel technologies to both intervene into minds and detect mental activity, the law should, we suggest, introduce stand alone protection for the inner sphere of persons. We shall address some metaphysical questions concerning physical and mental harm and demonstrate gaps in current doctrines, especially in regard to manipulative interferences with decision-making processes. We then outline some reasons for the law to recognize a human right to mental liberty and propose elements of a novel criminal offence proscribing severe interventions into other minds.

Keywords Mental self-determination · Mental integrity · Cognitive liberty, manipulation · Emotional harm · Mental and bodily injury · Dualism · Freedom of thought

Introduction

Isn't it a bit strange that unpleasant but rather trivial actions like cutting another's hair, inflicting some seconds of minor bodily pain or even firmly touching (without sexual intent) another person may constitute a criminal offense whereas deliberately causing mental suffering often falls squarely out of the purview of the criminal law? Isn't it remarkable that working conditions dangerous to bodily integrity are shut down and employers are threatened with criminal charges while millions of office workers suffer from diagnosable work-related stress, burn-out and depression without raising any legal concerns?

J. C. Bublitz (✉) · R. Merkel
Faculty of Law, Institute of Criminal Law and Legal Philosophy, University of Hamburg, Hamburg, Germany
e-mail: christoph.bublitz@uni-hamburg.de

And isn't it awkward that a multi-billion-Euro industry with the sole and explicit purpose of studying and influencing decisionmaking proudly and successfully applies its findings to persons, changing their desires, altering their behavior, inducing them to enter into contracts whereas lying for the same end could land perpetrators in prison?

Concededly, these are rough juxtapositions. But are there really categorical differences between the respective harms to persons as suggested by the way they are treated by the law? We have doubts. Rather, these examples illustrate two types of negative interferences with the mental sphere which are neglected in legal thinking: infliction of mental injury—i.e. pain, disorder, impairment of mental health—and mental manipulations—i.e. influences on preferences and choice. The underlying normative distinctions separating these interferences from those against which the law provides protection are, we suspect, not well-defined and rely on implicit yet incoherent mind-brain dualisms that become increasingly untenable, systematically undervalue the mental sphere and obscure what may become a key question in the age of neuroscience: What are the legitimate ways of changing other people's minds?

While legal systems have developed detailed rules of permissible conduct with bodies, have defined exceptions, counter exceptions, conditions of consent, acceptable risks and compensable harm, legal doctrines over conduct with another's mind are hard to find and strikingly underdeveloped. Why are we so convinced that, while no one is allowed to do anything to another's body without consent, they are to virtually mess up another's mind? Why is scarring souls so different from scarring the surface of the skin?

The basic, but often tacit distinction between mind and brain can already be found in the fundamental rights structuring legal orders. Every constitution guarantees a right to bodily integrity, but few afford protection to mental integrity.[1] The law has problems with non-economic damages in general, and mental harms in particular. Mental states, thoughts, feelings, behavioral dispositions hidden from view in the "inner citadel" of the individual's consciousness are regarded as intangible, evanescent, too elusive for the law to handle.

The subjective and private character of mental states raises many philosophical questions. Their ontological status alone may provoke endless discussions and their peculiar epistemic situation leads to practical problems. How to prove phenomena not directly accessible from the outside, i.e. from the third-person perspective? Relatedly, policy concerns about opening floodgates of litigation and worries about malingering may speak against legal coverage of mental harms. This coincides with a general characteristic of the law, firmly put forth by Kant (1797/1991): to restrict its regulatory purview to external actions and events.

However, arguing from a practical point of view tends to replace procedural with substantive law. Inflicting harms does not become less blameworthy only because harms are harder to prove. Also, denying claim rights simply because granting them might lead to an increase in lawsuits is anything but compelling reasoning. It rather indicates that *sub specie iuris* something may be amiss. Moreover, the general question of how we should treat minds may become a pressing political issue at least in the western world. The largest EU-wide study so far reports a staggering number of 165 million (out of 500) EU citizens *per year* suffering from diagnosable "brain disorders", with an estimated direct and indirect cost of more than 600 billion euro.[2] To the WHO, mental health is one of the challenges of the coming decade. Surely, there are many reasons for this high prevalence which fall under the

[1] The European Union has very recently introduced a right to respect for "mental integrity" in Art. 3 of the Charter of Fundamental Rights. Also, the European Court of Human Rights includes mental integrity under the scope of Art. 8 (privacy), however, it has not played an important role (yet).

[2] It should be noted that the study includes neurological disorders such as Parkinson's. Still, numbers are incredibly high (Gustavsson et al. 2011).

cognizance of the mind-sciences. Still, mental health problems are usually not ordained by fate but have causes which are at least partially found in the lifeworld, interpersonal relations and the social structures forming them. Legal and ethical norms are the basic forces through which social structures and interactions are formed. Hence it occurs to us that there could be a remote relation between the uncertain normative foundations of permissible conduct with the mental sphere and the problems it increasingly faces.

This alone may prompt reconsideration of the legal status of the mind. But what especially brings the venerable issue of mental harms back on the table of legal theory is neuroscience, promising to reveal subjective states as grounded in objective facts, i.e. in events observable from the third-person perspective. When mental states lose their empirical intractability, the legal disregard for the mind loses its plausibility. Forerunners of this development have already reached courtrooms. Testimony supplemented by functional or structural neuroimaging of physiological correlates of mental injuries and their consequences is increasingly brought forward, not only with the aim of exculpating criminal defendants, but also in ordinary civil and criminal cases in order to prove that "real", tangible and recoverable physical harm has been caused. We shall leave aside questions of what such images really show and whether obtaining and introducing them is or ought to be permissible in legal proceedings.[3] For the sake of the present argument we assume that these technologies will in the near future be good enough to render claims of mental injuries plausible, at least in combination with psychological expert testimony.

We are thus interested in the ways in which and the extent to which persons may legitimately change others' minds and which interventions should be proscribed by law. Beside infliction of mental distress and harm to mental health, we wish to draw attention to another set of worrisome mind-interventions of which the law at present is almost completely unaware, even though it touches issues at the heart of the legal order: mental manipulations that interfere with what we shall call mental self-determination. In short: we argue that concerns about neurointerventions targeting mental phenomena cannot be adequately captured by legal protection of bodily integrity (II). Therefore, rights protecting the mind need to be introduced. We shall outline the contours and origins of what we take to be a human right—a right to mental self-determination and some of the ways it may be interfered with (III–IV). Finally, we shall present some suggestions for how the law should frame the issue of protecting the mind (V) and some ideas for, and elements of, a novel criminal offence against mind-interventions (VI).

Mental Integrity and Mind-Brain Dualism

Mental and Bodily Injuries

Let us begin with mental injuries. All legal systems apparently draw distinctions between bodily and mental injuries, especially in tort and criminal law.[4] While persons are

[3] Cf. US law: Greely and Illes (2007); German law: Markowitsch and Merkel (2011).

[4] Tort law may face similar problems as many jurisdictions rely on criteria such as "nervous shock" or "physical manifestation" of psychiatric injury to limit tortuous liability. But although a tort of harm to mental integrity is currently absent in many countries, there seems to be more willingness to consider mental injuries as harms to health. A recently drafted European model code considers "bodily integrity and health" as legally relevant interests and remarks that "personal injury includes injury to mental health only if it amounts to a medical condition", Art. 2:201 2b (von Bar Grey 2009:359). The US tort of emotional distress seems to be the widest stand alone claim for mental harms and even there neuroscience seemingly provokes

protected extensively against physical harm, emotional harm is often treated as a "second class citizen" if recognized at all (Grey 2011:203). Distinguishing between these types of harms tends to lead the law into the dualist problem of separating the mental from the physical. In defining the scope of legal protection, many jurisdictions rely on criteria such as "physically" or "externally manifested" or "somatically objectifiable" as opposed to "purely mental" harms or "emotional disturbances". In the absence of bodily effects (deleterious effects on bodily substance or functioning), mental harms often give rise to neither civil claims nor criminal charges. Sustaining these delineations based on rather crude metaphysics becomes a practical problem. Confronted with brain images of supposedly "pure mental harms", judges can hardly maintain that such harms do not manifest objectively.

Despite more than 2,000 years of philosophical argument and recent breathtaking scientific progress, the mind-brain problem persistently defies an all-around satisfactory solution. The law must, nevertheless, recognize some undeniable facts. By all we know, all mental phenomena are somehow connected with brain activity. In describing this relation more concretely, the law should proceed cautiously and avoid adopting speculative views of any provenance, i.e. not only dualist but also eliminativist or (strong) reductionist accounts. It would be equally amiss, however, to ignore the rapid developments in the latter directions. As, at least in these matters, there is no "ethics without metaphysics", the law needs to take a stance for which it should choose the most innocuous position. Presumably, this is a weak "supervenience" claim along the following lines[5]:

There can be no changes on the mental level without some change on the physical, i.e. neuronal level. Or, to put it slightly differently: mental states not only correlate with particular brain states, but are also "caused" or (somehow differently) "realized" by physical states ("bottom-up" causation).

These interdependencies are very likely true; however, a more precise description already presents problems. There is no consensus on whether the mental and the physical are really different levels, nor is the sense of causation or realization fully understood.[6] Yet, this abstract position seems to be the most promising one as long as one bears in mind that it does not solve the mystery but only describes the relation in a way that avoids stronger metaphysical commitments. From the supervenience claim "no mental states without concomitant brain states" it can be inferred that there is no such thing as a pure mental harm.

Footnote 4 continued
new questions (Grey 2011). Mental manipulation does not seem to be an issue anywhere. One may ask whether criminal law is needed—might a refined tort suffice to secure interests of affected persons? This depends on the scope of tort liability and recoverable damages. If, as in many European countries, tort law only has the function to compensate harms but not to punish (no punitive damages), it is insufficient to effectively deter mind-interventions. Generally, US tort law is not exportable to other, esp. European, jurisdictions.

[5] "Supervenience" is a philosophical term of art, apt to be claimed by various positions on the mind-brain problem, from strong reductionist to moderate (non-Cartesian) views. Its meaning is spelled out in a broad variety of ways, most of which amount to the above slogan-like paraphrase; see e.g. Savellos and Yalcin (1995) and Kim (2005).

[6] We do not consider "causation" the appropriate concept here. At least, it is a different kind of causation than the one between two events in space and time with which criminal law is usually concerned. The question what *is* appropriate, however, leads straight into the core problem of mind-brain metaphysics which Chalmers (1996/2010) famously termed "the hard problem of consciousness". We couldn't sensibly embark on that discussion here.

How precise correlates of mental phenomena can be identified on the neuronal level is merely a contingent empirical question. The law can reasonably expect that what is happening at the moment in respect to some detectable mental harms, e.g. post-traumatic stress disorder, will, as science progresses, expand to many if not all allegedly purely mental harms. It is a meaningless enterprise to uphold abstract distinctions à la "pure mental harm" and then to reconsider every single case in light of the current state of science. Instead we propose a more radical approach: The law should discard dualistic differentiations, replace them with the assumption that all mental phenomena supervene on (or at least correlate with) neuronal processes and begin to develop a theory of which mental phenomena ought to be protected on this premise.

Alternatives

The tendency to overcome dualism can already be witnessed in some jurisdictions. For instance, in the UK the House of Lords held:

> The phrase 'actual bodily harm' is capable of including psychiatric injury. But, it does not include mere emotions such as fear or distress or panic nor does it include, as such, states of mind that are not in themselves evidence of some identifiable clinical condition.[7]

While this appears to be a move in the right direction, it cannot be followed by jurisdictions with stricter demands on concreteness and wording of statutes, at least in criminal law. For in its lexical semantics as well as in its colloquial meaning, the phrase 'bodily injury' is *not* capable of including psychiatric injury. In those jurisdictions, new statutes need to be enacted explicitly prohibiting the infliction of mental injuries.

This raises problems. For one, the law needs to define its own threshold criteria, since mental health classifications are often too wide or too narrow and in a constant flux. Medical definitions of illness themselves involve normative judgments which may be hidden from the eyes of law-practitioners.[8] To pick just one problem: Mental illnesses usually require abnormal states or inappropriate reactions. Falling into grief and depression upon hearing of the death of a relative is not considered an illness. But should the underlying medico-normative assumptions be relevant for the law? Consider a type of case before German courts in the 1950s. Spouses of German prisoners of war were (intentionally) falsely told that their husbands had passed away. As their grief did not constitute a clinical condition, there was no offence.[9] Yet, we think this is at least a prima facie case of illegitimately inflicted mental suffering.

Moreover, why should legal protection of the mind be restricted to mental dysfunctioning or *in*appropriate responses? In view of the principle that offences require their harmful consequences—here: the inappropriate reaction—to be reasonably foreseeable by the offender, liability would be restricted to a handful of exceptional cases, because in general foreseeable reactions are not inappropriate. That is to say, the law needs to define other thresholds; and, furthermore, it should pay more attention to the specific *way* a mental harm is brought about. It is not only the result, but also the means that matter in normative evaluations. Consider the classic case: marital infidelity generating severe mental suffering for the partner. Criminal offence?—Quite certainly not. Whether it is or should be can

[7] *Reg. v. Chan-Fook* [1994] 1 W.L.R. 689; *Reg. v. Ireland/Burstow* [1998] AC 147.

[8] On the endless discussion over facts and values in mental disorders e.g. Perring (2011).

[9] District Court Aachen, Neue Juristische Wochenschrift 1950, 759.

depend neither on the (in)appropriateness, nor on the severity or foreseeability of the spouse's reaction. Rather, the question is which ways of inflicting mental suffering on others are legally permissible. And therefore, it may well be the case that inducing the "same pain" through a different means, say, a lovesickness-pill, triggering identical neuronal activity and evoking the identical phenomenal experience of suffering, should be impermissible.

These exemplary cases demonstrate that harm to mind is in many ways different from harm to body. Bodies have clearly defined boundaries in space, interferences with and infringements upon which can be outlawed without restricting other people's reasonably defined liberties, whereas mental sufferings often arise in response to social interactions. A general norm stipulating that "infliction of severe mental injuries shall be punished" would potentially interfere with a host of mundane actions of others, exemplifying, as it were, social normality. The law cannot have one-sided regard for the effects on the minds of victims only (even if restricted by criteria such as appropriateness) but has to consider the impacts of prohibitions on all parties involved, on their legally guaranteed liberties, and thus on social life as a whole. It has to distribute risks and burdens of basic liberties of action according to certain principles, and hence separate the mental harms people ordinarily suffer in the normal course of life from those which are neither necessary nor unavoidable (or only avoidable at too large a cost) to legally safeguard equal basic liberties for all. This speaks against an analogical inference from physical to psychological injuries.

Mental Injury is Not Identical to Bodily Injury

Apart from this, there is a more fundamental objection against the inclusion of "emotional harms under the rubric of bodily injury" as sometimes suggested (Grey 2011:204). Strictly speaking—as criminal law is obliged to—mental injuries are not necessarily identical to bodily injuries. The current trend in psychiatry to relabel all mental disorders as brain disorders or to uncritically use these terms interchangeably stands on porous grounds as it runs the risk of confusing levels of explanation. From the fact that (strong) mind-brain dualism has not much to recommend it, it does not follow that all properties and faculties of the mind can simply be attributed to the body. It is not the brain that "decides", "suffers" or is "harmed"; rather, these are *mental* processes or properties of persons, not qualities of physical objects.[10] In other words: Just because two entities stand in a specific relation to one another, properties of one do not automatically become properties of the other. Such an inference is valid only if the relation is of a particular kind (e.g. reductionism). But the law, we urge, should avoid such metaphysical commitments wherever possible.

At least for normative purposes involving concepts such as "harm" or "dysfunction" both the mental and the physical level merit attention on their own. Mental dysfunctions arise in respect to psychological (higher-level) functions and to societal norms, not to

[10] This line of critique resembles the well-known argument of Bennett and Hacker (2003) but our claim is less ambiguous and does not depend on the correctness of theirs. Bennett and Hacker consider ascribing properties of wholes to their parts a metrological fallacy and hence the loose talk of "deciding brains" and the like as nothing but a conceptual confusion. We are not so sure that this really is a fallacy. The confusion in the use of language might simply reflect the unclarity of the subject matter, i.e. the proper relation between mind and brain. We do not categorically deny the possibility of reductionist explanations; the mind-brain problem is probably not merely a conceptual problem and is very likely *not* solved by conceptual analysis alone. Our worry here is only that equating mental with brain properties is not a logical necessity but the consequence of a presupposition which still awaits metaphysical clarification, let alone empirical proof. Before mental properties and symptoms of mental disorders can be sufficiently described on the physical level, equating them for normative purpose is premature, potentially confusing and obscuring necessary distinctions.

electro-chemical brain processes. They refer *per definitionem* to mental or behavioral phenomena, not easily redescribable in terms of physiology, neuroscience or basic physics. Speaking of depression, for instance, is speaking about specific mental symptoms. Whether a person suffers from depression solely depends on her exhibiting these symptoms. Even if we knew (what we currently don't) that *every* instance of depression strongly correlates with chemical "imbalances" in neurotransmitter levels (say Serotonin), a difference between mental and brain dysfunction would remain. On the neuronal level, all there is are events unfolding in accordance with laws of nature. And by themselves, such events cannot be dysfunctional. "Dysfunctional" is a judgment in light of a normative standard, and in the case of depression it is defined on the mental level (Miller 2010).

In regard to legal judgments, the exclusive view from the neuronal side tends to obscure relevant distinctions. Some neuroscientific findings suggest that "social pain" arising from problems such as exclusion from groups may be generated by the same neuronal processes as "physical pain". In terms of brain activation patterns, a broken heart might resemble a broken arm (Eisenberger and Liebermann 2009). Suppose this is true; should both therefore be treated as normatively similar? Again, we think not. For the law, the only relevant question is whether protection should be afforded against mental suffering due to group exclusion. The answer does not depend on any neuroscientific fact.

If mental effects were to be evaluated by their neuronal correlates, every libel, every threat, even yelling at someone else might constitute an interference with bodily integrity as it may significantly change neuronal states. It would be absurd to charge someone with having interfered with another person's neuronal states *as such*. In many instances of mental harm, their neuronal counterparts might in no comprehensible sense be more grave or extended in scope and quantity than the neural correlates of intense joyful experiences (such as falling in love). What makes the corresponding physical alterations of the brain important to the person (and the law) is exclusively the mental side, the experience, not its realization, and for *that* reason alone this strongly calls for a legal prohibition or remedy.

Thus we urge that harm to mind should not be treated as tantamount to harm to brain; blending both into one category would de-differentiate an age-long development of modern criminal law and, in a way, assimilate it to the ancient Roman conception of *iniuria*, a summary notion for any and all offences against a person. We do not consider that desirable. Instead, the law should define the kinds of mental phenomena worthy of protection by their mental properties[11] and introduce stand alone provisions penalizing interferences with mental integrity rather than expanding the protection of bodily integrity to mental integrity. As a consequence, the brain is afforded dual (and sometimes overlapping) legal protection: Bodily integrity covers physical interventions, e.g. brain lesions or deleterious effects on brain substance, regardless of their mental consequences. And conversely, mental integrity protects against interventions in virtue of their mental effects. As for mind-brain metaphysics, this approach rejects any form of substance dualism but retains a normative–epistemic form which renders it metaphysically safe.[12] Having clarified the normative discretness of the mental, we shall turn to the scope of its protection.

[11] This corresponds to the symptom–oriented way many mental disorders are currently classified by in diagnostic psychiatric manuals. Its reform is one of the controversial points in the current revision of the DSM-5, see Society for Humanistic Psychology (2011).

[12] Vis-a-vis strong reductionist objections, the law might maintain that it does protect brain states after all, only those *identified* by their peculiar mental effects. The law should not, however, fall from the dualistic extreme—postulating pure mental harms—into its reductionist counterpart.

Besides protection against harms to mental health, it should encompass another dimension to which we turn in the following: freedom from mental manipulations.

Mental Manipulation Cases

Perhaps even more worrisome than the infliction of pain and suffering are manipulative interventions altering preferences, will-formation and decisionmaking. This area seems largely beyond the focus of scholarly attention. Let us begin by presenting some illustrative scenarios:

Eliciting Emotions

On advice from their food chemist, a restaurant chain struggling with decreasing sales of its fatty burgers serves a complimentary welcome drink. What customers are not told is that a low dose of Ghrelin, not hazardous to bodily or mental health, is added. Without any noteworthy side effects, Ghrelin increases appetite and hence the restaurant's turnover as customers order more.[13]

Manipulating Preferences and Decisionmaking

An online store shows Flash movies to customers which subliminally prime brand C and cause customers to evaluate C more positively. While stimuli are not powerful enough to create completely new desires, they tip the scales of inclined consumers towards C's product. While overall sales remain constant, C's products are increasingly bought.[14]
Hired to investigate corrupt practices in a firm, a private detective orders suspected employees to testify. To increase the likelihood of them telling the truth, a psychiatrist stimulates some areas of their brain via harmless transcranial magnetic stimulation (TMS). Altering the brain networks necessary for deceit makes lying increasingly harder and therefore easier to detect.[15]

Non-Consented Neuroenhancement

A financial broker specialized in speed-trading makes profits from short-spanned volatility in stock prices. His employees have to be constantly alert. Therefore, he secretly spikes drinks with a psychostimulant increasing vigilance, awareness and motivation.[16]

[13] For Ghrelin in appetite regulation Wren et al. (2001). This example is not completely fictitious; some food companies are accused by food experts of adding appetite stimulating substances to their products.

[14] Studies demonstrate measurable behavioral outcomes of subliminal priming. Rather than ignoring it as a myth, subliminal persuasion should be investigated (Dijksterhuis et al. 2005). See Weinberger and Westen's (2008) studie on subliminal Flash movies transmitted via the Internet.

[15] Whether this is possible is currently studied (Luber et al. 2009). Relatedly, Klaming and Vedder (2010) argue in favor of using eyewitness enhancing technology in police interrogations.

[16] Unwanted neuroenhancements may happen quite frequently, from parents enhancing children to sport coaches and athletes. Currently, scientific data is inconclusive about the effectiveness of psychostimulants like Ritalin or Modafinil for enhancement purposes (Repantis et al. 2010a, b).

Patient P suffers from severe depression. As he does not respond to pharmaceutical treatment, a deep brain stimulator is implanted. Neuroscientists can remotely control the device but P is not aware of the induced changes in his brain's electric-currents since brain tissue is insensitive. For scientific purposes and in hope of a "Nature" paper, the scientists, without consent, frequently change brain activity and monitor P's reactions. P consequently experiences sudden mood swings which he attributes to other situational factors.[17]

Memory Manipulations

Through suggestive and leading questioning police officers distort witness W's memory. W comes to believe the version of the story intentionally implanted in him by the psychologically skilled officers and testifies accordingly.

V is sexually assaulted. Before letting her go, the offender administers her a substance thwarting the consolidation of her memory on the molecular level and leaving her with only a faint and dim recollection of the event. Noticing witness W, the offender gives him the firm advice not to testify, along with a dose of propanolol blunting the emotional side of memory so that he cannot remember finer details of the event. Or: W testifies truthfully, but due to his detached emotional response, judges do not consider him trustworthy and dismiss his testimony.[18]

Weakness of Will

Warehouse chain X notices that customers are more susceptible to impulsive purchases after having encountered and resisted various temptations. To facilitate this, they restructure the course of their stores and build in many tempting challenges only to deplete customers' powers of resistance until they are awaited by many more tempting offers in queues before checkout counters.

X produces the same result by offering snacks lowering the glucose level in the brain and thereby diminishing powers of self-control.[19]

Cognitive—Emotional Phenomena

In the final rounds of a poker competition, P secretly sprays odorless Oxytocin around the table. Oxytocin manipulates players' intuitive evaluation of the situation and raises their trust in others not bluffing. P wins.[20]

We could easily carry this further. Some of these stories certainly raise questions about their empirical presumptions, but although empirical matters are admittedly more complicated, none is pure science fiction. And while some, like remote-controlled deep brain stimulators only apply to extraordinary situations, these cases exemplify prototypes:

[17] Kohno et al. (2009) warn about security problems of DBS.

[18] Substances for memory dampening are clinically studied. For its prospects and legal problems see Kolber's instructive work (2006/2008).

[19] See Baurmeister's et al. (2007) intricate research on willpower, ego depletion and the role of glucouse.

[20] For the effects of Oxytocin on risk taking see Fehr et al. (2005, 2008).

The more insights neuroscience and psychology provide about decisionmaking and behavior, the more manipulative interferences become conceivable (Merkel 2007).

In all of these cases, interventions impair mental capacities or alter preferences and will-formation, but none of them is adequately captured by provisions protecting bodily integrity or mental health. Does an induced increase in neurotransmitters such as Oxytocin harm the body? Unless accompanied by other health problems, probably not. To reiterate our earlier point: although all of these interventions cause changes on the neuronal level, *as such* they are insufficient to be considered harms to the body. They are potentially illegitimate only in virtue of their mental effects. None of the affected persons is mentally ill or experiences pain and discomfort—they have only been manipulated.

Concededly, in some cases the law as it stands might already provide some answers. Specific substances (e.g. Oxytocin) might be classified and their use and trafficking outlawed. In others, tort liability might come into play. However, many legal systems probably would have to creatively interpret existing statutes in order to adequately handle such cases. And even then, we suspect, doctrinal troubles could be created by crafting cases slightly differently. Most of these interventions do not constitute a criminal offence, at least not one designed to protect mental integrity, but at best violate minor prohibitions such as the unlicensed use of drugs which lie beyond the core normative problem—i.e. illegitmate interferences with another's mental integrity.

Not all of them may appear severe enough to call for criminal prosecution. This certainly stands to be argued; but in order to do so, we need some principles. Thus, these cases illustrate gaps in the legal protection of persons and a prima facie plausible claim for legal protection of the mind, irrespective of bodily injury and beyond deception and fraud. These interventions are only evaluable by taking the mind seriously, and this requires a coherent theory of its protection.

Normative Foundation: A Human Right to Mental Self-Determination

Let us place the issue in a broader human-rights and legal theoretical context. The source of the problem is that the law is astonishingly silent about the *Rechtsgut*, the interest in need of legal protection, with which these interventions interfere, although it should count among the prime objects of the law's protective concern: the preconditions of the possibility of (mental) self-determination. We claim that a human right to mental self-determination does exist or is, as a tacit assumption, woven into the law's structure.

The scope of the right is twofold: In its negative dimension, it protects freedom *from* severe interferences by the state and third parties, setting up a defensive wall against unwanted intrusions through both factual interventions and normative obligations (e.g. legal provisions regulating what is on or in one's mind). It also grants what one may call positive entitlements, freedom *to* self-determine one's inner realm, e.g. the content of one's thoughts, consciousness or any other mental phenomena. Therefore it affects e.g. current debates about neuroenhancements.[21] But here, we shall leave the positive dimension aside and inquire into the freedom from factual interventions.

The problem is that such a right is unfortunately neither expressly acknowledged by Constitutions or Human Rights Treaties nor given much attention by legal scholars.

[21] In the current debates about enhancing mental capacities with the help of neurotools, human-rights and constitutional law issues are largely neglected. Thus, many ethicists' policy recommendations are somewhat premature. Without a clearer understanding of the fundamental rights involved, the legal regulation of neuroenhancements is not advisable (Bublitz 2011b).

Nonetheless, it has always been presupposed in principled legal thinking and must somehow have fallen into oblivion. This may sound like a bold claim, and we cannot fully substantiate it here. But let us present some ideas which may render it more plausible.

Historical Glances: Protection of the Inner Sphere

The great majority of constitutional rights pertain to actions and objects in the outside world—bodily integrity, property rights, freedom of speech, etc. Not much is said about internal, mental states. This suggests two possible conclusions: Either the mind is not a proper object of legal protection and hence there is no right to mental self-determination, or this right has never been considered more thoroughly because, traditionally, the mind has not been conceived as an entity vulnerable to external intrusions and hence in need of legal protection. We argue for the latter. Because the mind has been regarded as factually invincible, no need for its normative protection has seemed to ensue. Yet, that the mind is unassailable is a rather odd assumption; and modern neuroscience with its re-conceptualization of the mind as inextricably rooted in biological processes makes this oddity patently obvious.

Let us take a brief look back into history. In the highly ideological 1950s, a political-cultural process unfolded which some called "the battle for the mind", or, even back then, "the battle for the possession of the nerve cells" (Meerloo 1956:95). In the far East, Maoist "thought reform" programs instigated the incarceration and re-education of millions of people in order to mould them after a certain ideological image and to literally erase "wrong patterns" of thinking. The West responded to Chinese brainwashing with, inter alia, huge research efforts in behavioral and cognitive sciences. To its rather dark facets belong the victims of the infamous MK Ultra program officially abandoned in the 1970s (Marks 1979). It was held that "the political-religious struggle for the mind of man may well be won by whoever becomes most conversant with the normal and abnormal functions of the brain and is readiest to make use of the knowledge gained" (Sargant 1957:48). Mind interventions for non–therapeutic purposes have a dark history.

It was not so much ethical concerns that thwarted these attempts to invade minds but rather a lack of understanding of neuronal and mental processes and of technological sophistication. It is not fantastical to predict that neuroscience has the potential to turn brainwashing and mind-control practices into reality. Suppose neurotools allow us to achieve what has been attempted—and, in the Maoist case, with partial success—interventions into minds changing desires and beliefs without inflicting pain, harming bodily integrity or the need to indoctrinate persons over extended periods of time. Should governments be allowed to resort to such means?—Obviously not. It appears evident that states must be barred from invading the inner sphere of persons, from accessing their thoughts, modulating their emotions or manipulating their personal preferences. At the very least, such measures are in grave need of justification. But then, there must be a right which protects individuals against such interferences. Perhaps some particularly intense interventions amount to torture and degrading treatment. But in the absence of humiliation and pain, thresholds for mental torture are quite high, as the debates over the infamous US "torture" memos ("waterboarding") recently demonstrated (Bybee 2002). Against less severe interventions, there must be a right affording protection, and it must be built upon a coherent theory of why, when and how to protect the individual human mind. It's starting point must be a clear normative conception of mental self-determination.

Classical Views of Political Philosophy: Libertarianism; Social Contract Theories; Kant's Doctrine of Rights

Mental self-determination concerns the legal relation of a person to herself. This relation has always been subject to controversial philosophical and legal debates and is one of the central issues in political philosophy. Consider, for instance, libertarianism. In the wake of Locke, libertarians believe that persons have property rights in their body; persons literally own (the physical part of) themselves. Ownership discussions focus on the relation of persons to their bodies, their liberty (e.g. vis-a-vis slavery) and the fruits of their labor. But 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.[22] Individuals must have at least a privileged legal relation to themselves, such that no one else has claims over their body and mind unless it has been conferred onto them by the affected person.

Social contract theories, we think, must also presuppose something like original "ownership" over the mind, at least if the idea of free and equal persons is embedded in the (hypothetical) initial contractual situation or setup. When the imagined contractors (e.g. in Rawls' "original position") consider what normative contours their social contract ought to have, and to fairly distribute rights and duties, no one can plausibly have an original right over another person's body or mind. Otherwise, the idea of free and equal deliberators would be vacuous.

More generally, the very notion of a legal subject is hard to construe apart from a self-conscious, thinking being.[23] A legal subject *is* the aggregate of its mental faculties, behavioral dispositions, emotional propensities and so on. Therefore, the question what the legal relation of a subject qua mental being to their own mental phenomena might consist in may appear almost meaningless. After all, a mind is not something that has to be ascribed to a person, it constitutes the person, conceptually as well as normatively.

Therefore, we suggest that a pre-positive ("natural") right to mental as well as bodily self-determination exists. While one might argue about the scope and strength of particular rights to be derived from that original normative status as a person, one can hardly deny that status itself as their very premise. Thus, mental self-determination is not just a right granted (or denied) by legal orders. It is among the basic assumptions on which liberal legal orders are built.

According to Kant's Doctrine of Right, the law pertains to the regulation of the outer world and the external (physical) aspects of human actions only. To Kant, "the concept of right has to do, first, only with the external and indeed practical relation of one person to another, insofar as their actions, as deeds, can have influence on (collide with) each other." Juridical laws are those "directed merely to external actions and their conformity to law" (1797/1991:230, 214). The legitimacy of legal coercion derives from the fact that our actions come in conflict with each other, and hence reciprocal equal freedom has to be secured in order to avert falling back into a "state of nature". Kant thus draws a distinction between the outer part of actions, which the law must regulate, and the inner sphere, which is beyond its legitimate reach. This line of thinking reverberates in today's common saying

[22] Self-ownership with its strong assonance to property in material things is not a fully satisfactory concept here, but that leaves present argument untouched.

[23] This does not, of course, rule out granting the status as legal subject to infants, the permanently unconscious and the gravely mentally impaired. But their status is (normatively) derivative from the paradigm case of the self-conscious, thinking person.

that "law regulates behavior" (as opposed to mental states). But it does *not* entail that the mind does not need and deserve legal protection. On the contrary, it implies that there cannot be any justifiable legal coercion over mental states. This sheds some light on the neglect of the mind in human-right doctrines. The inner world is absent in those doctrines *not* because it is not worthy of legal protection, but because it is positioned beyond the purview of legal regulation. The mind, then, is one's own in an *absolute* sense.

Human Dignity

Moving to positive law, let us take a brief look at a key fundamental right in many jurisdictions: human dignity. The first Articles of the Universal Declaration of Human Rights (UDHR) and the European Charter of Fundamental Rights and Freedoms (ECFR) emphasize the prominent nature of human dignity. While its supreme value is widely accepted, its meaning and scope remain controversial.[24] But despite its indeterminate and contested character, some of its main features seem to be beyond dispute.

In terms reminiscent of the Categorical Imperative, the German Constitutional Court considers human dignity to command respect for persons *as subjects*, i.e. ends in themselves, which strictly prohibits treating them merely as objects.[25] More generally, dignity conceptions are mainly formulated along two lines. In a classic understanding, dignity means respecting the autonomy of persons, and autonomy here denotes a feature of persons setting ends for themselves and accepting (or rejecting) normative rules in accordance with their own reason. In applied (medical) ethics, the importance of autonomy is undisputed. There, it commands respect for the individual's values, preferences and conceptions of a good life but it must also entail respect for the mental capacities for setting ends, i.e. making decisions. Thus, human dignity prohibits at least severe manipulative interferences with reasoning, decisionmaking and the respective capacities (mental manipulations).

Alternative lines of thinking put more emphasis on dimensions of personhood not primarily related to reason, such as suffering and issues of identity. In this vein, dignity protects against unnecessary pain or humiliation and strives to preserve self-worth and development of an individual's personality (mental injuries). Often, dignity is defined negatively in virtue of its paradigmatic violations: brainwashing, indoctrination and conditioning (severe mind-interventions).

These lines of reasoning converge in the postulate that some mental elements of human beings must enjoy absolute legal protection. Thus, one of the central constitutional values, from which all further legal relations derive, essentially concerns protection against severe and non-consensual interventions into the mind.

Freedom of Religion, Thought and Conscience

Last but not least, here is one of the few rights that explicitly protect the person's inner sphere: freedom of religion, thought and conscience, enshrined in many human right treaties.[26] The scope of this right is twofold: the forum internum, the inner sphere where religious, philosophical and moral beliefs are formed, and the forum externum, the manifestation of beliefs in speech and action. While the latter is subject to limitations, the

[24] Particularly in bioethical debates, dignitiy often remains vague; see President's Council (2008).

[25] BVerfGE 30, 1, 25.

[26] Art. 18 UDHR, Art. 18 ICCPR, Art. 9 ECHR, Art. 10 ECFR.

former is protected unconditionally, i.e. the forum internum enjoys absolute protection prohibiting *any* interference.[27]

These absolute freedoms are understood, in the words of the ECtHR, as "cornerstones of any democratic society". The US Supreme Court declared it "the matrix, the indispensable condition, of nearly every other form of freedom … [T]he domain of liberty … has been enlarged … to include liberty of the *mind* as well as liberty of action."[28] And: "If there is any fixed star in our constitutional constellation, it is that no official, high or petty, can prescribe what shall be orthodox in politics, nationalism, religion, or other matters of opinion or force citizens to confess by word or act their faith therein."[29]

These words suggest a human right to mental liberty. However, it has never been elaborated more precisely. To our knowledge, no jurisdiction has developed a theory of legally permissible conduct with minds. In legal practice, freedom of thought has never played a decisive role, its scope and meaning remain vague (Vermeulen 2006; Hammer 2001; Blitz 2010). Even legal scholarship has largely avoided delineating the contours of mind-protecting rights. At best, freedom of thought denies states the legal power to impose upon citizens obligations concerning the content of thoughts (*Orwellian* "thought crimes"). It is beyond present purposes to render the concept more concretely. But what else could it mean but a prohibition of severe interferences which target thinking processes, patterns of thought, contents of opinion or preferences, and also, we add, emotional attitudes that influence ways of thinking?[30]

At least, there ought to be another, presumably non-absolute right protecting the mind against interventions—the right to mental self-determination. Obviously, the foregoing is not a strict logical deduction of that right, but it supports our claim that the lack of protection for the mind is not due to its lacking importance. Rather, the mind seems to have a special place in legal principles. And in the age of technological intrusions into the mind, notions such as freedom of thought may experience a legal renaissance. In fact, the issue has received some attention recently. Civil rights advocates promote the idea of "cognitive liberty" (Boire 2003; Sententia 2004; Kolber 2008; Blitz 2010) and some legal scholars discuss "mental" or "brain privacy" in respect to lie-detection and functional magnetic resonance imaging. But a broader cogent theory of the place of the mind in the architecture of rights is still lacking. We can only explain this remarkable deficit of attention by a pervading misconception of the mental as a quasi-noumenal sphere, immune to the causal powers of external events. In regard to freedom of thought, this can be substantiated by some historical quotes:

In drafting the UDHR, delegates remarked: "It would be unnecessary to proclaim freedom of [the inner sphere] if it were never to be given an outward expression" as the inner is beyond any access (Hammer 2001:34). And in the records of the German constitutional assembly, one reads: "A norm that thought is free is so self-evident that its codification is meaningless. It would merely be an empty provision, void of any application" (Bublitz 2011a). Similarly, the US Supreme Court declared: "[F]reedom to think is

[27] See e.g. UN General Comment No. 22, 1993: Art. 18 does "not permit any violation whatsoever on the freedom of thought."

[28] Palko v. Conneticut, 302 U.S. 319, 326–327, emph. added.

[29] West Virginia State Board of Education v. Barnette, 319 U.S. 624 (1943).

[30] The meaning of "thought" is vague. For a meaningful legal protection, it has to be interpreted broadly to include emotional states, since empirical sciences have convincingly demonstrated that emotion and cognition are interrelated phenomena; good decisionmaking seems to *require* emotional capacities (see e.g. Damasio's somatic marker thesis).

absolute of its own nature, the most tyrannical government is powerless to control the inward workings of the mind."[31]

These remarks date back to the 1940s, a time when there may have been good reasons to emphatically believe in the untouchable absoluteness of freedom of the mind. At any rate, a widespread belief in the *factual* invincibility of the mental realm may account for the lack of legal interest in its protection. Today, however, when neurotechnologies promise to enable us to surmount the natural boundaries of the mind (the skull) and to modulate the inward workings of the mind, the situation for the law has profoundly changed. It must set up normative boundaries. For centuries, it has protected the sanctity of the home. Isn't it time to protect the sanctity of the mind, too?

The challenge for the law is to render the scope of mental self-determination more concretely. As a human right, it pertains to the vertical relation between state and citizen. However, the protection of the mind also has to apply in the horizontal relation between citizens, to be achieved, inter alia, by introducing a novel criminal offence penalizing interventions into other minds, demarcating the limits of permissible conduct with regard to other persons' minds. We will formulate a pertinent proposal in a moment.

The Notion of Mental Self-Determination

To gain a better understanding of the protected interest, some words about "mental self-determination" are in order. It is important to differentiate between the scope of the right and the factual powers of mental self-determination. Concerning the latter, we should bear in mind that these powers are much more limited than it often appears. Some illustrations: We can neither concentrate as strongly as we wish, nor remember all we should. On occasion, we cannot tame our emotions nor avoid hating, liking or loving someone else, even if it runs counter to our well-understood interests. We find it hard, sometimes impossible, to overcome behavioral dispositions or cease habits. We cannot alter our preferences by efforts of will, and, perhaps most remarkably, we cannot change our beliefs by wanting to believe differently (Pettit and Smith 1996). At times, we have problems motivating ourselves to do what we should. Our behavior is often biased and predictably irrational. We find ourselves in an incessant stream of consciousness in which phenomena appear and fade away without any conscious command. Even willingly halting the wandering of the mind takes a long time of meditative practice.

Moreover, our introspective insights into the workings of our minds are limited. In our examplary cases, none of the target persons is necessarily aware of being manipulated. Indeed, unawareness of victims might be the key to successful manipulations, as detected attempts could be blocked by inner resistance. A long line of social-psychological research demonstrates the unreliability of introspection and the inability to recognize situational factors influencing thinking and acting (Wegner 2002; Bargh 2005). Do you, for instance, believe that your evaluation of other persons depends, to some extent, on the temperature or scent of the surroundings? Or do you feel influenced by advertisements? We don't either, but science and surveys tell us a different story. It is a fact that remains hard to accept: Major parts of our conscious experience are prepared and directed by subconscious mental processes, a largely automated machinery governing much of what we think, feel and do (Kahneman 2011; Evans 2010). In this light, speaking of mental self-determination

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

may appear presumptuous and ill-informed. The truth, it may be objected, is rather that it is even quite unclear who the controller of all these processes really is (Wegner 2005).

However, legal questions should not be confused with empircal aspects. The right to mental self-determination seeks to protect our mental powers from undue influence. It refers to interpersonal relations, not intrapersonal capacities. It is precisely the acceptance of our limited mental powers, the weaknesses of the mental condicio humana that gives rise to its legal protection. The question is rather: What are the normative consequences of the fact that people are not as self-determined in relation to their minds as philosophy and legal theory often tend to presume?

Part of the answer is developing legal protection for mental freedom rather than disavowing the facts. "[T]o gain control over external influences on their behaviour, people need first to recognize that they are subject to them, instead of denying this" (Hurley 2005). On a grander scale, this is true for the legal order, too. Ignoring it would come at a price for both the individual and society.

Towards Protection of the Mind Through Criminal Law

What then are the legitimate ways of changing other minds? As little systematic analysis has been devoted to this question, it might be wise to start from scratch. As a first observation, it is important to note that people change each other's minds all the time and in innumerable ways. Stimuli continuously wander from one mind to the next, social life may be considered nothing but a web of mutual influence. In a variety of well-defined situations, criminal law already does interfere with this constant exchange of stimuli in virtue of their mental effects by proscribing, e.g. deceptive messages leading to economic loss (fraud) or libel and slander. Also, it protects against certain types of coercive influence on the psychological condition, such as duress, stalking or harassment. Furthermore, many other criminal offences indirectly protect the mind (e.g. mental consequences of sexual assault). However, many loopholes remain, especially with respect to mental manipulations.

Some jurisdictions have enacted offences against the mind. For instance, the Italian crime of "plagio" (Art. 603) proscribed the "subjugation" of another person. Plagio originated from Roman Law where it prohibited enslaving free men or someone else's slave. By figurative speech it evolved beyond *physical* restraints to forms of "psychological kidnapping" (or, in Bob Marley's words "mental slavery"). In 1981, the Italian Constitutional Court struck it down because of "the imprecision and vagueness of the legal provision, and the impossibility to assign to it an objective content" (Borowitz 1971).

In 2001, France introduced a set of laws in response to the phenomenon of new religious movements, including an offence formerly discussed as "mental manipulation", now part of the offence of "fraudulent abuse of ignorance and weakness". Here is an excerpt[32]:

> Fraudulently abusing a person in a state of physical or psychological subjection/dependency (*sujétion*) resulting from serious or repeated pressure or from techniques aiming at altering her capacity of judgment, in order to induce her to conduct seriously harmful to her, is punished by three years of imprisonment…

Roughly, the norm penalizes exploiting vulnerable and suggestible persons. Confronted with new religious movements, other European countries have discussed introducing

[32] Art. 223-15-2: De l'abus frauduleux de l'état d'ignorance ou de faiblesse. Unofficial translation. The authors would like to thank Céline Gollbach for research of French law.

similar offences.[33] At first glance, it may come as a surprise that neuro-interventions and the regulation of religion share a common normative problem. But on second thoughts, parallels become obvious: Both concern prima facie dubious interventions into minds without causing bodily damage.

The French provision has attracted criticism from advocates of religious liberties, arguing that prohibitions of mental manipulations are based on obscure notions such as brainwashing, products of popular imagination but not empirically verifiable phenomena (Richardson and Introvigne 2001). Mental manipulation, critics claim, might be "nothing but a modern metaphor for medieval bewitchment and possession" (Duvert 2004:47). Indeed, concepts such as brainwashing certainly lack precision (though, arguably, they refer to real phenomena, Lifton 1961; Taylor 2004). But irrespective of the "brainwashing controversy" in social sciences (Zablocki 1997), this line of criticism is misguided. Even if no special mysterious techniques of brainwashing exist, contending that whatever one does to another's mind is hence legitimate is an obvious *non-sequitur*.

What gives rise to such criticisms is a misconception of the notion of free-will and its presuppositions. One critic contends: "Admitting that the human mind may be handled and manipulated implies giving up the very idea of free will, and more importantly, the possibility of human freedom*, tout court*." (Duvert 2004:49). The opposite is true: Denying the human mind's malleability by emphatically proclaiming its unassailability gives up on the idea of protecting the conditions on which freedom stands. The law cannot simply close its eyes and declare any weaknesses of the mind as non-existent. Freedom is not something to be taken for granted but something to be preserved and secured. And if the law treats persons as free, it has to grant them the legal powers to remain sufficiently free—at least from severe external influences.

In fact, virtually all legal systems follow the French example insofar as they afford stronger protection to vulnerable individuals (the elderly, minors, the cognitively impaired) in many areas of the law where "undue influence" is forbidden. We merely suggest that these special protection clauses be expanded to ordinary people if empirical sciences show that they too are more vulnerable than traditionally conceived. Hence, the criticisms leveled against penalizing mental manipulations do not refute the necessity of mind-protection. Rather, the discussions in France and other European countries highlight gaps in legal doctrines in regard to manipulations. The French provisions point in the right direction, but more work remains to be done.

Our Own Proposal

To clarify at the outset: We are talking about interventions into other minds, i.e. stimuli sent from one person with mental effects in another, to which the addressee has not given consent. If, just hypothetically, one were to ban any and all such interventions, we would

[33] A proposal from the Swiss "Rapport de la Commission penale sur les derives sectaires sur la question de la manipulation mentale" (1999) reads: "Whoever has carried out physical or psychological actions in a repeated and systematical way, aimed at impairing the capacity of another person to make autonomous judgments, or at placing this other person in a state of dependency, will be punished..". A Swedish Commission comes to the conclusion that "legislation affords insufficient protection with regard to what is termed 'improper influence' or manipulation. Introduction of this term in the legislation would benefit both serious practitioners of religion and personal integrity … The Commission therefore proposes that the Penal Code be amended to include a new penal provision making improper influence a punishable offense." Quoted from Richardson and Introvigne (2001).

have to stop talking to each other and prevent any emanation of stimuli from our sphere of responsibility. Such a stimuli-free world is anything but desirable, probably not even conceivable. Obviously, the default position cannot be designated by a complete prohibition of changing others' minds. On the contrary, deprivation of external stimuli may even lead to dramatic negative psychological consequences (Lilly 1956). On the other hand, the given situation of, by and large, unrestricted stimuli allows for too many unwanted intrusions into others' mental spheres. Hence, lines must be drawn to separate permissible from impermissible interventions. For this, we hold "mental self-determination" to be the most promising notion.

In its light, the aim is not an environment free of external stimuli, but free from stimuli that have deleterious effects on other persons' mental integrity. The principal premise is that no one has a right (a legally enforceable claim) over another's state of mind. Moreover, it imposes obligations on everyone, first and foremost, to refrain from interventions severely interfering with another's mental integrity by undermining mental control or exploiting pre-existing mental weaknesses.

However, it must be borne in mind that protecting the rights of one always curbs the liberty of others; outlawing interventions restricts liberties of interveners. Hence, rights and freedoms of senders and recipients of stimuli have to be balanced, and, thereby, two important factors should be taken into account: one is the ways or means of intervening into minds and the other is their respective normative status. And, as legitimate criminal law is only a means of last resort (ultima ratio), only the most severe interventions ought to be penalized, guaranteeing and enforcing an indispensable minimum of respect that persons owe to each other with regard to their respective mental realms.

Effect of Intervention

First, to raise legal suspicion, interventions into other minds must produce negative effects that substantially undermine mental self-determination. More concretely, worrisome interventions are those that reduce or impair cognitive capacities (e.g. memory, concentration, willpower), alter preferences, beliefs and behavioral dispositions (e.g. implanting false or erasing true memories, creating addictions), elicit inappropriate emotions (e.g. artificially induced appetite) or clinically identifiable mental injuries.[34] These categories overlap, and not much would be gained by further delineation. The vast majority of the millions of visual or auditory stimuli entering our minds consciously or subconsciously day by day do not undermine mental self-determination. Listening to words and sounds or watching pictures surely changes mental states, but it does not undercut any mental capabilities nor constitute legally relevant harm even if it influences us in various ways. These trivial interventions lack legal significance. However, the interventions in our exemplary cases above all produce mental effects that contravene the idea of mental self-determination, primarily because of the graveness of their effects. But that is only one part of the story, the victim's side.

[34] Philosophically minded readers may quarrel over the multitude of highly normative notions such as "negative interferences" with mental self-determination. True, such concepts are in need of further explication and may prompt difficult discussions. But that is what lawyers and legal scholars do. The point here is not to formulate a catch-all definition resolving all questions. Given the abstract wording of legal provisions, designed to apply to myriads of practical cases, this is impossible. Rather, we seek to find starting points and principles to frame the issue which have to be rendered more concrete in light of particular cases.

Means of Intervention

Second, as set out above, negative mental changes *per se* are not even indications of illegitimate interventions. In fact, we intentionally change each others' beliefs and emotions all the time, and not always with beneficial mental effects in the other. Still this does not evoke legal concern. It is simply a constitutive feature of social life. Only some ways of doing so attract suspicion. The many ways of intervening into minds are often categorized into two subclasses: *direct and indirect interventions*. While the difference between them may appear fairly self-evident, their precise description is quite challenging. Abstractly, both types are stimuli changing mental states and, in whatever way they achieve this by, are always accompanied by changes in the brain. Because of this, some authors propose to treat them on a par. However, we suggest just the opposite: Their proper and principled distinction is the indispensable starting point for a convincing legal assessment. So here is a reconstruction (see also Levy 2007:69) of the dichotomy:

Direct interventions are those working directly on the brain (e.g. DBS, psychoactive substances) whereas indirect interventions are somehow more remote—mediated, as it were, by internal processes on the part of the addressee. 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.[35] 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, e.g. the semantic content of messages or images, and engage with the psychological structure of the perceiver.

Concededly, all of these distinctions collapse at some point: Any transformation of the external world must cause internal (neuronal) changes. Direct and indirect interventions both affect (or are realized by) brain activity, and the effectiveness of both will at some stage also depend on psychological properties of persons. That is why mood, attitudes and features of character influence individual responses to psychoactive substances.

Their abstract similarities notwithstanding, interventions differ relevantly. Especially in light of the idea of mental self-determination, the rough distinction between direct and indirect interventions is not only tenable but significant. Persons have most control over interventions whose sensual substrates they perceive, particularly those rising to the level of conscious awareness. We can think about what we see and hear, we can modify and process it. And we can attribute experienced inner emotional changes to their cause—the perception.

Control is reduced when stimuli are subconsciously processed (subliminal stimuli). Still, persons have more control over those than over direct interventions. This may be illustrated by functional accounts of consciousness such as the global workspace model.

[35] Speaking of psychological mechanisms is, admittedly, vague. Tentatively, psychological processes are those which are best described by reference to psychological properties of persons such as fear or excitement instead of neuronal or physical occurrences. Our distinction between indirect and direct interventions does not rely on a particular mind-brain theory. The differences between causal pathways into the mind could be reformulated in reductionist terms without losing their peculiarities on which the normative differences are based. The sequences of mechanisms stimuli run through remain different, regardless of the level of description.

According to them, the mind works in a modularized way and has manifold specialized submodules. The function of consciousness is a global information exchange which enables 'communication' between different submodules and parts of the brain, facilitating higher cognitive functions such as working memory and rational decisionmaking (Baars 1997). Content in consciousness is broadcasted and received by various submodules and hence allows for most control. Subconsciously processed stimuli are relayed to fewer submodules, which we take to indicate that persons have less control over them. Nonetheless, even subconsciously processed information involves psychological processes. Our mind is set up to handle the enormous incoming data-stream by subconscious processing. And thus, subconscious stimuli presumably run through "filters" and are "checked" against or aligned with existing psychological states and preferences before they lead to altered moods or beliefs. Therefore, stimuli working their way through conscious awareness are more controllable, whereas subconsciously processed stimuli are less controllable.

Direct interventions, by contrast, are qualitatively different, presumably *bypassing* these psychological (not necessarily rational) processes altogether. Roughly one could say that *indirect interventions are inputs into the cognitive machinery our minds are adapted to process, whereas direct interventions change the cognitive machinery itself*. Again, indirect interventions also leave traces in the brain, but transformations are somehow more in accordance with the existing personality structure and preserve the authenticity of the individual.[36] Changes by indirect stimuli are consequences of interacting with the world while direct interventions "distort" our relations to the world or to ourselves.

Certainly, there are grey areas. Olfactory stimuli, for instance, seem to be much less controllable than, e.g. verbal language, a phenomenon familiar from the surprising way smells sometimes evoke memories. Here, our proposal leads to some hairsplitting distinctions, for instance between consciously perceived smells and nasally administered odorless Oxytocin, both taking the identical causal route into the body and possibly into the mind with the only difference that the latter does not evoke a phenomenal experience.

But as is familiar from countless other areas of the law, such hairsplitting is inevitable and, so to speak, the law's daily bread. We think that no theory of interventions into minds can deny or pass over these differences without losing important ingredients. The paradigmatic cases on the respective sides of the divide make this clear. In light of the task of protecting self-determination over one's mind, interventions may differ only gradually but still normatively significantly. Fortunately, we do not have to exclusively rely on the direct/indirect distinction. It only provides a first orientation for evaluating interventions.

Normative Status

There is another important difference between types of interventions which has not yet been appreciated in the neuroethical literature. The means by which persons seek to change others' minds may themselves enjoy legal protection. We refer to this as the normative status of the intervention. Not all interventions are protected equally, in fact, they are—and should be—expressions of quite different freedoms with very different normative weight. For instance, changing other minds via speech is an action to which strong human rights

[36] Of course, authenticity is one of the most challenged notions in the enhancement debate. But in our context, it has a different normative function. There, it is often understood as an interest to be observed by oneself in self-transformations, here, much less problematically, it designates an interest to be protected against others. The contested issue of what an authentic personality consists in can be left to the decision of the individual (and be left aside in our discussion).

protection is afforded, whereas spraying Oxytocin for the same end is not, irrespective of the strength of the respective stimuli.

In the current literature, however, there is a tendency to downplay these differences and to treat them "on a par" instead. In his (well-argued) book, Neil Levy advances an "ethical parity principle": "Our new ways of altering the mind … ought not to be regarded, as a class, as qualitatively different in kind from the old." In a slightly weaker version, the parity principle states that "unless we can identify ethically relevant differences between internal and external interventions and alterations, we ought to treat them on a par… [T]he mere fact that one kind of intervention is internal is not a ground for objection" (p. 62).

Levy does not claim we should not worry about new means of mind-interventions, rather that we should not be especially worried about "internal means of manipulating the mind, not until far more powerful techniques come into existence", because traditional techniques might be equally effective: "[T]he kinds of powers that neuroscience promises in the near future pale in comparison to the mind…control techniques already in existence, in power and in precision" (p. 144).

However, Levy focuses too narrowly on the interventions' *effects*. While he correctly notes that indirect interventions are often more effective in altering mental states, their impact is not all that matters. Consider also Greely's (2008:1134) words in regard to treatment of offenders: "I see no qualitative difference between acting *directly* to change a criminal's brain—through drugs, surgery, DBS, or vaccines, if proven safe and effective—and acting indirectly—through punishment, rehabilitation, cognitive therapy, parole conditions—to achieve similar ends."

Greely and Levy both differentiate between interventions in virtue of their side effects, and so do we. But apart from this, we want to advance a stronger claim in contrast to their suggestions: If two interventions have the same or sufficiently similar effects, they may still differ in the way the effect is produced, i.e. the causal routes into the mind, and this difference is crucial as it either respects mental self-determination or disregards and circumvents it.

For the law, a parity principle between interventions cannot apply, not even prima facie. Rather, we propose a *normative dualism of interventions*: Indirect interventions are normally permissible while direct interventions are prima facie prohibited (without consent, of course). The latter, so we suggest, should even constitute a criminal offence. Suppose a person seeks to change the mind of someone else, say, change his beliefs; or, even stronger: a government aims to change citizens' behavior (for a laudable goal, say, CO_2 reduction). Should it really be prima facie irrelevant whether they do so by argument, a public awareness campaign or by directly tampering with neuronal structures in which beliefs and behavioral dispositions are encoded? Certainly not. The law does and should allow—and a deliberative democracy even demands—to change other minds and beliefs by exchange of arguments in a wide sense, through the use of public reason. But it should prohibit doing so in more manipulative ways.

It is the well-founded liberty of any person to change another's mind through means such as speech and expression of opinions, even if their arguments might be so persuasive as to be irresistible or so offensive as to inevitably "hurt" feelings. And as all indirect interventions are based on stimuli that enter through the senses and emanate from the external environment, it is very likely that the person sending these stimuli has some kind of a legally protected interest in doing so. Trivially, persons may paint their houses or design their stores in whichever way they want although this deliberately changes the minds of visitors and perceivers in various respects. In these and many other cases, indirect interventions are expressions of legally protected interests which have to be balanced against the right to remain free from interventions.

By contrast, directly intervening into another's brain by, e.g. secretly spraying Oxytocin or putting a magnetic coil over another's head is not normally an expression of a legally protected interest. The only real *factual* interest interveners seem to have is in changing another's mental state. Yet, this interest is not a *legally* protected interest as it contravenes the first principle of mental self-determination: no one else has rights over another's mind, i.e. no one has a claim that someone else be in a particular state of mind, entertain a specific belief or feel a certain way.

This point may be generalized: Prohibiting direct interventions in the name of protecting mental liberty does not infringe upon any reasonably defined freedom between equal citizens. But social life as we know it, and as it evolves from the mutual demarcation of legally protected spheres of liberty within which everyone can act and be as they wish to, would collapse if indirect interventions were forbidden. What, for one, is an indirect intervention into her mind, may be the freedom of speech of another. Thus, communicative acts have to fall under special rules, legally as well as ethically; they exemplify a different category.

Any kind of social interaction of course involves a large number of stimuli. Gestures and looks, the tone of the voice, the form of a message and many other factors influence the other. The broad categories we proposed surely have to be rendered more concrete to resolve particular cases. The basic structure of doing so, however, remains the same. At least in respect to characteristics of persons, e.g. charming salesmen or attractive bartenders subconsciously manipulating others, the legal evaluation is clear: All such ways of presenting oneself are protected by human rights (e.g. personality rights) which usually prevail over the right of mental self-determination of the recipient and therefore constitute legitimate indirect interventions.

Some interventions are harder to classify. The classic case: subliminal messaging and other influences that make use of peripheral routes of perception. Are they free-speech protected acts of communication? We doubt it. At any rate, they can only enjoy considerably weaker protection than other forms of supraliminal communication and have to be balanced against mental self-determination, which should normally prevail. Furthermore, insights from neuroscience and psychology may reveal that some acts of communication currently enjoying full free-speech protection are actually more powerful than it may appear. For instance, many advertisements try to form associations of unrelated matters (famously: sex, women, cars). If this proves to be successful and customers' preferences are influenced accordingly, one may ask why these manipulative influences should be considered as exercises of free speech. The strong protection of free speech relies, inter alia, on the idea of public reasoning and the ideal of creating a more rational society through open argument. The standard model concerns two persons willingly communicating with a censuring state interfering. Today, we may often rather have the situation of one person trying to unilaterally influence the other by making use of whatever psychological trickery he can obtain. Then, mental self-determination must come into the equation. Certainly, however, one has to be very cautious not to grant too much discretion in such matters to the state. Still, it might be necessary to strike delicate balances in that area (neuromarketing is an interesting example). We cannot purse this here in any more detail. All we want to demonstrate is that the normative rules for indirect and direct interventions are strikingly different. Curbing the former immediately raises free speech issues and demands balancing rights; restricting the latter does not.

As a final difference between indirect and direct interventions, we wish to recall the aspect of dignity as respect for autonomy and individual subjectivity. Despite all unclarities in interpretations, direct interventions seem to violate the demands of dignity. Indirect

interventions, be it by speech or sounds or images, engage with the other's first-person perspective by recognizing and referring to her beliefs and feelings. Even the most rhetorically distorted propaganda must find resonance in the listener's personality in order to have any effect, and so does the most skillful deceptive and manipulative psychotherapeutic intervention. It is about the other person as a subject, and, circumventing rationality as they may, these interventions respect, in principle, the other person's sovereignty over her mind.

It is the sinister side of neuroscientific techniques to bypass the first-person perspective and to treat the other as a physical object, reducing them to an object of nature, treating them according to natural laws and negating their control over their own minds. This heteronomous access to the inner realm of others may amount to mental programming, conditioning, brainwashing, and objectification. And this is what respect for human dignity forbids. Respect for persons as subjects entails respect for their first-person perspective and implies prohibitions on direct interventions.

In summary, we propose a normative dualism of interventions. Prima facie, indirect interventions are permissible, direct ones not. This dualism collides with Levy's parity principle. We think, however, that compelling normative differences justify our position. First, indirect interventions are instances of specially protected liberties such as freedom of speech and their restriction ipso facto necessitates balancing countervailing rights. Direct interventions are not normally actions that are legally privileged in any comparable way. This difference follows straightforwardly from the structure of reciprocal rights and freedoms. Second, in light of a right to mental self-determination, interventions bypassing mental control are evidently illegitimate. Most indirect interventions, by contrast, at least in principle obey the command to respect the other's mental sovereignty. In consequence, we may hurt people with cutting remarks and manipulate them with distortive words, but not by directly tinkering with their neurons. This, we contend, is rooted in basic principles of law.

Elements of a Novel Criminal Offence

Finally, let us condense the foregoing into a proposal for a new criminal offence[37]:

> (I) Intervening directly into other minds through stimuli that operate *directly* on the brain through the use of pharmacological, surgical, neuro-stimulating, genetically engineering or other electro-magnetic, biological or chemical means, and thus purposefully bypassing mental control capacities of the addressee, causing serious negative mental consequences shall be punishable …

Surely, "negative mental consequences" need to be defined more precisely, inter alia, they must encompass mental injuries, lowering of mental capacities and changes of preferences. We hasten to note that such interventions can, to a large extent (but still within certain limits), be justified by informed consent. The legal-methodical way to deal with consent and other justifications is entirely familiar to criminal lawyers.

> (II) Intervening *indirectly* into other minds through stimuli purposefully designed to bypass mental control capacities causing severe negative mental consequences shall

[37] This is a modified version of proposals for German Criminal Law by Merkel (2009) and Bublitz (2011a).

be punishable unless such stimuli are exercises of permissible conduct such as free speech in respect of the other person's mental self-determination.

This covers perceptible (though not necessarily consciously perceived) interventions such as subliminal stimuli. Insofar as constitutions grant such stimuli full free-speech protection, it needs to be balanced against mental self-determination. Also, negative consequences need to be severe and—on the subjective (mens rea) side—the offence should require a qualified state, purpose or, perhaps, knowledge. Otherwise, far too many commonplace social interactions would fall under the prohibitions. Attempts should be punishable in both clauses as oftentimes only the attempt, but not the effects will be provable.

Regarding indirect interventions of the rather usual forms from suggestive persuasion to deceiving into a love affair, one has to bear in mind the warning by the Italian Constitutional Court. Abstract formulations will be too imprecise, hence more context-specific provisions are needed. One criterion which can be distilled from previous cases is that some interventions leading to mental harm involve deception (suffering-spouse). Perhaps, by analogy with fraud (deception + economic loss) a mind-protecting norm could be construed as "mental harm through lying" (deception + severe negative effects). But this needs further deliberation.

Since all prohibitions of indirect interventions straightforwardly entail curbing the freedoms of others, one may have to define special duty offences. The bottom line may be that anyone who exposes others knowingly to serious mental risks might be considered as having, within certain limits of reasonableness, a duty of care, e.g. psychologists, psychiatrists, perhaps policemen in regard to the memory of witnesses, or employers toward the mental health of their employees. This would also be the question in cases of marital infidelity. Spouses may have a special duty of care towards each other in respect to mental integrity, just as they, by the way, already have in many jurisdictions in respect to bodily integrity. Nevertheless, this duty has to be weighed against the right to personal liberty. As the law cannot, and ought not to, interfere with these highly intimate matters, liberty must prevail over care duties in such situations.

In the foregoing, we have focused on manipulative interferences and neglected what is presumably the standard type of mental injury in tort-litigation: stress-reactions such as posttraumatic stess disorder. Although they involve more complex background reasoning, we think they fit into our scheme. These symptoms are reactions to stressful events and hence have to be perceived. We suggest that they can only give rise to claims if (1) they themselves were foreseeable, and (2) the stressing event itself was brought about illegitimately. Then the liability of offenders for causing the stressful event is extended to cover ensuing harms to the psyche of others (e.g. witnesses), but it does not turn an otherwise permissible action into a criminal offence solely because of its mental consequences. And since their original act has to be illegitimate for other reasons, extending liability does not curb offenders' freedom of action.

Furthermore, the French provision deserves further attention. In some cases, bringing about mental weaknesses is, by itself, not illegitimate; but unduly exploiting them may be so. In this respect, the French norm may well serve as a model for other countries.

We must defer the discussion of a variety of other issues such as consent. That persons can consent to having their minds changed is obvious. The foregoing only applies to unwanted intrusions. Justification raises quite a few more major problems, particularly with regard to forced (but medically indicated) psychiatric interventions. Perhaps the most troublesome issues are of a practical nature: proof of causation, unusual dispositions of

victims ("eggshell psyche"). They all require careful consideration and we therefore cannot provide conclusive overall solutions to our examplary cases above, let alone to hard-to-assess harms rooted in complex social conditions such as the job market. Moreover, social psychological findings about humankind's susceptibility to situational forces deserve much closer legal attention (Nahmias 2007; Zimbardo 2007).

Finally, we are aware that many objections to our proposal of a new criminal offence may be raised. We emphatically wish to encourage skeptical comments. And we want to reassure readers that we are in no way advocates of new criminalization strategies. Quite to the contrary; we believe that criminal law must, in every single one of its statutory provisions, remain a narrowly defined means of last resort to defend the basic rules of a well-ordered society. We would much appreciate other and softer measures to protect the mind. Respect for psychological integrity and emotional tranquility mainly calls for political action, not new criminal offences. Also, we recognize that, due to issues of proof, our offence may play only a minor role in courts. But it is, of course, not our aim to have numerous persons convicted. Rather, we strive to put on the legislative and scholarly agenda, and, therewith, secure its foundations, what we believe to be one of the most precious human rights: mental freedom.

Let us conclude with a variation of the words of the US Supreme Court: The fundamental rights protecting free actions in the external world are indeed fixed stars in the constitutional universe. But their logical, albeit not always visible, center of gravity is the freedom of the inward world in which opinions are formed, life-plans developed, dreams cherished and emotions experienced. If the law assigns insufficient weight to its protection, the entire galaxy of liberty may collapse.

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