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Cognitive Content Moderation: Freedom of Thought and the First Amendment Right to Receive Subconscious Information

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COGNITIVE CONTENT MODERATION: FREEDOM OF THOUGHT AND THE FIRST AMENDMENT RIGHT TO RECEIVE SUBCONSCIOUS INFORMATION

*Mason Marks**

Abstract

In the television series *Severance*, employees of Lumon Industries receive brain implants that divide their memories of work and home life. When employees arrive at work, implants block access to memories of the outside world and unlock memories formed on the job. By manipulating the flow of information in employees' brains, Lumon engages in what this Article calls *cognitive content moderation*. Though *Severance* is science fiction, emerging technologies, including drugs and electronic devices, promote cognitive content moderation by influencing thought, memory, and perception. Constitutional law is unprepared. To clarify freedom of thought and make it more useful, this Article presents a novel information-based theory of mind, which frames thought in terms of information flow. This approach bridges the divide between (1) free thought theory and doctrine, which are underdeveloped and underused, and (2) free speech theory and doctrine, which are robust and frequently employed.

Framing thought in terms of information flow allows the application of existing free speech doctrine to freedom of thought. For instance, the established First Amendment right to receive information and ideas can be applied to cognitive processes such as thought and recollection. These phenomena require the transfer of information from subconscious brain regions to one's conscious mind, which can be considered a listener for First Amendment purposes. Framing thought in terms of information flow also suggests the existence of a right to receive subconscious information, which protects listeners

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from coercive cognitive content moderation. The government interferes with this right by impeding the flow of mental information or restricting access to technologies that promote it. Framing thought in terms of information flow also defends freedom of thought’s status as a fundamental First Amendment right. After describing the right to receive subconscious information and how existing theory and doctrine support it, this Article applies it to four examples of cognitive content moderation. It explains how the information-based theory intersects with First Amendment doctrine on commercial speech, government speech, and compelled speech. It concludes by discussing potential objections and proposing sensible limits to address them.

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INTRODUCTION

In the sci-fi television series *Severance*, employees of Lumon Industries receive brain implants that segment their memories of work and home life.¹ When employees arrive each morning, the implants suppress their access to memories of the outside world, including those featuring family, friends, and popular culture.² Employees can retrieve only work-related memories formed within the building. When they leave work each day, the process reverses; implants block work-related memories while restoring access to memories of the outside world.³ Lumon can also intervene by flipping a switch, controlling what information employees can summon from the depths of their subconscious minds.⁴

Manipulating the flow of mental information can be framed as *cognitive content moderation*, which is analogous to content moderation performed by internet and social media platforms.⁵ Online content moderators decide which content is acceptable for users to consume and which should be restricted.⁶ Similarly, cognitive content moderators regulate access to information stored within people’s brains. Some exert this control more directly and overtly than others. Lumon’s fictional technology may seem far-fetched. However, emerging technologies, such as deep brain stimulation and brain-computer interfaces, make

1. *Severance* (Red Hour Prods. 2022).

2. *Id.*

3. *Id.*

4. *Id.*

5. See Kate Klonick, *The New Governors: The People, Rules, and Processes Governing Online Speech*, 131 HARV. L. REV. 1598, 1665 (2018) (describing how online content moderation determines who can participate in a digital democratic culture).

6. *Id.*; see also Evelyn Douek, *Governing Online Speech: From “Posts-as-Trumps” to Proportionality and Probability*, 121 COLUM. L. REV. 759, 762–64 (2021) (describing the evolving role and challenges of online content moderation).

cognitive content moderation possible.⁷ More subtle forms of cognitive content moderation have already matured,⁸ and both public and private actors use them to observe and influence thought and behavior.⁹

This Article explains why existing First Amendment theory and doctrine on free thought cannot protect people from coercive forms of cognitive content moderation. Drawing from the fields of law, neuroscience, and philosophy, the Article proposes a novel information-based theory of mind that reframes thought in terms of information flow.

Abundant legal scholarship and U.S. Supreme Court precedent describe freedom of thought as a fundamental right protected by the First Amendment.¹⁰ Existing scholarship and

7. See Wissam Deeb et al., *Fornix-Region Deep Brain Stimulation-Induced Memory Flashbacks in Alzheimer's Disease*, 381 NEW ENG. J. MED. 783, 783 (2019) (describing how deep brain stimulation improved the memories of people with Alzheimer's Disease); see also Imad S. Khan et al., *Deep Brain Stimulation for Memory Modulation: A New Frontier*, 126 WORLD NEUROSURGERY 638, 640 (2019) (summarizing reports of memory improvement in patients receiving deep brain stimulation).

8. See, e.g., Ari Ezra Waldman, *Cognitive Biases, Dark Patterns, and the Privacy Paradox*, 31 CURRENT OP. PSYCH. 105, 107 (2020) (describing the use of deceptive dark patterns, which are user interfaces that leverage people's cognitive biases to influence consumer decisionmaking and bring about a desired outcome); see also Willy Pedersen et al., *Narratives of the Mystical Among Users of Psychedelics*, 64 ACTA SOCIOLOGICA 230, 240–41 (2021) (describing how psychedelic substances reveal useful insights that change how people perceive themselves and others).

9. See Brian Hengesbaugh & Harry Valetik, *FTC Is Escalating Scrutiny of Dark Patterns, Children's Privacy*, BLOOMBERG L. (Jan. 9, 2023, 4:00 AM), <https://news.bloomberglaw.com/us-law-week/ftc-is-escalating-scrutiny-of-dark-patterns-childrens-privacy> [<https://perma.cc/2TRG-KTGH>] (describing the Federal Trade Commission's increasing scrutiny and regulation of commercial dark patterns, which are design features that deceptively leverage cognitive biases to influence human decisionmaking); David Halpern & Michael Sanders, *Nudging by Government: Progress, Impact, and Lessons Learnt*, 2 BEHAV. SCI. & POL'Y 53, 53–55 (describing how government "nudge units" leverage design and behavioral science to influence decisionmaking); Terry Gross, *The CIA's Secret Quest For Mind Control: Torture, LSD and a Poisoner in Chief*, NPR (Sept. 9, 2019, 2:50 PM), <https://www.npr.org/2019/09/09/758989641/the-cias-secret-quest-for-mind-control-torture-ld-and-a-poisoner-in-chief> [<https://perma.cc/WQ9Y-BR8X>] (describing the U.S. government's use of psychedelics in efforts to develop mind control techniques). One might also consider the current federal prohibition on the personal use of psychedelic substances a form of cognitive content moderation. By prohibiting access to these substances, the government prevents people from accessing the insights they reveal. See Pedersen et al., *supra* note 8, at 235.

10. See, e.g., *Stanley v. Georgia*, 394 U.S. 557, 565 (1969) ("Our whole constitutional heritage rebels at the thought of giving government the power to control men's minds."); *Palko v. Connecticut*, 302 U.S. 319, 327 (1937) ("[The freedom

precedent often frame it as a prerequisite for free speech and other fundamental rights.¹¹ However, despite frequent references to freedom of thought, the concept remains poorly defined and underused.¹² Accordingly, some question its utility and exalted status in First Amendment theory and doctrine.¹³

Vague and incomplete descriptions of freedom of thought stand in contrast to the Supreme Court's robust and expansive free speech jurisprudence.¹⁴ This Article attempts to bridge that divide and render freedom of thought more useful and understandable. Instead of framing thought as a prerequisite for speech or vice versa, the information-based theory of mind frames both thought and speech in terms of information transfer. While freedom of speech requires relatively unfettered transmission of information between people (or at least from an information source to listeners),¹⁵ freedom of thought requires

of thought and speech] is the matrix, the indispensable condition, of nearly every other form of freedom.”); *Kovacs v. Cooper*, 336 U.S. 77, 97 (1949) (“[W]ithout freedom of thought there can be no free society.”); Neil M. Richards, *Intellectual Privacy*, 87 TEX. L. REV. 387, 408, 410 (2008) (stating that “if there is any constitutional right that is absolute, it is [the freedom of thought and belief]” and “freedom of thought and belief is the closest thing to an absolute right guaranteed by the Constitution”); Toni M. Massaro & Helen Norton, *Siriously? Free Speech Rights and Artificial Intelligence*, 110 NW. U. L. REV. 1169, 1175–76 (2016) (stating that most major theories of the First Amendment identify “freedom of thought as a central First Amendment concern”).

11. See Richards, *supra* note 10, at 408 (stating that freedom of thought “is the precondition for all other political and religious rights guaranteed by the Western tradition”).

12. See Frederick Schauer, *Freedom of Thought?*, 37 SOC. PHIL. & POL'Y 72, 72 (2020) (stating “it is not obvious what freedom of thought is”); Adam J. Kolber, *Two Views of First Amendment Thought Privacy*, 18 U. PA. J. CONST. L. 1381, 1383 (2016) (“Many free speech cases trumpet our freedom of thought but say frustratingly little about the contours of the protection.”); Matthew B. Lawrence, *Addiction and Liberty*, 108 CORNELL L. REV. 259, 261 (2023) (describing how the Supreme Court refers to freedom of thought as indispensable to liberty without having ever applied the freedom in practice).

13. See, e.g., Schauer, *supra* note 12.

14. Compare Kolber, *supra* note 12, at 1386 (describing the lack of clarity in the Supreme Court's description of free thought), with Leslie Kendrick, *First Amendment Expansionism*, 56 WM. & MARY L. REV. 1199, 1209 (2015) (describing the increasing variety of actions to which speech protections are applied). See also Ashutosh Bhagwat, *When Speech Is Not “Speech,”* 78 OHIO ST. L.J. 839, 844 (2017) (describing how litigants increasingly raise “plausible, and often successful First Amendment claims in unlikely situations”).

15. See Leslie Kendrick, *Are Speech Rights for Speakers?*, 103 VA. L. REV. 1767, 1778 (2017) (describing how free speech thinkers believe that First Amendment speech protections are not primarily about protecting speakers rights and explaining free speech is best characterized as a right of listeners to access information without government interference).

the unhindered transmission of information between sites or subsystems within the brain (or at the very least, promotes the flow of information from the subconscious to one's conscious awareness). Stated differently, speech involves external, interpersonal communication that transmits information to or from people's brains, whereas thought depends on internal, intrapersonal communication involving the transmission of information within one's brain, most of which occurs subconsciously.

Framing freedom of thought in terms of information flow allows existing free speech doctrine to apply to freedom of thought. For instance, because the subconscious flow of information conveys useful content, such as memories, to one's consciousness, which can be considered a listener for First Amendment purposes, the flow of subconscious information deserves constitutional protection under the well-established right to receive information and ideas.¹⁶ Accordingly, this Article proposes a novel First Amendment right to receive subconscious information.

The government interferes with the right to receive subconscious information when it impedes the free flow of information within one's brain or restricts access to substances or technologies that facilitate intrapersonal communication. By contrast, although the First Amendment does not directly shield consumers from private restrictions on their speech, the government can promote free speech values and defend the right to receive subconscious information by regulating commercial actors who engage in coercive cognitive content moderation. Such deceptive or manipulative acts arguably deprive private actors of commercial speech protections. This Article applies the right to receive subconscious information to four examples of cognitive content moderation: (1) the federal prohibition on psychedelic substances; (2) coercive choice architecture; (3) government-facilitated addictions to substances or technologies; and (4) brain-computer interfaces. Though there is arguably a First Amendment right to receive subconscious information, that right is not unlimited.

16. See *Martin v. City of Struthers*, 319 U.S. 141, 143 (1943) (stating that free speech protections include “the right to receive” information); see also *Kliendienst v. Mandel*, 408 U.S. 753, 762–63 (1972) (“In a variety of contexts this Court has referred to a First Amendment right to receive information and ideas.”); *Stanley v. Georgia*, 394 U.S. 557, 564 (1969) (stating that “[i]t is now well established that the Constitution protects the right to receive information and ideas,” which is “fundamental to our free society”).

Accordingly, this Article explains the contours of the right and under what circumstances government intrusion is legally defensible.

This Article contains three parts. Part I defines subconscious information and explains the neurologic basis for cognitive content moderation. It presents medical cases in which injuries obstruct the flow of subconscious information and impair one's ability to think and perceive. Part I then describes how replacing these neurologic injuries with various technologies could restore function and allow manipulation of mental states.

Part II explains how First Amendment theory and doctrine have addressed freedom of thought and its connection to freedom of speech. It presents an information-based theory of mind, which bridges the divide between existing theories on free thought and free speech. Part II uses this theory to propose a right to receive subconscious information, which is derived from the established First Amendment right to receive information and ideas.

Part III applies the right to receive subconscious information to four examples of cognitive content moderation. It defines the contours and limits of the right and explains how it promotes commonly accepted First Amendment goals. Part III describes how the information-based theory of mind affects existing First Amendment doctrine on commercial speech, government speech, and compelled speech. It concludes by addressing potential objections to the information-based theory of mind and the right to receive subconscious information.

I. THE NEUROLOGIC BASIS FOR COGNITIVE CONTENT MODERATION

Extending speech-like protections to thoughts and other mental phenomena may sound strange because we are taught to believe that thoughts and other mental phenomena are non-expressive.¹⁷ Unlike verbal and written communication, one's memories, subconscious drives, and inner monologues are not necessarily communicated to anyone.¹⁸ Moreover, many claim that no matter the external circumstances, people maintain control over their thoughts, which are believed to lie outside the

17. See Marc Jonathan Blitz, *Freedom of Thought for the Extended Mind: Cognitive Enhancement and the Constitution*, 2010 WIS. L. REV. 1049, 1051–52 (2010) (describing the popular belief among jurists and legal scholars that thoughts are exclusively internal, which protects them from state influence).

18. See *id.* at 1051; Bhagwat, *supra* note 14, at 855 (describing how prayer and other forms of intrapersonal communication are not usually intended to be heard).

government's reach.¹⁹ So, why bother extending rights to something that purportedly cannot be regulated?

Psychedelic substances and emerging technologies, such as brain-computer interfaces, challenge existing notions of what it means to think and communicate.²⁰ Furthermore, they illustrate how mental phenomena may not remain private or outside the government's reach, requiring reconsideration of common assumptions about how First Amendment law distinguishes between thought, conduct, and speech.²¹ Part II further discusses existing First Amendment theory, and Part III describes the impact of specific technologies on free thought. The following Section explains how thought depends on subconscious information flow between sites within the brain.

A. *Subconscious Information as the Substrate of Thought*

Before contemplating the importance of subconscious information, consider the complexity of the human brain, an organ described as the most complex object in the universe.²² Like computer processors, which control other computer components and receive and integrate information from them, brains are information processors, which control and receive

19. See, e.g., Jane Bambauer, *Is Data Speech?*, 66 STAN. L. REV. 57, 90 (2014) (stating that the U.S. government does not often overtly manipulate thought).

20. See Jane Wakefield, *Elon Musk's Neuralink 'Shows Monkey Playing Pong with Mind,'* BBC (Apr. 9, 2021), <https://www.bbc.com/news/technology-56688812> [<https://perma.cc/25F2-7VUL>] (illustrating how brain-computer interfaces can translate thoughts into externally observable actions); Ferris Jabr, *The Man Who Controls Computers with His Mind*, N.Y. TIMES (May 13, 2022), <https://www.nytimes.com/2022/05/12/magazine/brain-computer-interface.html> [<https://perma.cc/7FEH-6RW5>] (describing how brain-computer interfaces allow paralyzed individuals to control external devices with their thoughts); Noemi Császár-Nagy et al., *Classic Psychedelics: The Special Role of the Visual System*, 30 REV. NEUROSCIENCES 651, 659 (2019) (describing how psychedelic substances allowed people to access previously inaccessible subconscious information).

21. See Freethink, *This Neuroscientist Uses fMRI to Communicate with People in a Vegetative State*, YOUTUBE (July 3, 2018), <https://www.youtube.com/watch?v=JbWHAIDHUQ4&list=PLvLK5ZuczSArfFiZoybKhtGJimWI42xzS&index=21> [<https://perma.cc/CM39-DBLX>] (describing how fMRI technology allows some people with locked-in syndrome to communicate with the outside world using only their thoughts and associated mental activity). See generally Guohua Shen et al., *Deep Image Reconstruction from Human Brain Activity*, 15 PLOS COMP. BIO., Jan. 2019, <https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1006633> [<https://perma.cc/7TXZ-UKKC>] (describing how machine learning can interpret brain activity to reconstruct images that people have seen or imagined).

22. See SANDRA ACKERMAN, DISCOVERING THE BRAIN, at iii (1992); *The Brain is the Most Complex Thing in the Universe*, BBC (May 29, 2012), <https://www.bbc.com/news/uk-scotland-18233409> [<https://perma.cc/M3UQ-GVN6>].

information from other components of biological systems.²³ Computers use binary switches called transistors to block or transmit electricity, which allows computers to process information; modern computer processors contain billions of these transistors.²⁴ Like computer processors, biological brains use electricity to process information, but instead of using transistors, they use an average of 86 billion specialized cells called neurons.²⁵ Neurons send electrical impulses along their lengths to stimulate or inhibit the firing of adjacent neurons, which are organized into brain circuits.²⁶ Researchers have a preliminary understanding of some brain circuits and their functions, yet how the circuits produce a person's subjective conscious experience remains a mystery.²⁷

Scientists and philosophers have struggled to define consciousness for millennia, and many competing descriptions

23. See Pedro Martinez & Simon G. Sprecher, *Of Circuits and Brains: The Origin and Diversification of Neural Architectures*, 8 FRONTIERS ECOLOGICAL EVOLUTION, Mar. 27, 2020, at 1, 2, 5–6 (drawing an analogy between brains and computers; describing how the brain comprises “compact, internally wired groups of neurons that function as the ‘central processing unit’ (“CPU”) controlling the behaviors of most bilaterians”; and describing how brains integrate incoming sensory information from inside and outside an organism while sending output signals to muscles and organs); see also Tongtoon Li et al., *Brain Information Processing Capacity Modeling*, 12 SCI. REPS., Feb. 25, 2022, at 1, <https://www.nature.com/articles/s41598-022-05870-z#citeas> [<https://perma.cc/R4LR-4YE8>] (presenting models to describe the information processing capacity of the brain).

24. *Definition of Transistor*, PC MAG., <https://www.pcmag.com/encyclopedia/term/transistor> [<https://perma.cc/YBE6-VMPL>].

25. Rodrigo Pérez Ortega, *‘Breakthrough’ Finding Shows How Modern Humans Grow More Brain Cells than Neanderthals*, SCI. (Sept. 8, 2022, 2:00 PM), <https://www.science.org/content/article/breakthrough-finding-shows-how-modern-humans-grow-more-brain-cells-neanderthals> [<https://perma.cc/745G-HGPA>] (reporting that human brains contain an average of eighty-six billion neurons); MARK BEAR ET AL., NEUROSCIENCE: EXPLORING THE BRAIN 82 (Enhanced ed. 2020) (describing how neurons propagate changes of electrical charge, called action potentials, to transfer information and stating that “[t]he *frequency* and *pattern* of action potentials constitute the code used by neurons to transfer information from one location to another” (emphasis in original)).

26. BEAR ET AL., *supra* note 25, at 277–300 (describing the process of synaptic transmission where information is chemically transferred from one neuron to another via molecules called neurotransmitters); see Martinez & Sprecher, *supra* note 23, at 2 (explaining that chemically or functionally related neurons are organized into neural networks or circuits, which constitute the fundamental functional units of brains).

27. DAVID J. CHALMERS, THE CHARACTER OF CONSCIOUSNESS 50 (2010) (describing the search for neural correlates of consciousness, for which the conceptual foundation has only started to be laid).

exist.²⁸ Some focus on attention; others emphasize feeling or self-awareness.²⁹ This Article adopts Professor Thomas Nagel's view of consciousness, which emphasizes one's subjective inner experience, or what it feels like to be inside one's head.³⁰ The term *conscious information* refers to the phenomenal content of that inner experience.³¹ For instance, the redness of an apple, the sounds of jazz, and the wetness of water have unique subjective qualities when we perceive them.³² Philosophers refer to these experiences as *qualia*, or the "raw feels" of consciousness.³³ By comparison, *subconsciousness* refers to processes of the mind or brain that either escape our awareness or that we cannot directly feel or experience.³⁴ For instance, our brains automatically regulate respiration even when we are not paying attention. The information sent from our brains to our diaphragm muscles that causes our lungs to expand has no qualia associated with it.³⁵ Accordingly, *subconscious information* refers to information stored, processed, or transmitted by subconscious regions of the mind or brain, which lie outside one's conscious awareness.³⁶ This subconscious information constitutes most of the information stored and processed by the brain.³⁷

28. BRUCE E. GOLDSTEIN, *THE MIND: CONSCIOUSNESS, PREDICTION, AND THE BRAIN* 47 (2020).

29. *Id.*

30. See Thomas Nagel, *What Is It Like to Be a Bat?*, 83 *PHILO. REV.* 435, 436 (1974).

31. See CHALMERS, *supra* note 27, at 252 (describing qualia, the phenomenal qualities of consciousness).

32. *Id.* at 254.

33. *Qualia*, *STAN. ENCYCLOPEDIA PHIL.* (Aug. 12, 2021), <https://plato.stanford.edu/entries/qualia/> [<https://perma.cc/B7ZL-8W3R>] (defining qualia); see also Mark Bradley, *The Causal Efficacy of Qualia*, 18 *J. CONSCIOUSNESS STUD.* 32, 32 (2011) ("Qualia are the elements of phenomenal consciousness—the raw feels which constitute what it is like to be in a conscious mental state, which constitute experience itself").

34. *What is the Subconscious Mind?*, *IMOTIONS* (Feb. 18, 2020), <https://imotions.com/blog/learning/research-fundamentals/what-is-the-subconscious-mind/> [<https://perma.cc/Q3KT-USFF>].

35. See Brent Allsop, *Representational Quail Theory*, 1 *J. CONSCIOUSNESS EXPL. & RSCH.* 193, 197 (2010) (describing qualia as including "everything we consciously know," but not as including everything our brain subconsciously knows).

36. See David Gillingwater & Thomas H. Gillingwater, *A Neuroanatomical Approach to Exploring Organizational Performance*, in *OPERATIONS MANAGEMENT: A MODERN APPROACH* 120, 132 (Rae Simons ed., 2011).

37. See Chris Baraniuk, *The Enormous Power of the Unconscious Brain*, *BBC*, (Mar. 16, 2016), <https://www.bbc.com/future/article/20160315-the-enormous-power->

Philosophers debate whether qualia are reducible to physical terms.³⁸ For example, some debate whether the taste and fizziness of Coca-Cola can be fully explained by the firing of neurons or if there is something nonphysical about one's experience of those qualities.³⁹ However, regardless of whether brain activity fully explains the subjective nature of experience, qualia depend on the faithful storage, transmission, and processing of subconscious information.⁴⁰ In other words, these brain processes may not be sufficient to describe qualia, but they are necessary for their existence.

When we perceive qualia representing the appearance of an object, such as the color and texture of an orange, light reflected from the fruit's surface enters our eyes, refracts within our corneas, and stimulates specialized cells within our retinas.⁴¹ The information then travels subconsciously from our retinas to the occipital, or "visual," cortex at the back of the brain, then the temporal lobes at the brain's sides, and then eventually reaches the frontal lobes.⁴² We then perceive that information as qualia representing the shape, color, and texture of the orange.⁴³ However, our perceptions of oranges are also colored by other information drawn from the subconscious, such as memories about whether we enjoy the taste of oranges or whether we prefer orange juice with or without pulp.⁴⁴ We might remember the scent created by cutting into ripe oranges

of-the-unconscious-brain [<https://perma.cc/R6QA-2YLA>] (quoting neuroscientist David Eagleman: "The conscious you, which is the part that flickers to life when you wake up in the morning, is the smallest bit of what's happening in your head. It's like a broom closet in the mansion of the brain.").

38. See Bradley, *supra* note 33, at 32–33.

39. See *id.*

40. See ERIC B. BAUM, WHAT IS THOUGHT? 5 (2004) (describing how "[t]he brain does vast computations of which we are unaware" and how the information that "reaches our awareness is only the outcome of these processes"); CHALMERS, *supra* note 27, at 254.

41. DAVID W. HARRISON, BRAIN ASYMMETRY AND NEURAL SYSTEMS 87, 89 (2015) (describing the path of visual information within the eyes and nervous system).

42. *Id.* at 91–92.

43. See *id.* at 96.

44. See Sylvie Moritz-Gasser et al., *Mapping the Connectivity Underlying Multimodal (Verbal and Non-Verbal) Semantic Processing: A Brain Electrostimulation Study*, 51 NEUROPSYCHOLOGIA 1814, 1814 (2013) (stating that semantic memory is essential to understand the meaning of objects, people, and facts); Eduardo Camina & Francisco Güell, *The Neuroanatomical, Neurophysiological and Psychological Basis of Memory: Current Models and Their Origins*, 8 FRONTIERS PHARMACOLOGY, June 30, 2017, at 6 (2017) (defining episodic memory, which stores personal experiences, and semantic memory, which stores information regarding facts).

or recall the appearance of a painting featuring oranges by Manet or one of the Dutch masters. Our perceptions of oranges and all other things in the outside world are influenced by information originating from outside us and information originating within our minds. Both require a continuous stream of subconscious information to reach our consciousness and constitute our thoughts.

Previous legal scholarship has debated whether mental phenomena such as thoughts deserve special consideration.⁴⁵ In general, the legal concepts of thought and freedom of thought are heavily undertheorized.⁴⁶ One might define thoughts as concepts, images, ideas, or feelings held within the conscious mind. Regardless of how we define them, like perceptions, thoughts are impossible without streams of subconscious information. Psychologists and philosophers have described consciousness as a stream.⁴⁷ Images, ideas, feelings, and sensations flow into conscious view, while previously perceived information flows out.⁴⁸

Consciousness can also be described as a movie playing in our minds.⁴⁹ However, we can only see and hear what's being projected "on the screen" at any given time. To build on this analogy, subconscious information can be thought of as the sections of a film strip that are not currently illuminated and shown on screen. As previously displayed content scrolls out of view and returns to the subconscious, other subconscious information replaces it. Whether we think of consciousness as a river or a film reel, obstructing the flow of subconscious information has downstream effects that impact thought and behavior.⁵⁰ Moreover, if regulation impacts the flow of subconscious information, it too constrains thought, speech, and behavior. The following Section describes how disturbing

45. See, e.g., Schauer, *supra* note 12 ("[I]t is not obvious just what freedom of thought is, nor what, if anything, the idea of freedom of thought adds to traditional understandings of personal autonomy or liberty.").

46. *Id.*

47. See, e.g., WILLIAM JAMES, TALKS TO TEACHERS ON PSYCHOLOGY: AND TO STUDENTS ON SOME OF LIFE'S IDEALS 15 (1899) (describing consciousness as a stream, the existence of which is "the primal fact" of psychology).

48. *Id.*

49. TED, *How Do You Explain Consciousness* | David Chalmers, YOUTUBE (July 14, 2014), <https://www.youtube.com/watch?v=uhRhtFFhNzQ> [<https://perma.cc/J62W-7QSG>] (describing consciousness as a multitrack "movie playing in your head" with three-dimensional vision, surround sound, smell, taste, touch, pain, hunger, memories, emotions, and a constant voiceover narrative).

50. See GOLDSTEIN, *supra* note 28, at 82–83.

or controlling the flow of subconscious information affects thought and perception.

B. *How Manipulating Subconscious Information Flow Influences Thought*

If something obstructs or alters the flow of subconscious information, it can significantly alter or impair our thoughts and conscious experience. For instance, individuals with visual agnosia have injuries that affect how parts of their brains communicate.⁵¹ The flow of subconscious information on its way to the conscious mind is disrupted.⁵² Visual agnosia, for example, can result from injury to a pathway that sends visual information from the occipital lobe to the temporal lobes.⁵³ Consequently, when objects are placed in the visual field of patients with visual agnosia, they can see the objects clearly, but they are unable to recognize or name the objects.⁵⁴ They might see the shape and color of an orange, but they are unable to identify it as one.⁵⁵ However, when tasting an orange, they might immediately recognize its flavor and correctly name the fruit.⁵⁶ In one famous experiment, neurologist Oliver Sacks held a rose in front of a patient who described it as “a convoluted red form with a linear green attachment.”⁵⁷ Upon smelling the flower, the patient instantly recognized it as a rose by its scent.⁵⁸

Another rare neurologic condition causes cognitive impairments that contrast with those of visual agnosia.⁵⁹ Instead of seeing objects without being able to recognize them, people can detect objects without being able to see them.⁶⁰ In one case, a patient who was blind in his left eye could point to the location of a moving light source, shown only on his left, even though he reported not consciously perceiving the light.⁶¹ People with another condition, called prosopagnosia, or “face blindness,” can perceive human faces without being able to

51. *Id.* at 83–84.

52. *See id.* at 84.

53. *Id.* at 84–86.

54. *Id.* at 84.

55. *See id.*

56. *See id.*

57. *Id.*

58. *Id.*

59. *See id.* at 84.

60. *See id.*

61. *Id.* at 88.

recognize them.⁶² The actor Brad Pitt recently revealed that he has a form of visual prosopagnosia.⁶³

These examples illustrate the centrality of subconscious information to thought and conscious experience as well as speech and behavior. However, because so much information moves around inside our brains without our conscious awareness, we take for granted the extent to which subconscious information influences our thoughts, speech, and actions. The examples above also show how brains are not monolithic structures. Instead, they consist of many interconnected subunits in constant communication, supported by a symphony of electrical activity and information flow.⁶⁴ Neuroscientists use the term *modularity* to describe how brains can be conceptualized as sets of distinct but interconnected modules or subnetworks.⁶⁵ Each module has specialized functions and can operate relatively autonomously.⁶⁶ Moreover, brains in states of high *network modularity* have more connections within each module and fewer connections between modules.⁶⁷ The degree of modularity is believed to change over time and reflect various conditions and activities.⁶⁸

Like physical injuries that cause visual agnosia or face blindness, various technologies and substances can alter how subconscious information flows between and within brain subunits. For example, deep brain stimulation uses bursts of electricity delivered through implanted electrodes to improve one's memory or reduce the frequency or intrusiveness of repetitive thoughts.⁶⁹ Psychedelic substances use chemistry to

62. Dani Blum, *What Is Prosopagnosia, a Condition That Causes Face Blindness?*, N.Y. TIMES (July 8, 2022), <https://www.nytimes.com/2022/07/06/well/mind/prosopagnosia-face-blindness.html> [<https://perma.cc/U3RK-D7EA>].

63. *Id.*

64. See Maxwell A. Bertolero et al., *The Modular Integrative Functional Architecture of the Human Brain*, 112 PROC. NAT'L ACAD. SCI. U.S. AM. E6798, E6804 (2015).

65. *See id.*

66. *Id.*

67. Courtney L. Gallen & Mark D'Esposito, *Brain Modularity: A Biomarker of Intervention-Related Plasticity*, 23 TRENDS COGNITIVE SCI. 293, 293 (2019).

68. *See generally* Douglas Godwin et al., *Breakdown of the Brain's Functional Network Modularity with Awareness*, 112 PROC. NAT'L ACAD. SCI. U.S. AM. 3799 (2015) (reporting that focusing one's attention on a visual target may decrease network modularity).

69. Khan et al., *supra* note 7, at 639, 643.

alter neural processing and one's perception of self and others.⁷⁰ These substances can reveal novel personal insights and potentially influence the brain's network modularity.⁷¹ Other technologies affect subconscious information in more subtle ways. For instance, dark patterns, a form of coercive design or "choice architecture," can trigger cognitive biases and override the brain's decision-making capacity to increase the likelihood of outcomes desired by their designers.⁷² These examples of cognitive content moderation can be used for benevolent or malevolent purposes, which are discussed further in Part III.

Part II below explains how First Amendment theory and doctrine have addressed freedom of thought and its relationship to freedom of speech. It presents a novel information-based theory of freedom of thought, which attempts to bridge the gap between well-developed free speech theories and underdeveloped theories of freedom of thought. Part II then argues that free thought and free speech are both fundamentally about the unhindered transmission of information. Instead of framing thought as a phenomenon wholly distinct from speech, or as a prerequisite for speech, one can view thought and speech as analogous phenomena.

While thought requires intrapersonal information flow, involving the movement of largely subconscious information via neurons between brain modules or regions, speech involves the interpersonal transfer of information that is consciously expressed by speakers and perceived by listeners. Part II draws upon this similarity to update freedom of thought using elements of free speech theory and doctrine. Specifically, it leverages the well-established First Amendment right to receive information to propose a novel right to receive *subconscious* information. Part III applies that right to four cases of coercive cognitive content moderation.

70. See Császár-Nagy et al., *supra* note 20 (describing the potential for psychedelics to promote access to hidden "higher-level abstract, semantic language as well as to visual symbolic information"); Pedersen et al., *supra* note 8 (describing how psychedelic substances reveal useful insights that change how people perceive themselves and others).

71. Pedersen et al., *supra* note 8, at 235; Richard E. Daws et al., *Increased Global Integration in the Brain After Psilocybin Therapy for Depression*, 28 NATURE MED. 844, 846 (2022).

72. See BUREAU OF CONSUMER PROT., FED. TRADE COMM'N, BRINGING DARK PATTERNS TO LIGHT 2 (2022), https://www.ftc.gov/system/files/ftc_gov/pdf/P214800%20Dark%20Patterns%20Report%209.14.2022%20-%20FINAL.pdf [<https://perma.cc/3KHW-MQJW>].

II. AN INFORMATION-BASED THEORY OF FREEDOM OF THOUGHT

The First Amendment states that “Congress shall make no law . . . abridging the freedom of speech.”⁷³ However, the Amendment fails to mention or define freedom of speech, leaving scholars to debate its qualities and contours.⁷⁴ Accordingly, they have developed a variety of elaborate competing and intersecting theories to justify the First Amendment’s free speech protections.⁷⁵ Though no single unifying theory has emerged, abundant legal scholarship addresses the importance of speech to democratic self-governance, the search for truth, and personal autonomy, as well as various offshoots of these three primary theories.⁷⁶

By comparison, freedom of thought remains heavily undertheorized.⁷⁷ The First Amendment does not mention freedom of thought,⁷⁸ and it remains unclear to legal scholars what the term means.⁷⁹ Nevertheless, many regard it as the foundation of free speech and other fundamental rights.⁸⁰ According to Professor Neil M. Richards, “all leading theories of the First Amendment rest on the importance of freedom of thought,” and “if there is any constitutional right that is absolute, it is [that] one.”⁸¹ Supreme Court justices often agree,

73. U.S. CONST. amend. I.

74. *See id.*

75. *See, e.g.,* Kolber, *supra* note 12, at 1389 (stating there is significant debate regarding the First Amendment’s underlying purpose).

76. *See, e.g.,* Ashutosh Bhagwat, *The Democratic First Amendment*, 110 NW. U. L. REV. 1097, 1102 (2016) (democratic self-governance); William P. Marshall, *In Defense of the Search for Truth as a First Amendment Justification*, 30 GA. L. REV. 1, 3 (1995) (search for truth); Seana Valentine Shiffrin, *A Thinker-Based Approach to Freedom of Speech*, 27 CONST. COMMENT. 283, 283 (2011) (personal autonomy).

77. *See, e.g.,* Schauer, *supra* note 12 (“[I]t is not obvious just what freedom of thought is, nor what, if anything, the idea of freedom of thought adds to traditional understandings of personal autonomy or liberty.”).

78. *See* U.S. CONST. amend. I.

79. *See* Blitz, *supra* note 17 (describing freedom of thought as “something of a mystery” because the Supreme Court has not defined it and explaining that theorists have long concluded it unnecessary to define it because people assumed the mind was beyond the government’s reach).

80. *See, e.g.,* Richards, *supra* note 10, at 406, 408 (stating that freedom of thought “is the precondition for all other political and religious rights guaranteed by the Western tradition” and “if there is any constitutional right that is absolute, it is [that] one”).

81. *Id.*

describing freedom of thought as central to liberty,⁸² the speech process,⁸³ and democratic society.⁸⁴

This Part describes how First Amendment theory and doctrine define freedom of thought and its relationship to freedom of speech. It then presents a novel information-based theory of freedom of thought, which helps bridge the divide between the expansive free speech theory and the relatively underdeveloped theories on freedom of thought.

A. *Freedom of Thought Meets Freedom of Speech*

Over the past century, the Supreme Court has repeatedly referenced the importance of free thought. In *Palko v. Connecticut*,⁸⁵ Justice Louis Brandeis claimed, “freedom of thought, and speech . . . is the matrix, the indispensable condition, of nearly every other form of freedom.”⁸⁶ In *Stanley v. Georgia*,⁸⁷ the Court concluded that a state “cannot constitutionally premise legislation on the desirability of controlling a person’s private thoughts.”⁸⁸ Justice Thurgood Marshall wrote in *Stanley*: “Our whole constitutional heritage rebels at the thought of giving government the power to control men’s minds.”⁸⁹

Over fifty years later, in 2002, the Court reaffirmed the importance of freedom of thought in *Ashcroft v. Free Speech Coalition*,⁹⁰ where Justice Anthony Kennedy framed unfettered thought as “the beginning of freedom.”⁹¹ The following year, in *Lawrence v. Texas*,⁹² Justice Kennedy claimed, “Liberty presumes an autonomy of self that includes freedom of *thought*, belief, expression, and certain intimate conduct.”⁹³

Though many courts and legal scholars agree that freedom of thought is a foundational right protected by the First

82. See *Palko v. Connecticut*, 302 U.S. 319, 326–27 (1937).

83. See *id.* at 327 (writing that the combination of freedom of thought and freedom of speech is “the matrix, the indispensable condition, of nearly every other form of freedom”); *Wooley v. Maynard*, 430 U.S. 705, 714 (1977) (describing freedom of thought and freedom of speech as concomitant rights).

84. *Kovacs v. Cooper*, 336 U.S. 77, 97 (1949) (Frankfurter, J., concurring) (“[W]ithout freedom of thought there can be no free society.”).

85. 302 U.S. 319 (1937).

86. *Id.* at 326–27.

87. 394 U.S. 557 (1969).

88. *Id.* at 566.

89. *Id.* at 565.

90. 535 U.S. 234 (2002).

91. *Id.* at 253.

92. 539 U.S. 558 (2003).

93. *Id.* at 562 (emphasis added).

Amendment, they have not clearly defined it or how it relates to free speech.⁹⁴ For instance, it is unclear whether linking thought to speech or other expressive conduct is necessary for invoking First Amendment protection for thought.⁹⁵ Consequently, despite its apparent importance, it remains unclear whether freedom of thought can stand on its own as a fundamental right.⁹⁶

Scholars have observed this lack of clarity and advanced theories to better define the concept and how it might intersect with free speech rights.⁹⁷ For instance, they envision freedom of thought to include a variety of rights, such as rights to experience “all kinds of mental states,”⁹⁸ to manipulate one’s consciousness,⁹⁹ to avoid revealing one’s thoughts or having them manipulated,¹⁰⁰ or to imagine, reflect, deliberate, believe, remember, sense, question, and desire without government interference.¹⁰¹

The lack of a unified theory of the First Amendment has not helped clarify the meaning of free thought. Most justifications for the First Amendment fall into a handful of categories, including its roles in facilitating democratic self-governance, supporting the discovery of truth by contributing to the marketplace of ideas,¹⁰² and promoting personal autonomy and

94. See Kolber, *supra* note 12, at 1391 (stating that the Supreme Court “has never taken a clear position on whether thought must be intertwined with expression in order to be protected”); Blitz, *supra* note 17.

95. See Kolber, *supra* note 12, at 1386–87 (describing two ways in which the First Amendment might protect freedom of thought: one that requires thought to be intertwined with expression and one that does not); Blitz, *supra* note 17 (describing the lack of clarity regarding whether thoughts must be expressed to gain First Amendment protection).

96. See, e.g., Blitz, *supra* note 17.

97. See Shiffrin, *supra* note 76 (advancing a “thinker-based” foundation for freedom of speech); see also Bambauer, *supra* note 19 (using Shiffrin’s thinker-based approach to analyze data privacy laws).

98. Jan Christoph Bublitz, *Freedom of Thought in the Age of Neuroscience: A Plea and a Proposal for the Renaissance of a Forgotten Fundamental Right*, 100 ARCHIVES FOR PHIL. L. & SOC. PHIL. 1, 2 (2014).

99. See Blitz, *supra* note 17, at 1054.

100. See Simon McCarthy-Jones, *The Autonomous Mind: The Right to Freedom of Thought in the Twenty-First Century*, 2 FRONTIERS IN A.I., Sept. 2019, at 1.

101. See Lucas Swaine, *Freedom of Thought as a Basic Liberty*, 46 POL. THEORY 405, 411 (2018).

102. See Stuart Minor Benjamin, *Algorithms and Speech*, 161 U. PA. L. REV. 1445, 1453–55 (2013) (stating that the marketplace of ideas is the most commonly invoked conception of the First Amendment’s purpose).

self-fulfillment.¹⁰³ Some theories focus on speakers' interests while deprioritizing listeners' interests.¹⁰⁴ Others prioritize listeners' rights at the expense of speakers' interests.¹⁰⁵

Professor Seana Shiffrin promotes an autonomy-based approach to free speech theory, which links speech to freedom of thought.¹⁰⁶ Her theory emphasizes one's interest in shaping the development and operation of one's mind.¹⁰⁷ In Shiffrin's view, free speech laws must be consistent with this autonomy interest to effectively promote freedom of speech.¹⁰⁸ Like Shiffrin, several First Amendment scholars believe freedom of thought should be the focal point of free speech doctrine.¹⁰⁹ Others, such as Professor Frederick Schauer, question freedom of thought's elevated status.¹¹⁰ To Schauer, "[T]houghts are persistently and inevitably the product of what we see, hear, read, and experience, and thus are the consequence of our countless interactions with the external world."¹¹¹ In other words, thoughts are merely a conglomeration of external stimuli. Under this view, speech is important because it allows people to convey information and influence other people's thoughts, and thinking is just an inevitable consequence of all that speech. Accordingly, there is no basis for treating thoughts differently from other sources of information because thoughts are merely the result of information we consume. Schauer concludes that freedom of thought should not be viewed as a fundamental right or the foundation for freedom of speech, but it should instead be reframed as a liberty or autonomy interest.¹¹²

103. See Dana Remus Irwin, *Freedom of Thought: The First Amendment and the Scientific Method*, 2005 WIS. L. REV. 1479, 1482 (2005).

104. Shiffrin, *supra* note 76.

105. *Id.*

106. See *id.* ("We should understand freedom of speech as, centrally, protecting freedom of thought.").

107. See *id.*

108. *Id.* at 283, 289 (defining a set of goals shared by thinkers, including "apprehending the true," which entails understanding and believing accurate things about oneself, including the contents of one's mind and features of one's environment, and "exercising the imagination," which involves understanding and exploring nonexistent environments that are both possible and impossible; apprehending the truth involves one's search for knowledge, and exercising the imagination evokes a sort of mental sandbox where thinkers can conduct unlimited experiments with little risk of harm).

109. *E.g.*, Blitz, *supra* note 17, at 1054; Irwin, *supra* note 103.

110. Schauer, *supra* note 12.

111. *Id.* at 74.

112. See *id.* at 80 (arguing that freedom of thought is better framed as a liberty or autonomy interest than the foundation for freedom of speech).

Schauer believes that Shiffrin and others who view freedom of thought as fundamental have failed to establish its value.¹¹³ He asks, “[H]ow, if at all, is it different from general liberty, personal autonomy, and the freedom simply to do as one chooses?”¹¹⁴ The following Section addresses this question by presenting an information-based theory of freedom of thought. This theory rests on the observation that all other theories of freedom of thought have one thing in common: the rights they promote rely on unhindered transmission of information between the brain’s regions, circuits, and modules.¹¹⁵ The information-based theory attempts to unify and clarify existing theories of free thought, rendering them more understandable and useful while simultaneously elucidating and strengthening connections between free thought and free speech.

B. *Framing Thought and Speech in Terms of Information Flow*

Schauer describes thought as being influenced by all external sources of information, which exceeds the categories that are characterized as speech for First Amendment purposes.¹¹⁶ However, no information, speech or otherwise, reaches our awareness before first being converted into subconscious information by our sense organs and nervous systems.¹¹⁷ That subconscious information is transmitted and processed by various brain modules and networks.¹¹⁸

In addition to external inputs, thinking requires the simultaneous input of information arising from within, including memories, calculations, and the products of other subconscious cognitive processes.¹¹⁹ Consequently, thought is more than just the sum of one’s interactions with the external world. It involves simultaneously blending internal and external data streams, both of which are subconsciously processed and conveyed to one’s consciousness.¹²⁰ Instead of rendering freedom of thought a general autonomy interest, these observations elevate freedom of thought and confirm its

113. *Id.*

114. *Id.*

115. *See infra* text accompanying notes 118–22.

116. *Schauer, supra* note 12, at 81–82.

117. *See BAUM, supra* note 40.

118. *Id.* at 5, 8–9.

119. Moritz-Gasser et al., *supra* note 44; Camina & Güell, *supra* note 44.

120. Moritz-Gasser et al., *supra* note 44; Camina & Güell, *supra* note 44.

centrality within the First Amendment's scope.¹²¹ The free flow of subconscious information is a fundamental liberty because without it, no streams of information, internal or external, could reach conscious awareness to constitute thoughts.¹²²

Imagine sitting in a concert hall for a performance of Beethoven's Fifth Symphony. Without the unrestricted flow of subconscious information, sound waves from the orchestra would merely bounce off your eardrums. You would not hear the music. Light waves representing the conductor's wild gestures might reach your retinas. However, without the subconscious transmission of that information to your cerebral cortex, you would not perceive the conductor's movements.

Internal stimuli would also fail to reach your awareness or blend with your perceptions of external stimuli without the flow of subconscious information.¹²³ Your subconscious mind could not produce a comforting recollection, such as a memory of hearing Beethoven at a previous concert or of first discovering his music as a child, to enhance your experience of the live performance. That information would remain trapped within the regions of your brain where memories are stored.¹²⁴ This scenario describes the experience of people with rare cases of amnesia who have only short-term memories.¹²⁵ These individuals live only in the present and the very recent past.¹²⁶ They can absorb new information through their senses, which can influence their thoughts.¹²⁷ However, they cannot summon memories of more remote experiences to mingle with current information from external stimuli.¹²⁸

In addition to affecting your ability to think and perceive, obstructing the flow of subconscious information would prevent you from communicating. Your cerebral cortex could no longer send the motor impulses necessary to move your mouth, lips, and vocal cords in the patterns necessary to speak and share

121. See Richards, *supra* note 10, at 408 (stating that freedom of thought is the starting point of all political and religious rights acknowledged by Western society and "if there is any constitutional right that is absolute, it is [that] one").

122. BAUM, *supra* note 40.

123. See Camina & Güell, *supra* note 44.

124. See Moritz-Gasser et al., *supra* note 44.

125. Real Stories, *The Man with the Seven Second Memory (Amnesia Documentary)*, YOUTUBE (Aug. 13, 2016), https://www.youtube.com/watch?v=k_P7Y0-wgos [<https://perma.cc/SQ35-8WQN>] (describing the case of conductor and musician Clive Wearing, who was left with a memory that spans only seven seconds).

126. See *id.*

127. *Id.*

128. See *id.*

your enthusiasm with the concertgoers seated around you.¹²⁹ Both freedom of thought and freedom of speech depend on the transmission of subconscious information. Freedom of thought is fundamental because, without the flow of largely subconscious information that constitutes intrapersonal communication, there could be no subjective inner life or interpersonal communication.

The following two Sections provide additional support for an information-based theory of free thought. They argue that the flow of subconscious information deserves First Amendment protection because, in addition to promoting expression, thought itself can have expressive qualities, particularly when linked to nascent neurotechnologies. Moreover, even if non-expressive, the flow of subconscious information conveys valuable content to listeners, which should be protected by the established First Amendment right to receive information and ideas. Finally, the unrestricted flow of subconscious information warrants constitutional protection because it supports values believed to underlie the First Amendment, including the promotion of democratic self-governance,¹³⁰ the creation of new knowledge and a marketplace of ideas in furtherance of our search for truth,¹³¹ and the pursuit of personal dignity and autonomy.¹³²

C. *Mental Information as Conduct and Communication*

In his autobiographical work *The Diving Bell and the Butterfly*, journalist and author Jean-Dominique Bauby describes his experience living with a condition called locked-in

129. See DONALD B. FREED, *MOTOR SPEECH DISORDERS: DIAGNOSIS AND TREATMENT* 142 (3d ed. 2020).

130. Robert Post, *Participatory Democracy and Free Speech*, 97 VA. L. REV. 477, 482 (2011) (“[T]he best possible explanation of the shape of First Amendment doctrine is the value of democratic self-governance.”).

131. *Abrams v. United States*, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting); see also Rodney A. Smolla, *The Meaning of the “Marketplace of Ideas” in First Amendment Law*, 24 COMM. L. & POL’Y 437, 437–39 (2019) (defining the marketplace of ideas metaphor of First Amendment law and describing its history).

132. *Whitney v. California*, 274 U.S. 357, 375 (1927) (Brandeis, J., concurring) (“Those who won our independence believed that the final end of the State was to make men free to develop their faculties.”), *overruled by* *Brandenburg v. Ohio*, 395 U.S. 444 (1969); see also Martin H. Redish, *The Value of Free Speech*, 130 PA. L. REV. 591, 593 (1982) (claiming that a broader goal of the First Amendment is “individual self-realization”).

syndrome.¹³³ Bauby wrote the entire memoir by blinking his left eye,¹³⁴ which took ten months of working four hours a day.¹³⁵ Bauby was fortunate to retain some eye movement; some people with locked-in syndrome cannot move any muscles.¹³⁶ These individuals might try to communicate, but they cannot create the movements necessary to gesture, write, or speak.¹³⁷ They are completely isolated from the outside world, and the only activity they can muster is thought. Consequently, they are frequently written off by society for being in a so-called vegetative state without mental activity, even though they continue to have an active mental life.¹³⁸

Under current First Amendment doctrine, people with locked-in syndrome might be considered incapable of engaging in any conduct whatsoever. Conduct arguably involves physical action and the manner of its execution.¹³⁹ Thinking and other mental phenomena are believed to be nonphysical and unobservable.¹⁴⁰ However, neuroimaging technologies prove that mental phenomena have physical correlates. Researchers at Vanderbilt University put people in functional magnetic resonance imaging (fMRI) machines and asked them to judge how criminal offenders should be punished for their crimes.¹⁴¹ Participants exhibited increased neuronal activity in different brain areas depending on whether they were determining a criminal suspect's degree of culpability or the severity of their punishment.¹⁴² That neuronal activity, a physical phenomenon,

133. See generally JEAN-DOMINIQUE BAUBY, *THE DIVING BELL AND THE BUTTERFLY* (Jeremy Leggatt trans.) (1997) (discussing the author's experience with locked-in syndrome, where his body was paralyzed while his mind was intact).

134. Thomas Mallon, *In the Blink of an Eye*, N.Y. TIMES (June 15, 1997), https://archive.nytimes.com/www.nytimes.com/books/97/06/15/reviews/970615.mallon.html?_r=1. [<https://perma.cc/LWU5-8NLZ>].

135. *The Diving Bell and the Butterfly*, Antranik, <https://antranik.org/diving-bell-and-the-butterfly/> [<https://perma.cc/RXD2-Y6SA>].

136. See Aaron Rothstein, *Locked In: What It's Like to Be Fully Paralyzed*, THE NEW ATLANTIS (Feb. 6, 2018), <https://www.thenewatlantis.com/practicing-medicine/locked-in-what-its-like-to-be-fully> [<https://perma.cc/56Q3-UPH6>]; Eimear Smith & Mark Delargy, *Locked-In Syndrome*, 330 BMJ 406, 406 (2005).

137. Smith & Delargy, *supra* note 136, at 407–08.

138. *Id.* at 406.

139. See *Conduct*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/conduct> [<https://perma.cc/6GHM-6DCS>].

140. See Blitz, *supra* note 17.

141. Jeffrey Rosen, *The Brain on the Stand*, N.Y. TIMES MAG. (Mar. 11, 2007), <https://www.nytimes.com/2007/03/11/magazine/11Neurolaw.t.html> [<https://perma.cc/M3KC-WXZ9>].

142. Joshua W. Buckholtz et al., *The Neural Correlates of Third-Party Punishment*, 60 NEURON 930, 934 (2008).

was an unmistakable physical correlate of the research participants' mental calculations.¹⁴³ In other words, their thought involved the physical act of firing neurons in distinct patterns that could be observed and interpreted.¹⁴⁴ Our ability to detect these patterns is a recent development that arguably renders thought expressive.

Even if one accepts that mental phenomena have physical correlates and that thinking is a form of conduct, conceding that thought has expressive qualities is another thing altogether. However, this perspective overlooks the full inner lives of people with locked-in syndrome, their efforts to communicate, and the nascent technologies that can render their mental activity visible and understandable to bystanders. The neurotechnologies described in Part III allow some people with locked-in syndrome to engage with the outside world.¹⁴⁵ For instance, brain-computer interfaces and fMRI machines can read neural activity, and software can translate their output and display it on computer screens in readable form.¹⁴⁶ Researchers can use these technologies to communicate with paralyzed individuals by asking questions and observing their responses.¹⁴⁷ In this example, neurotechnology arguably transforms what First Amendment doctrine would consider purely mental phenomena into pure speech. Much like how people use smartphones to translate thoughts and actions into communicable messages when texting someone across the country, people with locked-in syndrome can use brain-computer interfaces to communicate.

In rare cases, people can use thoughts to communicate without relying on technology. Conjoined twins often share

143. *See id.*

144. *Id.*

145. *See* Jessica Hamzelou, *A Locked-In Man Has Been Able to Communicate in Sentences by Thought Alone*, MIT TECH. REV. (Mar. 22, 2022), <https://www.technologyreview.com/2022/03/22/1047664/locked-in-patient-bci-communicate-in-sentences/> [<https://perma.cc/SXJ7-2LPW>] (describing how a paralyzed man communicated entire sentences through a brain implant).

146. *See* Margaret Osborne, *Brain Implants Allow Paralyzed Man to Communicate Using His Thoughts*, SMITHSONIAN MAG. (Mar. 25, 2022), <https://www.smithsonianmag.com/smart-news/brain-implants-allow-paralyzed-man-to-communicate-180979817/> [<https://perma.cc/VE8L-URVS>] (describing how researchers learned to communicate with a man paralyzed by amyotrophic lateral sclerosis using a brain implant and software that translated neural activity into speech).

147. *See* Hamzelou, *supra* note 145.

organs and other body parts.¹⁴⁸ One pair of conjoined twins claims to communicate using only mental information transmitted through their shared brainstem.¹⁴⁹ Researchers have confirmed this ability, and their mother proudly shows it off by holding a stuffed animal in front of only one twin while the other identifies the animal.¹⁵⁰ Like the mental activity of people with locked-in syndrome, the twins' transmission of subconscious information has expressive qualities.

The following distinctions may be impractical and could strain the analogy drawn between speech and thought. Nevertheless, it may be helpful to distinguish subconscious information that merits the most robust First Amendment safeguards from information that warrants less protection. For instance, some subconscious information may resemble pure speech. If conjoined twins convey messages resembling written or spoken language, their messages may warrant strong speech protections.¹⁵¹ The same might be said of messages sent directly from one mind to another via brain-computer interface.¹⁵²

Other subconscious information may have little or no resemblance to pure speech while still conveying meaning. For instance, if conjoined twins convey emotions or images, that information might be closer to symbolic speech than pure speech for First Amendment purposes.¹⁵³ Accordingly, it might receive less protection than subconscious information that conveys spoken or written language.¹⁵⁴ Other subconscious information may carry little or no discernible meaning, perhaps resembling mere conduct for the purposes of First Amendment

148. *Conjoined Twins*, MAYO CLINIC (Dec. 16, 2022), <https://www.mayoclinic.org/diseases-conditions/conjoined-twins/symptoms-causes/syc-20353910> [<https://perma.cc/8R84-98ET>].

149. 60 Minutes Australia, *Conjoined Twins Share Taste, Sight, Feelings and Thoughts | 60 Minutes Australia*, YOUTUBE (Dec. 19, 2018), <https://www.youtube.com/watch?v=N1Mac4FeKXg&list=PLvLK5ZuczSArfFiZoybKhtGJimW142xzS&index=19> [<https://perma.cc/W4F3-8GE9>].

150. *Id.*

151. Government regulation of pure speech is mostly subject to strict scrutiny. See *Tinker v. Des Moines Indep. Cmty. Sch. Dist.*, 393 U.S. 503, 505–06 (1969) (“[P]ure speech . . . is entitled to comprehensive protection under the First Amendment.” (internal quotations omitted)).

152. See Richard Nieva, *Elon Musk Is Working on ‘Consensual Telepathy,’* CNET (Apr. 21, 2017, 11:16 AM), <https://www.cnet.com/science/elon-musk-neuralink-corp-consensual-telepathy/> [<https://perma.cc/9ZBD-ZLXU>] (describing the potential for brain-computer interfaces to enable brain-to-brain communication).

153. See James M. McGoldrick, Jr., *Symbolic Speech: A Message from Mind to Mind*, 61 OKLA. L. REV. 1, 4 (2008) (defining symbolic speech and describing the U.S. Supreme Court’s treatment of it).

154. *Id.*

analysis, warranting the lowest degree of protection.¹⁵⁵ The involuntary nerve impulses that maintain heart and respiration rate are one example. Though these impulses perform vital functions, they likely play a minor role in transmitting semantic or symbolic information to or from consciousness.

The foregoing examples illustrate that, in certain cases, purely mental phenomena can have expressive qualities. However, in each case, speakers were using the transmission of subconscious information to communicate with other people. The following Section considers what happens when there are no obvious speakers and subconscious information is transmitted only within the brain of one person. Relying on the well-established First Amendment right to receive information and ideas, the Section explains why the transmission of subconscious information warrants First Amendment protection—even in the absence of identifiable speakers.

D. *Speakerless Speech and the Right to Receive Information and Ideas*

In the television show *Severance*, when Lumon Industries switches an employee's brain implant on or off, there is no speaker as understood by First Amendment law.¹⁵⁶ Instead, the employee's conscious mind suddenly receives information from subconscious regions of the brain that were previously blocked by the implant.¹⁵⁷ Though the information may have no identifiable speaker, the employee's receipt of the information could warrant First Amendment protection because his consciousness could qualify as a listener under current free speech doctrine.¹⁵⁸ The same could be said of people who consume psychedelics and receive previously inaccessible subconscious information.¹⁵⁹ The insights, messages, and perceptions they receive may appear to originate outside themselves, from another person, place, or thing (such as

155. *Id.*

156. *See Severance*, *supra* note 1 (showing the memories and knowledge the employees gain or lose access to originates only from within their own minds).

157. *Id.*

158. *See, e.g.*, James Grimmelman, *Speech In, Speech Out*, 6 (Cornell L. Sch. Legal Rsch. Paper Series, No. 18-41, 2018) (stating that “it is perfectly plausible to say that something is protectable *as speech* without identifying a *speaker*,” and that “there are plenty of cases in which a listener has greater rights than a speaker” or “where a speaker is not before the court and might not even be identifiable”).

159. Császár-Nagy et al., *supra* note 20.

deceased relatives, plants, spirits, or other dimensions).¹⁶⁰ However, the information more likely originates from within their subconscious minds.¹⁶¹ Regardless of its origin and the ostensible lack of a speaker, the information arguably deserves First Amendment protection due to its value to listeners.

Though likely a stretch, one could also frame the brain's submodules or subnetworks as speakers for the purposes of First Amendment analysis. One theory of psychotherapy, Internal Family Systems (IFS), frames the mind as a conglomeration of multiple *parts* or subpersonalities.¹⁶² These parts represent different facets of one's personality that might have become trapped at different developmental stages, possibly due to trauma.¹⁶³ The developer of IFS describes the facets as "internal people of different ages, talents[,] and temperaments."¹⁶⁴ IFS claims that these parts can become polarized and clash with each other.¹⁶⁵ Therapists trained in IFS encourage patients to communicate with and learn from these subpersonalities to better integrate them into one's conception of the self.¹⁶⁶

The parts described by IFS theory are not intended to be understood as distinct people or personalities.¹⁶⁷ They are metaphors for different aspects of one's psyche.¹⁶⁸ Interestingly, in *Severance*, the work- and home-facing sides of each employee's mind—referred to respectively as "innies" and "outies," reflecting their existence inside or outside the workplace—become increasingly isolated, and it becomes unclear whether they represent distinct identities or different parts of a single employee's personality.¹⁶⁹ Recall the neuroscientific observation that brains consist of interconnected but largely autonomous modules.¹⁷⁰ According to neuroscientist David Eagleman, "You have competing

160. See Michael P. Bogenschutz et al., *Clinical Interpretations of Patient Experience in a Trial of Psilocybin-Assisted Psychotherapy for Alcohol Use Disorder*, 9 FRONTIERS PHARMACOLOGY, Feb. 20, 2018, at 2.

161. Császár-Nagy et al., *supra* note 20.

162. See Leonard L. Riskin, *Managing Inner and Outer Conflict: Selves, Subpersonalities, and Internal Family Systems*, 18 HARV. NEGOT. L. REV. 1, 16, 21 (2013).

163. *Id.* at 21; *see id.* at 23.

164. *Id.* at 21.

165. *Id.*

166. *Id.* at 27–28.

167. *See id.* at 19.

168. *See id.*

169. *Severance*, *supra* note 1.

170. *See Bertolero et al.*, *supra* note 64.

populations in the brain—one part that wants to tell something and one part that doesn't,” and “the issue is that we're always cussing at ourselves or getting angry at ourselves or cajoling ourselves.”¹⁷¹

Eagleman says, “[T]here are different parts of the brain that are battling it out. And the way that that battle tips, determines your behavior.”¹⁷² Human brains are complex systems in which information is constantly sent, processed, and received by different subsystems that may have different priorities. In the Information Age, when First Amendment doctrine readily extends speech protection to commercial advertising,¹⁷³ campaign expenditures,¹⁷⁴ online transmissions of data,¹⁷⁵ and arguably to the outputs of robots and software algorithms,¹⁷⁶ extending speech protection to the outputs of brain sites and systems may seem less radical than it would have fifty years ago. Alternatively, individuals could be said to play the roles of speaker and listener simultaneously (such as when they consume psychedelics with the intent of receiving information from the subconscious). Regardless, current First Amendment doctrine likely renders speakers unnecessary, and the information transferred between brain modules can be protected regardless of whether they are framed as speakers.

Since deciding *Martin v. City of Struthers*¹⁷⁷ in 1943, the U.S. Supreme Court has acknowledged the First Amendment's support of a right to receive information and ideas, which

171. *'Incognito': What's Hiding in the Unconscious Mind*, NPR (Aug. 24, 2012), <https://www.wbur.org/npr/159922899/incognito-whats-hiding-in-the-unconscious-mind> [<https://perma.cc/JSU7-4P3R>].

172. *Id.*

173. *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n*, 447 U.S. 557, 561–62 (1980).

174. *Citizens United v. FEC*, 558 U.S. 310, 372 (2010).

175. *South Carolina State Conf. v. Kohn*, 2023 U.S. Dist. LEXIS 4977, at *15 (holding that the online transmission of court records was protected under First Amendment doctrine).

176. Stuart Minor Benjamin, *The First Amendment and Algorithms*, in *THE CAMBRIDGE HANDBOOK OF THE LAW OF ALGORITHMS* 606, 606 (Woodrow Barfield ed., 2020), https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=6744&context=faculty_scholarship [<https://perma.cc/HQ8X-EG35>]; see also Edward Lee, *Prompting Progress: Authorship in the Age of AI*, 76 FLA. L. REV. (forthcoming Sept. 2024) (manuscript at 61) (arguing that the output of AI generated work may still be considered to have been created by a person if the claimed author engaged in sufficient creative activity).

177. 319 U.S. 141 (1943).

accompanies the right to speak.¹⁷⁸ Decades after *Martin*, in *Virginia State Board of Pharmacy v. Virginia Citizens Consumer Counsel, Inc.*,¹⁷⁹ the Court reinforced the right to receive information and broadened its scope to encompass a right to receive commercial information.¹⁸⁰ The Court reasoned that receiving commercial speech is vital to forming and expressing informed economic opinions.¹⁸¹ The Court even suggested that consumers might have more substantial interests in receiving unfettered commercial speech than information regarding important political debates.¹⁸² Presumably, consumers have an equally strong interest in unfettered access to subconscious information, which underlies the formation and expression of informed opinions of all kinds, economic or otherwise.

Although the Court elevated the interests of listeners in *Virginia State Board of Pharmacy*, it still acknowledged the importance of speakers.¹⁸³ However, subsequent First Amendment views and theories have called for protecting speech based solely on its benefit to listeners, even when speakers have no First Amendment rights or no speakers exist or can be identified.¹⁸⁴ A series of hypotheticals helps illustrate why speakers are unnecessary to invoke free speech rights.¹⁸⁵ In each of the following examples, the government regulates a message, but no speakers could claim an interest relevant to the message or its restriction.¹⁸⁶ Consider a government ban on books whose authors have died, on books produced by monkeys smacking typewriters, on toy guns (due to their potential to

178. *See id.* at 143 (stating that free speech protections include “the right to receive” information, in this case literature); *Kleindienst v. Mandel*, 408 U.S. 753, 762 (1972) (“In a variety of contexts this Court has referred to a First Amendment right to ‘receive information and ideas.’”); *Stanley v. Georgia*, 394 U.S. 557, 564 (1969) (“It is now well established that the Constitution protects the right to receive information and ideas . . . [which is] fundamental to our free society.”).

179. 425 U.S. 748 (1976).

180. *See id.* at 765.

181. *See id.*

182. *See id.* at 763 (“[T]he particular consumer’s interest in the free flow of commercial information . . . may be as keen, if not keener by far, than his interest in the day’s most urgent political debate.”).

183. *See id.* at 756 (“Freedom of speech presupposes a willing speaker.”).

184. *See* RonNell Andersen Jones, *Press Speakers and the First Amendment Rights of Listeners*, 90 COLO. L. REV. 499, 503 (2019).

185. *See* Leslie Kendrick, *Are Speech Rights for Speakers?*, 103 VA. L. REV. 1767, 1780 (2017) (citing LARRY ALEXANDER, *IS THERE A RIGHT OF FREEDOM OF EXPRESSION* 8 (2005)).

186. *Id.*

encourage violence), and on naturally occurring rock formations (due to some people's belief that they symbolize violence).¹⁸⁷ In the case of dead authors, there are no living speakers with applicable free speech interests; in the case of monkey authors, there are no human speakers at all; in the case of toy guns, there are no speakers (unless one accepts toy manufacturers as speakers); and in the case of the rock formations, there are no speakers (nor manufacturers).¹⁸⁸ Yet the forms of speech in these examples arguably deserve First Amendment protection due to their value to listeners, and government restrictions on them would likely be unconstitutional.¹⁸⁹

The previous examples establish that speakerless speech implicates the First Amendment.¹⁹⁰ They are supported by cases where speakers were either unavailable or potentially impossible to identify.¹⁹¹ Moreover, many free speech scholars agree that little current free speech theory or doctrine requires human speakers to trigger First Amendment coverage.¹⁹² Professors Toni Massaro and Helen Norton argue that speech rights should extend to computers and robots that broadcast information to listeners in the absence of human speakers.¹⁹³ Referring to Apple's voice-activated digital assistant, Professor James Grimmelman claims that "the human user's experience of Siri's utterances as meaningful speech does not depend on which humans (if any) were responsible for the utterances."¹⁹⁴ Professor Jane Bambauer contends that data produced by computers can receive protection because it constitutes information that can be used to produce knowledge, which promotes important First Amendment values.¹⁹⁵ Finally, Professor Stuart Benjamin argues that even the outputs of computer algorithms should constitute speech under the First Amendment because they produce substantive messages that

187. LARRY ALEXANDER, IS THERE A RIGHT OF FREEDOM OF EXPRESSION 8 (2005).

188. *Id.* at 8–9.

189. Kendrick, *supra* note 185.

190. *Id.* at 1781.

191. See Grimmelman, *supra* note 158.

192. See, e.g., Helen Norton, *Robotic Speakers and Human Listeners*, 41 SEATTLE U. L. REV. 1145, 1149 (2018) (explaining that the First Amendment protects robotic speech while leaving room for government regulation).

193. See Massaro & Norton, *supra* note 10, at 1174.

194. Grimmelman, *supra* note 158.

195. See Bambauer, *supra* note 19, at 91–105.

can be sent and received.¹⁹⁶ These claims support the conclusion that free speech protections can extend to information listeners receive in the absence of speakers. There is no reason that protected information could not originate from within the brain.

While addressing whether thoughts must be linked to expressive conduct to trigger First Amendment protections, Professor Adam Kolber takes a step toward framing the right to receive information in terms of information processing.¹⁹⁷ According to what he calls the intertwined view, thoughts must be linked tightly to a form of expression to receive protection.¹⁹⁸ Alternatively, according to the independent view, thoughts need not be linked to expression—even thoughts that go uncommunicated can receive protection.¹⁹⁹ Using the example of blackjack players counting cards, Kolber argues that courts could protect pure thought regardless of whether they adopt the intertwined view or the independent view.²⁰⁰

When players count cards, they perceive symbols on cards lying face up on a blackjack table.²⁰¹ Players then mentally manipulate that information to estimate how many cards of each suit remain in the deck.²⁰² If a law prohibited card counting, it would limit players' ability to process the information they glean from the cards.²⁰³ Kolber does not explain further what it means to process that information.²⁰⁴ Instead, he draws an analogy between a card-counting ban and a hypothetical prohibition on medical devices, such as cochlear implants, that help people with sensory impairments perceive phenomena they could otherwise not perceive.²⁰⁵ If government regulation prohibited cochlear implant manufacturers from conveying foreign speech to an individual with hearing impairments, that regulation should violate the individual's

196. See Stuart M. Benjamin, *Algorithms and Speech*, 161 U. PA. L. REV. 1445, 1471 (2013) (arguing that substance of speech is the crux of First Amendment protection).

197. See Kolber, *supra* note 12, at 1406.

198. *Id.* at 1383, 1386.

199. *Id.* at 1415.

200. *Id.* at 1422.

201. *Id.* at 1384.

202. *Id.*

203. *Id.* at 1405–06.

204. See *generally id.* (describing, briefly, the mental processing that players must engage in when card counting).

205. See *id.* at 1406 (drawing an analogy between the information received by people mentally card counting and the information received by people with hearing impairments via cochlear implants).

free speech rights.²⁰⁶ Similarly, a law prohibiting blind blackjack players from having a non-vision-impaired person tell them what cards they are holding might also violate the First Amendment, as would a ban on electronic devices that serve the same purpose.²⁰⁷ Kolber argues that banning card counting would have similar First Amendment implications.²⁰⁸

In the card counting example, players ostensibly process information that originates outside the brain. However, card counting also requires access to subconscious information, such as memorized knowledge of how to count cards and memories regarding which cards were previously dealt. In other words, a prohibition on card counting is as much a ban on accessing internal information as a restriction on receiving information from external sources, such as cards lying on the table. Without both streams of information, players cannot count cards. Accordingly, the right to receive information and ideas should protect both streams of information regardless of their source because the right protects listeners, even in the absence of speakers. One might even argue that internal information sources deserve greater protection than external sources.

Additional historical and theoretical justifications exist for the right to receive subconscious information. From a theoretical perspective, the right promotes values that are believed to underlie the First Amendment. Though there is no single, unifying purpose attributed to the First Amendment, most justifications fall into three general categories: the promotion of democratic self-governance, the creation of knowledge, and the exercise of personal autonomy.²⁰⁹

Professor Jack Balkin believes the First Amendment promotes a democratic culture, where ordinary people can engage in processes that provide meaning to their lives and shape who they are.²¹⁰ According to Professor Robert Post, “the best possible explanation of the shape of First Amendment doctrine is the value of democratic self-governance.”²¹¹ This concept requires that people play a role in their own governance. Post describes a chain of communication that must

206. *Id.*

207. *Id.*

208. *See id.*

209. Post, *supra* note 130, at 478.

210. Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. REV. 1, 3 (2004).

211. Post, *supra* note 130, at 482.

be “sufficiently strong and discernible” to ensure that political representatives speak for those they claim to represent.²¹²

The First Amendment’s democratic self-governance justification can be traced to Alexander Meiklejohn, who noted that instead of requiring everyone to speak, free speech requires that “everything worth saying shall be said.”²¹³ Meiklejohn argued that free speech adds constitutional value by producing an informed populace to improve the democratic process.²¹⁴ Promoting the flow of subconscious information supports these democratic goals. Democracy cannot function otherwise. If people lack access to the information and ideas stored within their own brains, they cannot express them to achieve the Meiklejohnian free speech ideal. Nor can they maintain the chain of communication necessary to sustain democratic self-governance.²¹⁵

In addition to promoting democratic values, the right to receive subconscious information fosters the generation of new knowledge and stocks the metaphorical marketplace of ideas.²¹⁶ For example, research shows that psychedelics can enhance creative problem-solving.²¹⁷ In contrast, restricting the flow of subconscious information impedes knowledge generation and inhibits personal autonomy.²¹⁸ People with mental health or substance use conditions may have difficulty functioning at work or navigating social situations, limiting their autonomy. When these individuals consume psychedelics, they report gaining valuable insights about themselves and feeling more in touch with their peers and surroundings.²¹⁹ Some individuals may treat their addictions and improve their mental health,

212. Massaro & Norton, *supra* note 10, at 1176 (citing ROBERT C. POST, *CITIZENS DIVIDED: CAMPAIGN FINANCE REFORM AND THE CONSTITUTION* 8 (2014)).

213. *Id.* (quoting ALEXANDER MEIKLEJOHN, *POLITICAL FREEDOM: THE CONSTITUTIONAL POWERS OF THE PEOPLE* 26 (1965)).

214. Post, *supra* note 130, at 482.

215. Massaro & Norton, *supra* note 10.

216. See Smolla, *supra* note 131 (describing the marketplace of ideas metaphor); Luisa Prochazkova et al., *Exploring the Effect of Microdosing Psychedelics on Creativity in an Open-Label Natural Setting*, 235 *PSYCHOPHARMACOLOGY* 3401, 3402 (2018) (reporting that small doses of psychedelics can enhance cognitive flexibility).

217. Prochazkova et al., *supra* note 216.

218. See *id.*

219. See Pedersen et al., *supra* note 8, at 235 (stating that research participants reported receiving insights that improved their personal relationships, for instance, by promoting feelings of “deep empathy and perceived closeness with others”).

enhancing their autonomy.²²⁰ Moreover, psychedelics reportedly address existential anxiety.²²¹ The insights psychedelics reveal support Balkin's First Amendment justification, which emphasizes participation in processes of meaning-making and identity formation.²²²

Part III further defines the right to receive subconscious information and its potential applications. It describes four cases of cognitive content moderation in which public or private actors attempt to restrict, control, or manipulate the flow of subconscious information. In some circumstances, subconscious information might receive the strongest free speech protections, and any attempt to regulate it may warrant the highest levels of judicial scrutiny. In other circumstances, subconscious information might warrant intermediate scrutiny or only rational basis review.

III. THE RIGHT TO RECEIVE SUBCONSCIOUS INFORMATION

Part II presented an information-based theory of mind and explained how existing First Amendment theory and doctrine support a right to receive subconscious information, a negative constitutional right. This Part applies that right and explains how it intersects with existing First Amendment doctrine on commercial speech, government speech, and compelled speech.

The government interferes with the right to receive subconscious information when it impedes the flow of information within the brain or restricts access to substances and technologies that facilitate it. Conversely, the government can defend the right to receive subconscious information through legislation that protects individuals from private actors who engage in coercive cognitive content moderation.

Section III.A applies the right to four examples of cognitive content moderation: (1) the prohibition or forced administration of psychedelic substances; (2) thought manipulation through coercive choice architecture; (3) government-facilitated addictions to drugs or technologies; and (4) the control of

220. Dennis Hevesi, *Howard Lotsof Dies at 66; Saw Drug Cure in a Plant*, N.Y. TIMES (Feb. 17, 2010), <https://www.nytimes.com/2010/02/17/us/17lotsof.html> [<https://perma.cc/WY9L-XG9S>] (describing the famous case of Howard Lotsof, who reportedly used the psychedelic substance ibogaine to overcome addiction to heroin).

221. See generally Nina Schimmers et al., *Psychedelics for the Treatment of Depression, Anxiety, and Existential Distress in Patients with a Terminal Illness: A Systematic Review*, 239 PSYCHOPHARMACOLOGY 15, 16 (2021) (reporting that consumption of psychedelics indicated positive effects on existential well-being and a reduction in anxiety).

222. Balkin, *supra* note 210.

cognitive information by regulating or manipulating brain-computer interfaces and related technologies. Section III.A also explains how the right to receive subconscious information intersects with existing First Amendment doctrine. Section III.B addresses potential objections to the right to receive subconscious information.

A. Case Studies on Cognitive Content Moderation

This Section describes four examples of cognitive content moderation that may violate one's right to receive subconscious information. In each case, the government either interferes directly with the flow of subconscious information or indirectly by restricting access to technologies that promote its flow.

Section III.A.1 describes how the federal government previously forced people to consume psychedelic substances in an effort to develop mind control techniques. It then describes how the federal prohibition on psychedelic substances limits people's access to subconscious information, inhibiting free thought. Though banned outside the research context, psychedelics are proving to be effective for treating depression and post-traumatic stress disorder, potentially by bringing traumatic memories to the surface where they can be more easily processed and resolved.²²³ Moreover, many claim these substances enhance creativity, provide valuable psychological insights, and improve overall well-being.²²⁴ Indigenous communities have used psychedelics for centuries to access hidden information.²²⁵ Under an information-based theory of mind, restricting access to these substances and the insights

223. See, e.g., Julia Naftulin, *A Navy SEAL Veteran with PTSD Said a 'Magic' Mushroom Trip Put an End to His Depression*, BUS. INSIDER (Nov. 10 2020, 9:58 AM), <https://www.insider.com/army-vet-with-ptsd-magic-mushrooms-prevent-substance-abuse-2020-11> [<https://perma.cc/SV53-KZ9E>] (describing the experience of Navy SEAL veteran Chad Kuske, who reports, "I spent decades in therapy just trying to figure out for myself what caused this [depression], or why am I like this? And [the psychedelic substance] psilocybin, just in a moment, makes all of these things crystal clear to where you're left with not a doubt in your mind about why something was, or where to go, or how it's not serving you").

224. See, e.g., Thomas Anderson et al., *Microdosing Psychedelics: Personality, Mental Health, and Creativity Differences in Microdosers*, 236 PSYCHOPHARMACOLOGY 731, 731 (2019) (explaining that microdosing psychedelics leads to improved mood, focus, and creativity, and a decrease in symptoms of depression and anxiety).

225. See Ralph Metzner, *Introduction: Visionary Mushrooms of the Americas*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL 1, 5 (Ralph Metzner & Diane Conn Darling eds., 2004).

they reveal violates the First Amendment right to receive subconscious information.

1. Prohibition or Forced Administration of Psychedelic Substances

During the sixteenth century conquest of Mexico, Spanish missionaries observed what must have seemed a peculiar practice.²²⁶ Members of Aztec society venerated and consumed mushrooms that historians believe contained psilocybin, a psychedelic compound that alters thought and perception.²²⁷ The Aztec called the fungi *teonanácatl*, meaning “sacred mushroom” or “flesh of the gods.”²²⁸ Consuming them reportedly provided glimpses of the future and gave Aztec healers the knowledge to diagnose and treat disease.²²⁹ However, the Spanish banned the practice, prohibiting not only the mushrooms but also the insights they reportedly revealed.²³⁰

It may sound far-fetched that consuming mushrooms could reveal the future or how to cure an illness. Yet five hundred years later, research suggests the Aztec healers were onto something.²³¹ Clinical trials show that when people consume psilocybin and other psychedelic compounds, they report receiving insights that allow them to break harmful habits, such as smoking cigarettes, drinking alcohol, or consuming

226. See generally *id.* at 1–23 (providing a history of psilocybin use by the Aztecs).

227. See Richard Evans Schultes, *Teonanacatl: The Narcotic Mushroom of the Aztecs*, 42 AM. ANTHROPOLOGIST 429, 429–33 (1940) (indicating that the Aztecs used *teonanácatl* for therapeutic purposes, namely, as medicines for fevers and rheumatism); Metzner, *supra* note 225, at 11–13 (indicating that the Aztecs used *teonanácatl* for divinatory purposes). *Teonanácatl* also appears to be associated with *Xochipilli*, or “Prince of Flowers,” the Aztec deity of “ecstatic mushroom trance.” *Id.* at 15; see also R. GORDON WASSON, THE WONDROUS MUSHROOM: MYCOLATRY IN MESOAMERICA 56–78 (1980) (discussing *Xochipilli*).

228. See, e.g., Gastón Guzmán, *Hallucinogenic Mushrooms in Mexico: An Overview*, 62 ECON. BOTANY 404, 405 (2008) (translating *teonanácatl* as “sacred mushroom” or “flesh of the gods”). But see WASSON, *supra* note 227, at 44 (1980) (arguing that “divine or wondrous or awesome mushroom” is a better translation for *teonanácatl*).

229. See Metzner, *supra* note 225, at 12–13 (indicating that the Aztecs used *teonanácatl* for divinatory purposes); John W. Allen & James Arthur, *Ethnomycology and Distribution of the Psilocybian Mushrooms*, in SACRED MUSHROOM OF VISIONS: TEONANÁCATL, *supra* note 225, at 49, 56 (“As the conquest spread through Central America to Mexico, [early Spanish chroniclers] observed the Aztec priests and their followers being served the sacred fungi at festivals and other celebrations.”).

230. Metzner, *supra* note 225, at 1.

231. See, e.g., Bogenschutz et al., *supra* note 160, at 2, 5–6 (describing the positive effects of psilocybin on three people with alcohol use disorder).

opioids to excess.²³² Some see visions of the future, which reveal previously unseen paths to improve their lives.²³³ Many gain new knowledge about themselves and their relationships with nature and other people.²³⁴ These insights are often perceived as messages from an inner voice or entities outside oneself, such as relatives, ancestors, or deities.²³⁵

Psychedelic substances are known to influence thought, perception, and emotions by altering how the brain processes information.²³⁶ For centuries, Indigenous communities around the world have used naturally occurring psychedelics such as psilocybin, ibogaine, and N,N-Dimethyltryptamine (DMT) in religious and healing rituals.²³⁷ In the early- to mid-twentieth century, Western scientists synthesized other psychedelics, such as lysergic acid diethylamide (LSD), ketamine, and 3,4-Methylenedioxymethamphetamine (MDMA).²³⁸ In the past decade, a multi-billion-dollar psychedelics industry has emerged, and scientists are racing to develop new compounds with novel properties.²³⁹

232. *See id.* at 6.

233. *See* Pedersen et al., *supra* note 8, at 241–42 (describing how “transcendence of time and space, ego dissolution or death, and pronounced euphoria” were key aspects of psilocybin use that led users to enact broader life changes).

234. *Id.* at 241.

235. *Id.*

236. *See* Császár-Nagy et al., *supra* note 20.

237. *See* Michael Winkelman, *Psychedelics as Medicines for Substance Abuse Rehabilitation: Evaluating Treatments with LSD, Peyote, Ibogaine and Ayahuasca*, 7 CURRENT DRUG ABUSE REVS 101, 104 (2014); *see also* Luis Eduardo Luna, *Indigenous and Mestizo Use of Ayahuasca: An Overview*, 2011 ETHNOPHARMACOLOGY OF AYAHUASCA 1, 2–4 (describing the use of ayahuasca by Indigenous and Mestizo populations).

238. *See* Ruairi J Mackenzie, *An Introduction to Five Psychedelics: Psilocybin, DMT, LSD, MDMA and Ketamine*, TECH. NETWORKS (Nov. 16, 2021), <https://www.technologynetworks.com/neuroscience/articles/an-introduction-to-five-psychedelics-psilocybin-dmt-lsd-mdma-and-ketamine-355897> [[https://perma.cc/RN X6-5BEY](https://perma.cc/RN>X6-5BEY)]. Note that some experts do not consider ketamine and MDMA to be psychedelics. *See id.* (noting that MDMA is not a “classical psychedelic,” and that ketamine is “primarily an anesthetic, although subanesthetic doses can produce psychedelic effects”).

239. *See* Joshua Phelps et al., *The Rapid Rise in Investment in Psychedelics—Cart Before the Horse*, 79 JAMA PSYCHIATRY 189, 189 (2022), <https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2787968> [[https://perma.cc/P8J7-FL VR](https://perma.cc/P8J7-FLVR)] (estimating that the psychedelics industry, worth \$2 billion in 2020, will grow to \$10.75 billion by 2027); John Semley, *The High-Stakes Race to Engineer New Psychedelic Drugs*, WIRED (July 26, 2022, 6:00 AM), <https://www.wired.com/story/race-to-engineer-new-psychedelic-drugs/> [<https://perma.cc/HB4T-NKDL>] (describing the race to develop and patent novel psychedelic compounds).

Regardless of their origin, psychedelics can produce novel thoughts and perceptions by promoting access to subconscious information or altering the information's transmission or processing.²⁴⁰ Their exact mechanism of action remains unclear.²⁴¹ However, psychedelics might increase connectivity between brain regions, particularly in the visual cortex, which is responsible for receiving and processing visual information, and the frontal cortex, which is associated with planning and executive function.²⁴² For example, recent neuroimaging studies suggest that psilocybin decreases global brain network modularity by increasing connectivity between subnetworks,²⁴³ potentially enhancing one's repertoire of possible connectivity states.²⁴⁴ In addition to these changes in brain activity, many studies document the profound subjective experiences triggered by psychedelics, which frequently involve receiving novel insights and perceptions.²⁴⁵

The right to receive subconscious information suggests a negative right to possess and use psychedelic substances. State or federal prohibitions on these activities would violate that right if the affected people could demonstrate that the involved substances promote access to subconscious information that is of value to listeners. Doing so would support heightened judicial scrutiny of the government prohibition. One might ask whether recognizing such a right would impact the prohibition of any psychoactive drug, such as cocaine or heroin. However, substances that promote informational content that is useful to listeners may be distinct from those that merely alter mood or sensation.

Unlike psychedelics, cocaine, heroin, and other psychoactive drugs are not known to provide conscious access to information that has the qualities of speech or that produce meaningful

240. See Császár-Nagy et al., *supra* note 20 (describing the potential for psychedelics to promote access to hidden “higher-level abstract, semantic language as well as to visual symbolic information”).

241. See *id.* at 651.

242. See Lorenzo Pasquini et al., *Subacute Effects of the Psychedelic Ayahuasca on the Salience and Default Mode Networks*, 34 J. PSYCHOPHARMACOLOGY 623, 624 (2020).

243. Richard E. Daws et al., *Increased Global Integration in the Brain After Psilocybin Therapy for Depression*, 28 NATURE MED. 844, 845 (2022).

244. Enzo Tagliazucchi et al., *Enhanced Repertoire of Brain Dynamical States During the Psychedelic Experience*, 35 HUM. BRAIN MAPPING 5442, 5444 (2014).

245. See, e.g., *id.* at 5443 (providing a description of the findings of various studies on the subject).

insights of lasting influence.²⁴⁶ Instead, drugs like cocaine and heroin may produce feelings of euphoria and numb other feelings such as pain.²⁴⁷ Nevertheless, to the extent that substances such as stimulants, antidepressants, or anesthetics affect thought and decision-making, their regulation could impact freedom of thought and the right to receive subconscious information.²⁴⁸ For instance, if intractable pain prevents people from thinking clearly, and the government restricts their access to opioids that could alleviate pain and restore the individuals' ability to think and make decisions, then the government's action could infringe upon their right to receive subconscious information and may be subject to heightened judicial scrutiny. Similarly, if people have difficulty focusing their attention, which is alleviated by consuming controlled substances such as stimulants, then restrictions on those individuals' use of stimulants could infringe upon their right to receive subconscious information. However, this Subsection focuses on psychedelics because the insights they reveal most closely resemble speech.

In one recent study, researchers administered psilocybin to three participants who were diagnosed with alcohol use disorder.²⁴⁹ One participant, whom researchers called Mark, said the experience “was almost like finding the Holy Grail and the answer to all of life’s questions.”²⁵⁰ He claimed it prompted “a couple of eureka moments” and gave him “a new slate” that allowed him to remain abstinent from alcohol for two years after the study commenced (the last time researchers followed up).²⁵¹ A second participant, Rob, reported sensing his father’s

246. Compare David B. Yaden et al., *Psychedelics and Consciousness: Distinctions, Demarcations, and Opportunities*, 24 INT’L J. NEUROPSYCHOPHARMACOLOGY 615, 619 (2021) (providing an example of the research regarding the effects of psychedelics on consciousness and finding that altered states induced by psychedelics are primarily changes “to one’s awareness of their sense of self or to self-consciousness”), with Michael Lyvers & Molly Meester, *Illicit Use of LSD or Psilocybin, but Not MDMA or Nonpsychedelic Drugs, Is Associated with Mystical Experiences in a Dose-Dependent Manner*, 44 J. PSYCHOACTIVE DRUGS 410, 413 (finding cocaine and opioid use were not positively related to scores on mystical experiences indices).

247. See Nissan Akpan & Julia Griffin, *How a Brain Gets Hooked on Opioids*, PBS (Oct. 9, 2017, 6:31 PM), <https://www.pbs.org/newshour/science/brain-gets-hooked-opioids> [<https://perma.cc/2L46-7S3E>].

248. See Blitz, *supra* note 17 (describing how psychoactive drugs such as antidepressants and stimulants might affect freedom of thought).

249. See Bogenschutz et al., *supra* note 160.

250. *Id.* at 3.

251. *Id.*

presence and communicating with him to achieve mutual forgiveness.²⁵² Rob said the experience increased his sense of urgency to move his life in a more positive direction.²⁵³ He remained abstinent from alcohol for over a year after the study started (the last time researchers followed up).²⁵⁴ A third participant, Lisa, reported receiving spoken messages from God that brightened her mood and made her less self-critical.²⁵⁵ She also heard what she described as her inner voice, which reassured her of her intrinsic value.²⁵⁶ Lisa claimed the experience dissolved her self-critical thoughts and nearly eliminated the appeal of drinking alcohol.²⁵⁷ She reported reduced alcohol consumption and alleviated anxiety at a check-in fifty-four weeks after the commencement of the study.²⁵⁸

A Norwegian study analyzed the narrative reports of fifty adults who consumed various psychedelics.²⁵⁹ Participants described receiving insights that improved their personal relationships, for instance, by promoting feelings of “deep empathy and perceived closeness with others.”²⁶⁰ Many also reported having challenging experiences, including moments of terror.²⁶¹ However, even those experiences ultimately produced deep existential insights, which the participants valued.²⁶² Some described gaining insights that made them feel unity with all other humans.²⁶³ Another common theme was participants seeing family members and experiencing things from their perspectives, which generated feelings of empathy.²⁶⁴ One participant claimed, “I saw my father, I saw my mother, I saw my brother. I could see them[,] but I also experienced *being* them.”²⁶⁵ Many reported receiving messages from plants or other beings.²⁶⁶ One participant said, “[Y]ou get the feeling that there’s something outside of yourself talking to you.”²⁶⁷

252. *Id.* at 4.

253. *Id.*

254. *Id.* at 5.

255. *Id.*

256. *Id.*

257. *Id.*

258. *Id.*

259. *See* Pedersen et al., *supra* note 8, at 234.

260. *Id.* at 235.

261. *Id.*

262. *Id.*

263. *Id.* at 237.

264. *Id.* at 238.

265. *Id.*

266. *Id.* at 239.

267. *Id.*

In another study, researchers analyzed the effects of ibogaine and created a typology of the insights it produced, including revelations regarding one's family, how to be more empathetic, and how to avoid the harmful impact of opioids and other substances.²⁶⁸ One participant reported, "I saw my whole life as if it were on an old film—flickering past in black and white imagery . . ." ²⁶⁹ Participants often saw visions of their future: "[F]or what felt like hours, [I] saw my future as a heroin addict. I was in and out of prison for a long time till I was old and decrepit and alone."²⁷⁰ One participant claimed, "I was also able to begin to see how, because I felt so unlovable, I paid in one way or another for love. I was [then] able to stop that and open myself up to real love for maybe the first time in my adult life."²⁷¹ Another reported, "I awoke 3 days later in tears of joy KNOWING that I was never alone and never would be alone and that death is just a doorway to another reality."²⁷²

The above examples illustrate how psychedelic substances produce experiences, knowledge, and insights that significantly benefit listeners. Indigenous communities have long observed these qualities of psychedelic plants and fungi.²⁷³ Like the Aztec, many Indigenous communities have long known that psychedelic substances reveal valuable messages and insights.²⁷⁴ Some have used them for centuries in spiritual, community, and healing rituals.²⁷⁵ Practitioners of the Bwiti religion in Gabon, Central Africa, consume a powder derived from the iboga tree, which contains the psychedelic compound ibogaine.²⁷⁶ According to one church leader, "You don't get truth on a red carpet. You get it by eating the sacred wood [Iboga]."²⁷⁷ Further, "Iboga . . . will show you your true destiny, [it] will show you the path to follow."²⁷⁸

268. See Thomas K. Brown et al., *Ibogaine and Subjective Experience: Transformative States and Psychopharmacotherapy in the Treatment of Opioid Use Disorder*, 51 J. PSYCHOACTIVE DRUGS 155, 159–61 (2019).

269. *Id.* at 159.

270. *Id.*

271. *Id.* at 160.

272. *Id.* at 160 tbl.1.

273. See Metzner, *supra* note 225, at 11–13.

274. Winkelman, *supra* note 237, at 6; Luna, *supra* note 237, at 2.

275. See Winkelman, *supra* note 237, at 5–6.

276. Vice TV, *Hamilton's Pharmacopeia: Hamilton Morris Attends an African Psychedelic Ritual*, YOUTUBE (Dec. 28, 2021), https://www.youtube.com/watch?v=sWdLGJkdS_U_ [<https://perma.cc/FX8Z-YT55>].

277. *Id.*

278. *Id.*

Western scientists have observed ibogaine's potential to help people with substance use conditions, such as alcoholism and opioid use disorder.²⁷⁹ Some claim this discovery dates to 1962, when nineteen-year-old Howard Lotsof consumed ibogaine in Brooklyn, New York.²⁸⁰ The experience gave him new insights into his relationship with heroin.²⁸¹ "I [then] viewed heroin as a drug which emulated death. And the very next thought into my mind was 'I prefer life to death,'" said Lotsof.²⁸² He claimed six of his friends also tried ibogaine, and five of them immediately stopped using heroin.²⁸³

These examples suggest that using psychedelics promotes access to information that was previously inaccessible and possibly stored within subconscious regions of a person's mind. In many cases, people experience receiving these insights as messages from other individuals, deities, or inner voices.²⁸⁴ Regardless of the perceived origin, people frequently receive information of great personal significance, which allows them to improve their lives.²⁸⁵ Consequently, their access to that information should be protected by the right to receive subconscious information, which supports a related right to possess and use psychedelics.

Before the 1960s, psychedelics were unregulated in the United States.²⁸⁶ Moreover, throughout the 1950s and 1960s, scientists studied the therapeutic properties of psychedelics in the United States and Europe.²⁸⁷ However, the rising

279. See, e.g., Alan K. Davis et al., *Subjective Effectiveness of Ibogaine Treatment for Problematic Opioid Consumption: Short- and Long-term Outcomes and Current Psychological Functioning*, 1 J. OF PSYCHEDELIC STUD. 65, 68 (2017) (describing a study where most participants reported previous daily use of opioids and indicated that ibogaine reduced their withdrawal symptoms).

280. See Brown et al., *supra* note 268, at 155.

281. *Id.*

282. *Id.*

283. Hevesi, *supra* note 220.

284. See, e.g., Bogenschutz et al., *supra* note 160, at 2, 5 (discussing the history of psychedelics and case studies in which participants hear internal messages); see also Pedersen et al., *supra* note 8, at 238–39 (describing research participants' interactions with "God-like" voices).

285. See R. R. Griffiths et al., *Psilocybin Can Occasion Mystical-Type Experiences Having Substantial and Sustained Personal Meaning and Spiritual Significance*, 187 PSYCHOPHARMACOLOGY 268, 282 (showing that psilocybin created experiences that had "substantial and sustained personal meaning and spiritual significance").

286. See generally Collin M. Reiff et al., *Psychedelics and Psychedelic-Assisted Therapy*, 177 AM. J. PSYCHIATRY 391, 391–92 (2020) (describing the prohibition of psilocybin and other "hallucinogens").

287. *Id.* at 391–93.

popularity of psychedelics, fueled by controversial figures such as psychologist Timothy Leary, triggered a political and legal backlash.²⁸⁸ In 1965, President Lyndon B. Johnson signed the Drug Abuse Control Act of 1965, which placed psychedelics, such as LSD and psilocybin, under federal control.²⁸⁹ In 1970, Congress enacted the federal Controlled Substances Act (CSA), which President Richard Nixon's office drafted and promoted.²⁹⁰ The CSA categorized most psychedelics as Schedule I controlled substances, the most highly regulated category, which resulted in their general prohibition.²⁹¹

There are two ways a government can engage in cognitive content moderation involving psychedelics. A government can ban the possession and use of psychedelics, which Spanish missionaries did during their conquest of the Americas and the U.S. Congress did in the 1970s.²⁹² Alternatively, a government can mandate the consumption of psychedelics. A government forcing people to consume psychedelics may sound improbable. However, the U.S. government did just that for decades and as recently as the 1970s.²⁹³ Throughout the mid-twentieth century, the CIA conducted experiments in which subjects were given psychedelics under a variety of circumstances, sometimes

288. See Emily Witt, *The Science of the Psychedelic Renaissance*, NEW YORKER (May 29, 2018), <https://www.newyorker.com/books/under-review/the-science-of-the-psychedelic-renaissance> [<https://perma.cc/CP9Y-NL7R>].

289. Reiff et al., *supra* note 286.

290. Joseph F. Spillane, *Debating the Controlled Substances Act*, 76 DRUG & ALCOHOL DEPENDENCE 17, 21, 24 (2004). Audio recordings of President Nixon suggest that his support for the CSA was likely motivated more by politics than science; his aim could be seen as cognitive content moderation targeted at particular political thought and speech. See COMMON SENSE FOR DRUG POL'Y, NIXON TAPES SHOW ROOTS OF MARIJUANA PROHIBITION: MISINFORMATION, CULTURE WARS AND PREJUDICE 2, 4 (2002), <https://www.csdp.org/research/shafernixon.pdf> [<https://perma.cc/44L4-YG4J>]. By banning psychedelics, substances that can promote feelings of empathy and connectedness, Nixon could remove not only a source of significant anti-war sentiment but also some of the glue that bound anti-war protesters. See Tom LoBianco, *Report: Aide Says Nixon's War on Drugs Targeted Blacks, Hippies*, CNN (Mar. 24, 2016, 3:14 PM), <https://www.cnn.com/2016/03/23/politics/john-ehrllichman-richard-nixon-drug-war-blacks-hippie/index.html> [<https://perma.cc/L8HM-VB93>]. (“[B]y getting the public to associate the hippies with marijuana and blacks with heroin. And then criminalizing both heavily, we could disrupt those communities.”).

291. See Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. No. 91-513, § 202(c), 84 Stat. 1236, 1248—49 (providing the original Schedule I drugs).

292. See Metzner, *supra* note 225, at 1; Reiff et al., *supra* note 286.

293. See *MK-Ultra*, HISTORY (Aug. 21, 2018), <https://www.history.com/topics/us-government-and-politics/history-of-mk-ultra> [<https://perma.cc/36TG-6KUS>].

without their knowledge or consent.²⁹⁴ In a top-secret program called MK-Ultra, which spanned twenty years from 1953 to 1973, the CIA gave people psychedelics and studied their behavior and performance on psychological tests.²⁹⁵ This Cold War-era program was intended to develop mind control techniques that could be used against the nation's enemies.²⁹⁶ In a second covert project called Operation Midnight Climax, the CIA opened a brothel and administered psychedelics to its unsuspecting clients.²⁹⁷ Agents observed the effects through recording devices and one-way mirrors.²⁹⁸

As far as we know, MK-Ultra failed to produce effective mind-control techniques.²⁹⁹ Nevertheless, mind control involves coercive alteration of information flow or processing within people's brains, and, in that respect, it exemplifies government-initiated cognitive content moderation. When viewed through the lens of an information-based theory of mind, involuntary experiments violated participants' right to receive subconscious information.

In the private sector, some employers are encouraging employees to consume psychedelics to promote their mental health, empathy, and creativity.³⁰⁰ At least one company has started covering psychedelic therapy under its health insurance plan.³⁰¹ These employers arguably engage in a subtle form of cognitive content moderation. Though First Amendment limits

294. *See id.*

295. *Id.*

296. *Id.*

297. *See id.*

298. *Id.*

299. *See* Stephen Kinzer, *The Secret History of Fort Detrick, the CIA's Base for Mind Control Experiments*, POLITICO (Sept. 15, 2019), <https://www.politico.com/magazine/story/2019/09/15/cia-fort-detrick-stephen-kinzer-228109/> [<https://perma.cc/TU7U-E865>]. Due to changing attitudes toward psychedelics, research on these substances is accelerating, and technologies such as artificial intelligence are being used to generate novel psychedelic compounds. Shayla Love, *The Future of Psychedelic Medicine Will Be Drugs You've Never Heard Of*, VICE (Jan. 24, 2022, 9:00 AM), <https://www.vice.com/en/article/m7v3dq/the-future-of-psychedelic-medicine-will-be-drugs-youve-never-heard-of> [<https://perma.cc/7WU4-CY6T>]. Designing more effective mind control agents may soon be possible.

300. *See generally* Dana G. Smith, *Why This Startup is Encouraging Employees to Microdose Psychedelics at Work*, FAST CO. (May 31, 2022), <https://www.fastcompany.com/90755976/why-this-startup-is-encouraging-employees-to-microdose-psychedelics-at-work> [<https://perma.cc/S8T3-49LH>].

301. *See* Ruth Reader, *Why Dr. Bronner's is Offering Ketamine Therapy to its Employees*, FAST CO. (Mar. 25, 2022), <https://www.fastcompany.com/90733549/why-dr-bronnens-is-offering-ketamine-therapy-to-its-employees> [<https://perma.cc/4MRA-H6YJ>].

on restricting speech do not apply to private sector employers, they would restrict government agencies' ability to require employees or private citizens to consume psychedelics. Like Lumon Industries, which controlled the flow of subconscious information within employees' brains, government-mandated psychedelic consumption would influence the flow or processing of subconscious information in state employees, arguably violating their First Amendment right to free thought.

The CSA prohibits the commercial and personal production, possession, and use of psychedelics.³⁰² It is effectively an outright ban. However, the CSA allows limited exceptions for manufacturers who obtain a Drug Enforcement Administration (DEA) license to produce psychedelics for research purposes and for scientists who obtain DEA registration to conduct experiments using psychedelics (and other Schedule I controlled substances).³⁰³ Similarly, Congress and the courts have created limited religious CSA exemptions that allow certain organizations to possess and use psychedelics for ceremonial purposes. For instance, in 1978, Congress enacted the American Indian Religious Freedom Act (AIRFA).³⁰⁴ The Act acknowledged three types of infringements by the federal government upon Native American religious practices, including restricting access to ceremonial substances such as peyote.³⁰⁵

Despite AIRFA, the Supreme Court has denied some Native Americans the right to access psychedelics without significant repercussions. In *Employment Division, Department of Human Resources of Oregon v. Smith*,³⁰⁶ the Court held that a state could deny employment benefits to Native Americans who were fired for using peyote even though they used the psychedelic plant as part of their religious practice.³⁰⁷ According to Justice Antonin Scalia's majority opinion, the CSA's incidental effects on religion did not violate the Free Exercise Clause because the

302. CONG. RSCH. SERV., THE CONTROLLED SUBSTANCES ACT (CSA): A LEGAL OVERVIEW FOR THE 116TH CONGRESS 2 (2019) (“[T]he CSA establish[es] penalties for the production, distribution, and possession of controlled substances”), <https://crsreports.congress.gov/product/pdf/R/R45948/2> [<https://perma.cc/D4CR-4UFM>].

303. 21 U.S.C. § 823(g).

304. Robin K. Rannow, *Religion: The First Amendment and the American Indian Religious Freedom Act of 1978*, 10 AM. INDIAN L. REV. 151, 153 (1982).

305. *Id.* at 154.

306. 494 U.S. 872 (1990), *superseded by statute*, Religious Freedom Restoration Act of 1993, Pub. L. No. 103-141, 107 Stat. 1488, *invalidated by* *City of Boerne v. Flores*, 521 U.S. 507 (1997).

307. *See id.* at 890.

CSA is a “neutral law of general applicability.”³⁰⁸ Scalia said the Court had previously used free exercise rights to invalidate laws of general applicability only when those laws involved other constitutional protections, such as communicative or parental rights, in addition to the Free Exercise Clause.³⁰⁹

In response to *Smith*, Congress enacted the Religious Freedom Restoration Act (RFRA) in 1993.³¹⁰ RFRA states that “governments should not substantially burden religious exercise,” even through neutral laws of general applicability, unless the governments demonstrate that the laws further a compelling state interest and are the least restrictive means of achieving that interest.³¹¹ In the 2005 case *Gonzales v. O Centro Espírita Beneficente União do Vegetal*,³¹² a Brazilian church successfully invoked RFRA to avoid prosecution under the CSA for utilizing ayahuasca as a religious sacrament.³¹³ However, *Gonzales* is the exception rather than the rule, and psychedelic churches risk arrest and prosecution for violating the CSA.³¹⁴

The information-based theory of mind recasts cases like *Smith* and *Gonzales* as free speech and free thought cases in addition to free exercise cases. When viewed through the lens of cognitive content moderation, the government’s prohibition on psychedelics violates the aggrieved parties’ First Amendment right to receive the information and insights that psychedelics reveal. Accordingly, the Oregon peyote ban at issue in *Smith* can be understood as a hybrid case, involving

308. *See id.* at 879.

309. *See id.* at 882.

310. Kristen A. Carpenter, *Living the Sacred: Indigenous Peoples and Religious Freedom*, 134 HARV. L. REV. 2103, 2119 (2021).

311. *Id.*

312. 546 U.S. 418 (2006).

313. *See generally id.* at 419.

314. *See* Alejandra Molina, ‘We Expect to Win.’ Ayahuasca Churches Vow to Remain as Court Case Largely Dismissed., RELIGION NEWS SERV. (Apr. 8, 2022), <https://religionnews.com/2022/04/08/we-expect-to-win-ahuayasca-churches-vow-to-remain-amid-court-case-largely-dismissed/> [<https://perma.cc/5V7Z-DPLA>] (describing the arrest and prosecution of Clay Villanueva of the Yagé Assembly church); Manisha Krishnan, *A Magic Mushroom Church Is Suing Cops for Raiding \$200K of ‘Sacrament’*, VICE (Aug. 17, 2022, 1:57 PM), <https://www.vice.com/en/article/v7vbkx/magic-mushroom-zide-door-lawsuit-religious-freedom> [<https://perma.cc/4D2Z-GN3B>] (describing a lawsuit filed by the Zide Door Church of Entheogenic Plants, which is based in Oakland, California).

both the free exercise of religion and freedom of thought, despite Justice Scalia's claim to the contrary.³¹⁵

Granting CSA exemptions to some groups for limited purposes, while prohibiting access to others for similar or different purposes, arguably represents a content- and speaker-based restriction on speech.³¹⁶ In *Citizens United v. Federal Elections Commission*,³¹⁷ Justice Kennedy concluded, "[T]he Government may commit a constitutional wrong when by law it identifies certain preferred speakers" and "restrictions based on the identity of the speaker are all too often simply a means to control content."³¹⁸ Further, where "Government seeks to use its full power, including the criminal law, to command where a person may get his or her information or what distrusted source he or she may not hear, it uses censorship to control thought. This is unlawful. The First Amendment confirms the freedom to think for ourselves."³¹⁹

Psychedelic-related insights are no different from the information source at issue in *Citizens United*. Under the information-based theory of mind, psychedelics are sources of valuable information, making them comparable to magazines, books, films, and other media. Allowing some groups access to the information for certain purposes while prohibiting others from accessing it for similar or different purposes is arguably a content- and speaker-based restriction on speech.³²⁰ And commanding that an individual may not access a distrusted source of information, here psychedelics, should ring the same alarm as the prohibition struck down in *Citizens United*.³²¹

The CSA imposes similarly unequal restrictions on the use of psychedelics. It allows scientists and clinical trial participants to access psychedelics for research that involves observing and experiencing the novel insights that psychedelics

315. See DAVID POZEN, *THE CONSTITUTION OF THE WAR ON DRUGS* 122, 126–27 (2024) (describing Justice Scalia's claim in *Smith* that Oregon's peyote ban was not a hybrid situation involving the free exercise clause and another constitutional protection and arguing that Scalia may have been mistaken if the prohibition also infringed freedom of thought or freedom of speech).

316. See *Gonzales*, 546 U.S. at 420 (discussing content- and speaker-based restrictions on speech included in the CSA, which authorizes "the Attorney General to 'waive the requirement for registration of certain manufacturers, distributors, or dispensers if he finds it consistent with the public health and safety'").

317. 558 U.S. 310 (2010).

318. *Id.* at 340.

319. *Id.* at 356.

320. See 564 U.S. 552, 571 (2011).

321. See *Citizens United v. Fed. Election Comm'n*, 558 U.S. 310, 356 (2010).

reveal.³²² The CSA also allows certain manufacturers to produce psychedelics and sell them to these groups.³²³ However, the CSA prohibits all other groups from accessing psychedelics for any purpose.³²⁴ Similarly, RFRA and the DEA, which interprets and enforces RFRA, allow some religious organizations access to psychedelics for certain spiritual purposes but deny access to other groups that utilize them for religious or secular purposes.³²⁵ In other words, both the CSA and RFRA discriminate against certain groups who possess and consume psychedelics for secular or nonmedical purposes. Consequently, like other statutes and state actions that make content- and speaker-based distinctions, the CSA and RFRA may violate the First Amendment rights of affected groups who are denied access to information.

Because prohibitions on personal possession and use of psychedelics block access to subconscious information and arguably infringe a fundamental right, they could be subject to strict scrutiny.³²⁶ In addition to imposing content- and speaker-based restrictions on thought, the CSA's outright ban on personal possession and use of psychedelics ostensibly lacks narrow tailoring. Content-based regulations must be the least restrictive means available to survive narrow tailoring for First Amendment purposes.³²⁷ But, before engaging in the narrow tailoring analysis, the government must establish that its means further a compelling state interest.³²⁸ In *Gonzales*, the government claimed that applying the CSA was the least

322. 21 U.S.C. § 823(g).

323. § 823(a)–(b).

324. See CONG. RSCH. SERV., *supra* note 302.

325. See DIVERSION CONTROL DIV., DRUG ENF'T AGENCY, GUIDANCE REGARDING PETITIONS FOR RELIGIOUS EXEMPTION FROM THE CONTROLLED SUBSTANCES ACT PURSUANT TO THE RELIGIOUS FREEDOM RESTORATION ACT (REVISED) 1 (2020), [https://www.deadiversion.usdoj.gov/GDP/\(DEA-DC-5\)\(EO-DEA-007\)\(Version2\)RFR_A_Guidance_\(Final\)_11-20-2020.pdf](https://www.deadiversion.usdoj.gov/GDP/(DEA-DC-5)(EO-DEA-007)(Version2)RFR_A_Guidance_(Final)_11-20-2020.pdf) [<https://perma.cc/N5K8-Y3QD>].

326. Caroline Mala Corbin, *The Unconstitutionality of Government Propaganda*, 81 OHIO ST. L.J. 815, 821 (2020) (“Regulations that discriminate against viewpoint are subject to strict scrutiny and are presumed unconstitutional.”).

327. *Sable Comm'ns of Cal., Inc. v. FCC*, 492 U.S. 115, 126 (1989) (stating that the government may “regulate the content of constitutionally protected speech in order to promote a compelling interest if it chooses the least restrictive means to further the articulated interest”); *United States v. Playboy Ent. Grp., Inc.*, 529 U.S. 803, 813 (2000) (stating that “if a statute regulates speech based on its content, it must be narrowly tailored to promote a compelling government interest . . . if a less restrictive alternative would serve the Government purpose, the legislature must use that alternative”).

328. See *Gonzales v. O Centro Espírita Beneficente União do Vegetal*, 546 U.S. 418, 429 (2006).

restrictive means to achieving three compelling state interests: protecting the health and safety of UDV church members; discouraging diversion of ayahuasca from the church to other groups; and complying with international drug treaties, such as the United Nations Convention on Psychotropic Substances.³²⁹ The Court held that the DEA failed to show a compelling interest in prohibiting UDV members from accessing ayahuasca.³³⁰ However, if those interests had been found compelling, they arguably could have been achieved through means less restrictive than an outright ban. The same could be said of the CSA ban on personal psychedelic use. Under the information-based theory of mind, the reasoning of *Sable Communications of California, Inc. v. Federal Communications Commission*³³¹ and *United States v. Playboy Entertainment Group, Inc.*³³² could be applied to the CSA's ban on personal use and possession of psychedelics.

In *Sable Communications of California, Inc.*, the Court evaluated whether a federal ban on prerecorded pornographic messages, delivered through “dial-a-porn” services, was constitutional under the First Amendment.³³³ The majority opinion by Justice Byron White concluded that while the government's interest in protecting children from indecent pornographic messages was legitimate, Section 223(b) of the amended Communications Act of 1934 was not sufficiently narrowly drawn to serve that purpose.³³⁴ Banning adult access to indecent messages “far exceeds that which is necessary” to shield minors from that content.³³⁵ According to the Court, less restrictive approaches, such as requiring service providers to enact steps designed to prevent minors from accessing their content, could have achieved that purpose.³³⁶ For instance, instead of an outright ban, the law could have mandated credit card verification or the use of special access codes, which would not have infringed the First Amendment rights of adults to access pornographic information.³³⁷

In *United States v. Playboy Entertainment Group, Inc.*, the Court analyzed whether Section 505 of the Telecommunications

329. *Id.* at 426.

330. *Id.* at 439.

331. 492 U.S. 115 (1989).

332. 529 U.S. 803 (2000).

333. *Sable Comm'ns of Cal., Inc.*, 492 U.S. at 117–18.

334. *Id.* at 131.

335. *Id.*

336. *See id.* at 128.

337. *Id.*

Act of 1996 violated the First Amendment.³³⁸ The majority, led by Justice Anthony Kennedy, concluded that the government's interest in shielding children from sexually explicit television programs was legitimate.³³⁹ However, the content-based restriction of Section 505, which required providers of sexually explicit channels to scramble their content or limit broadcasting to late night hours, was not narrowly tailored to achieve the stated purpose.³⁴⁰ The Court said that allowing subscribers to block sexually explicit channels, which was permitted under Section 504 of the Telecommunications Act, could adequately protect children from sexually explicit material without infringing the First Amendment rights of adults to view those channels.³⁴¹ Thus, the Court held Section 505 violated the First Amendment.³⁴²

Applying *Sable* and *Playboy* to the CSA ban on personal use and possession of psychedelics, the ban arguably does not survive narrow tailoring analysis. Even if protecting individual health and safety, preventing diversion, and complying with international treaties are compelling government purposes, they could arguably be achieved through less restrictive means to avoid prohibitions on personal adult access to the subconscious information psychedelics can reveal. For instance, to promote health and safety, the government could require health screenings and education that promotes safe use. To reduce the risk of diversion and underage consumption, the government could implement storage and security requirements while limiting possession to adults with valid identification proving their age. To comply with international drug treaties, governments could potentially allow only possession of botanical psychedelics. Based on the official United Nations Commentary on the Convention on Psychotropic Substances,³⁴³ some scholars believe botanical

338. *United States v. Playboy Ent. Grp., Inc.*, 529 U.S. 803, 806 (2000).

339. *Id.* at 811.

340. *Id.* at 827.

341. *Id.* at 823.

342. *Id.* at 827.

343. ADOLF LANDE, UNITED NATIONS, COMMENTARY ON THE CONVENTION OF PSYCHOTROPIC SUBSTANCES 387 (1971) ("Schedule I does not list any of the natural hallucinogenic materials in question, but only chemical substances which constitute the active principle contained in them. The inclusion in Schedule I of the active principle of a substance does not mean that the substance itself is also included therein if it is a substance clearly distinct from the substance constituting its active principle. . . . Neither the crown (fruit, mescal button) of the Peyote cactus nor the

substances are excluded from international control.³⁴⁴ Alternatively, Congress or the DEA could move psychedelic substances or related botanical products to Schedule V under the Controlled Substances Act, which would maintain federal control while allowing psychedelics to be purchased “behind the counter” like certain cough suppressant formulas and other restricted products.³⁴⁵

Drug treaties also contain potential “escape clauses” for psychedelics, which limit signatories’ treaty obligations where those duties conflict with a nation’s Constitutional principles or basic concepts of its legal system.³⁴⁶ Accordingly, to the extent that prohibitions on personal psychedelic possession or use violate the First Amendment, or other Constitutional rights, allowing access is not barred by U.S. treaty obligations.³⁴⁷ Some countries defend their decriminalization or regulation of treaty controlled substances on human rights or health and welfare grounds.³⁴⁸ The point is that several less restrictive means exist through which governments could achieve drug-related purposes while limiting infringement of the right to receive subconscious information.

Of course, like any right, the right to receive subconscious information is not unlimited. In *Zemel v. Rusk*,³⁴⁹ the Court denied a citizen’s challenge to a State Department prohibition on issuing passports for foreign travel to Cuba.³⁵⁰ The challenger, Zemel, wished “to satisfy [his] curiosity about the

roots of the plant *Mimosa hostilis* nor *Psilocybe* mushrooms themselves are included in Schedule I, but only their respective active principles, mescaline, DMT, and psilocybine . . .”).

344. See, e.g., Kenneth W. Tupper & Beatriz Caiuby Labate, *Plants, Psychoactive Substances and the International Narcotics Control Board: The Control of Nature and the Nature of Control*, 2 HUM. RTS. & DRUGS 17, 21–22 (2012).

345. See W. Steven Pray & Gabriel E. Pray, *Behind-the-Counter Products: A Third Class of Drugs*, U.S. PHARMACIST, Sept. 2011, at 11, 13, <https://www.uspharmacist.com/article/behind-the-counter-products-a-third-class-of-drugs> [<https://perma.cc/95R4-UM47>].

346. See David Bewley-Taylor, *Politics and Finite Flexibilities: The UN Drug Control Conventions and Their Future Development*, 114 AMER. J. INT’L L. UNBOUND 285, 286 (2020); see also John Collins, *Rethinking ‘Flexibilities’ in the International Drug Control System—Potential, Precedents and Models for Reforms*, 60 INT’L J. DRUG POL’Y 107, 112 (2018) (describing flexible enforcement models of international drug treaties).

347. See Bewley-Taylor, *supra* note 346.

348. See Neil Boister, *Waltzing on the Vienna Consensus on Drug Control?*, 29 LEIDEN J. INT’L L. 389, 402–03 (2016) (describing Uruguay’s human rights and health and welfare justifications for its regulation of marijuana).

349. 381 U.S. 1 (1965).

350. *Id.* at 3.

state of affairs in Cuba and to make [himself] a better informed citizen.”³⁵¹ In other words, he wanted access to information that only visiting a foreign nation could provide. Observing that there are few actions that “could not be clothed by ingenious argument in the garb of decreased data flow,”³⁵² Chief Justice Earl Warren concluded that “[t]he right to speak and publish does not carry with it the unrestrained right to gather information.”³⁵³ Fearing that the First Amendment could be invoked to prevent the government from regulating all manner of activities, the majority ruled against *Zemel*.³⁵⁴ Like any other right to receive information, the right to receive subconscious information should have at least some constraints.

At first glance, *Zemel* might seem an obstacle to accessing psychedelics under the right to receive subconscious information. However, several facts distinguish *Zemel* from other cases, including cases of possession or consumption of psychedelics. In *Zemel*, the government justified its travel policy by invoking national security concerns,³⁵⁵ which arguably allow the greatest imposition upon fundamental liberties.³⁵⁶ Those concerns are likely absent when civilians privately consume psychedelics. Of course, regarding psychedelics, the government frequently claims a compelling interest in protecting safety, and courts typically defer to government expertise in cases regarding drug regulation.³⁵⁷

Another distinction between *Zemel* and cases involving psychedelics is the relationship of the regulated activity to the speech process. The *Zemel* Court characterized travel as conduct that is only incidentally related to speech, giving the government more latitude to regulate.³⁵⁸ There should

351. *Id.* at 4.

352. *Id.* at 16–17.

353. *Id.* at 17.

354. *See id.* at 16–17.

355. *Id.* at 14–16.

356. *See, e.g.,* *Korematsu v. United States*, 323 U.S. 214, 218 (1944) (justifying the deprivation of fundamental civil liberties during a time of war), *abrogated by* *Trump v. Hawaii*, 128 S. Ct. 2392 (2018).

357. *See generally* Marc Jonathan Blitz, *Cognitive Enhancement and American Constitutional Law*, in *NEUROPSYCHOPHARMACOLOGY* 1039 (Peter Riederer et al. eds., 2022) (explaining how courts may defer to the government regarding drug safety because using any drug involves at least some degree of risk even if the government has other motives).

358. *See Zemel*, 381 U.S. at 16–17; *see also id.* at 24 (Douglas, J., dissenting) (“Since we deal with rights peripheral to the enjoyment of First Amendment guarantees, restrictive legislation must be ‘narrowly drawn’ to meet a precise evil.”) (citation omitted).

seemingly be a point where the link between conduct and speech (or thought) becomes too attenuated to invoke the First Amendment. Otherwise, as the *Zemel* majority acknowledged, the First Amendment would protect all conduct due to its role in information gathering.³⁵⁹ However, the mental insights gained from consuming psychedelics or accessing information stored within the brain seem more centrally related to speech and thought than the insights gained from traveling abroad and other actions that may be viewed as incidental to speech. Cases decided after *Zemel*, including *Sorrell*, expanded and reinforced the right to receive information. For instance, *Sorrell* extended the right to receive information to the starting point of speech formation—to the acquisition of information that forms the basis of speech.³⁶⁰ This expansion should encompass information that arises within the subconscious mind.

Cases since *Zemel* have also emphasized the importance of protecting the right to receive information within one's home versus other locations.³⁶¹ In *Stanley v. Georgia*, the Court ruled that First Amendment freedoms encompass a right "to read or observe what [one] pleases," which gains "an added dimension" when exercised "in the privacy of a person's own home."³⁶² Based on *Zemel* and *Stanley*, consuming psychedelics at home may warrant stronger First Amendment protections than traveling abroad to receive information.³⁶³ As described above, a speech-related right to access psychedelics extends from the right to receive subconscious information. The insights revealed by psychedelics promote First Amendment ideals, including promoting democratic self-governance, the marketplace of ideas, personal autonomy, meaning-making, and self-actualization.

The following Subsection shifts from discussing a fundamental First Amendment right to an increasingly common form of public and private cognitive content moderation. Government and commercial actors use design elements called dark patterns to leverage cognitive biases of human psychology and manipulate people to make certain

359. See *id.* at 16–17 (majority opinion).

360. *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 570 (2011); see also Joseph Thai, *The Right to Receive Foreign Speech*, 71 OKLA. L. REV. 269, 299 (2018).

361. See *Stanley v. Georgia*, 394 U.S. 557, 564 (1969).

362. *Id.* at 564–65.

363. The consumption of psychedelics in locations outside the home may warrant weaker First Amendment protections than doing so at home. Subsection III.B.4 further addresses these and other potential limitations on the right to receive subconscious information.

decisions.³⁶⁴ The Subsection argues that because dark patterns change how subconscious information flows and is processed within the brain, the government's use of them may unconstitutionally hinder freedom of thought and be subject to heightened judicial scrutiny. Moreover, when private actors employ dark patterns in commercial contexts, their use undermines the goals of commercial speech doctrine, which aims to educate consumers to promote informed decision-making. Consequently, although the First Amendment does not protect consumers from private actors, the manipulative impact of dark patterns on free thought makes dark patterns less deserving of First Amendment protection, potentially giving the government greater leeway to regulate dark patterns than other forms of commercial speech.

2. Coercive Choice Architecture

As people complete their daily routines, they continuously make decisions, many of which occur subconsciously.³⁶⁵ For instance, when a shopper decides to visit the supermarket to buy a carton of milk, he must make hundreds of smaller decisions along the way. Do I walk or drive to the store? Should I let other drivers merge into my lane? Where should I park? Will I take a shopping cart or a handbasket into the store? How will I travel from the store's entrance to the dairy section? Should I stop for paper towels along the way? Should I use the cashier's aisles or self-checkout? Should I pay with cash or by credit card?

Many of these decisions will be made automatically, without the shopper's awareness.³⁶⁶ They are influenced by factors such as the design of the city, the roads, the supermarket, and available payment methods.³⁶⁷ For example, safe, well-maintained sidewalks might encourage people to walk instead of drive. Affordable and reliable public transportation could encourage people to travel by bus or train. Well-designed

364. BUREAU OF CONSUMER PROT., *supra* note 72.

365. See DANIEL KAHNEMAN, THINKING, FAST AND SLOW 20–21 (2011) (describing two systems of the mind: System 1, which operates quickly, automatically, and with no apparent voluntary control; and System 2, which allocates attention to perform complex, effortful computations; the second system is “often associated with the subjective experience of agency”).

366. See *id.* at 21–22 (listing and describing examples of System 1's automatic decisions).

367. See *id.* at 51 (explaining how words, gestures, and deliberate designs influence unconscious decisions).

signage can facilitate efficient traffic flow along city roads or within supermarket aisles.

Designers craft these environmental factors to influence the decisions people make.³⁶⁸ In this respect, our built environment serves as *choice architecture*, which economist Richard Thaler defines as “the environment in which people choose.”³⁶⁹ Choice architecture exists in the three-dimensional spaces of our physical surroundings, as well as the virtual three-dimensional spaces of video games and virtual reality.³⁷⁰ Similarly, choice architecture is present in the two-dimensional layouts of websites, smartphone apps, and paper documents.³⁷¹

Thaler and Professor Cass Sunstein claim, “[T]he goal of a conscientious choice architect is to help people make better choices ‘as judged by themselves.’”³⁷² To achieve that goal, designers build features into environments that nudge people to choose certain options over others.³⁷³ Nudges are subtle design interventions that steer people along certain decision paths without forcing their compliance.³⁷⁴ Examples include providing people with discounted gym memberships to encourage them to exercise or automatically enrolling employees in retirement accounts to encourage them to save money.³⁷⁵

To be a nudge, the intervening choice architecture must be relatively easy for decision-makers to overrule.³⁷⁶ If the outcome is largely unavoidable, or the cost to avoid it becomes too high, then the conditions that produced that outcome are no longer nudges.³⁷⁷ They have become something more manipulative or coercive. Because these conditions are often deceptive and may influence consumers without their knowledge, the design elements of coercive choice architecture are often referred to as dark patterns.³⁷⁸

368. See *id.* at 51, 55–58 (stating that designers have known of this effect “for a long time,” and providing examples of its effects in experiments).

369. Richard Thaler, *Nudge, Not Sludge*, 361 SCI. 431, 431 (2018).

370. See RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* 94–95 (2008).

371. See *id.*

372. See Thaler, *supra* note 369, at 431; see also THALER & SUNSTEIN, *supra* note 370, at 5.

373. THALER & SUNSTEIN, *supra* note 370, at 6.

374. Cass R. Sunstein, *The Ethics of Nudging*, 32 YALE J. ON REGUL. 413, 417 (2015).

375. *Id.* at 426.

376. THALER & SUNSTEIN, *supra* note 370, at 6.

377. See *id.*

378. See BUREAU OF CONSUMER PROT., *supra* note 72.

Dark patterns are essentially user interfaces designed to confuse or coerce people, which makes it difficult for users to express their true preferences, or to manipulate them into taking actions they would not otherwise take.³⁷⁹ Professor Ari Waldman describes dark patterns as design tricks that “weaponize the design of built online environments to harm consumers and their privacy.”³⁸⁰

One empirical study found dark patterns “strikingly effective in getting consumers to do what they would not do when confronted with more neutral user interfaces.”³⁸¹ When deployed at scale, dark patterns are an efficient means of shifting the behavior of populations, often in directions that go against the interests of individuals and communities.³⁸² A common example of dark patterns is making the cancellation of online subscriptions overly burdensome.³⁸³ In this context, a common dark pattern involves hiding cancellation buttons behind difficult-to-find links or forcing people to call a telephone number and endure long wait times before being permitted to cancel a service.³⁸⁴

Previous efforts to combat the use of dark patterns have focused on their economic consequences or relatively vague notions of manipulation and user autonomy.³⁸⁵ The information-based theory of mind sheds new light on dark patterns and gives constitutional force to arguments against their use. Dark patterns exert their influence by altering the flow and processing of subconscious information; accordingly, dark patterns may violate the First Amendment right to receive subconscious information. Under the information-based theory of mind, free thought and rational decision-making require the unimpeded flow and integration of information from disparate brain regions.³⁸⁶ Interfering with this flow disrupts the brain’s evaluative capacities and constitutes a form of cognitive content moderation that is potentially unconstitutional.

379. See Jamie Luguri & Lior Jacob Strahilevitz, *Shining a Light on Dark Patterns*, 13 J. LEGAL ANALYSIS 43, 44 (2021).

380. Waldman, *supra* note 8, at 105–07 (describing five major cognitive biases that platforms can exploit through dark patterns).

381. Luguri & Strahilevitz, *supra* note 379, at 46.

382. See *id.* at 103.

383. See Isabella Kwai, *Consumer Groups Target Amazon Prime’s Cancellation Process*, N.Y. TIMES (Jan. 14, 2021), <https://www.nytimes.com/2021/01/14/world/europe/amazon-prime-cancellation-complaint.html> [<https://perma.cc/2GNA-KX34>].

384. *Id.*

385. See Luguri & Strahilevitz, *supra* note 379, at 52, 54.

386. See *supra* Section II.B.

Both nudges and dark patterns work by leveraging cognitive biases of human psychology.³⁸⁷ One category of cognitive biases includes learned or preprogrammed mental shortcuts people use to make decisions quickly and automatically.³⁸⁸ These shortcuts are stored in memory; to leverage them, a nudge or dark pattern must trigger the associated information.³⁸⁹ In other words, though nudges and dark patterns are typically external to the brain, people's senses deliver them to brain regions, where they act like a key to unlock a cognitive bias. By influencing the flow of subconscious information in this way, dark patterns bring about a desired behavioral outcome. Because they interfere with the free flow and processing of subconscious information, their use should potentially be restricted.

Sunstein and Thaler refer to harmful choice architecture as “sludge” because it “mucks things up and makes wise decision-making and prosocial activity more difficult.”³⁹⁰ Sludge comes in two varieties.³⁹¹ It can discourage behavior that is in one's best interest, such as obtaining reimbursement for medical expenses from a health insurance company.³⁹² Sludge can also promote self-defeating behavior, such as investing in deals that are too good to be true or providing more personal information to companies than one intends to reveal.³⁹³ Sludge is “a viscous mixture’, in the form of excessive or unjustified frictions that make it difficult for consumers, employees, employers, students, patients, clients, small businesses[,] and many others to get what they want or to do as they wish.”³⁹⁴ Because sludge inhibits consumers from exercising free thought, it creates market inefficiencies and negative externalities, which are

387. See BUREAU OF CONSUMER PROT., *supra* note 72, at 2; THALER & SUNSTEIN, *supra* note 370, at 34.

388. See, e.g., Waldman, *supra* note 8, at 106 (discussing the shortcut of anchoring, which involves a “disproportionate reliance on the information first available when [people] make decisions”); see also Cass R. Sunstein, *Sludge Audits*, 6 BEHAV. PUB. POL'Y 654, 656 (2022), <https://www.cambridge.org/core/journals/behavioural-public-policy/article/sludge-audits/12A7E338984CE8807CC1E078EC4F13A7> [<https://perma.cc/5KAT-FUV9>].

389. See THALER & SUNSTEIN, *supra* note 370, at 26 (describing “availability bias” as being able to increase a person's fear of a bad outcome simply by reminding them of a related incident that went awry).

390. Thaler, *supra* note 369, at 431.

391. *Id.*

392. See *id.*

393. See *id.*

394. Sunstein, *supra* note 388, at 656.

borne by consumers and society instead of the businesses that produce it.³⁹⁵

A significant practical challenge is drawing a line between helpful choice architecture, which should be allowed, and harmful choice architecture, which should be discouraged or prohibited.³⁹⁶ Legislation and regulation must also distinguish harmful choice architecture from advertising that merely attempts to persuade consumers without coercing them. Like nudges and dark patterns, advertising may alter the flow of subconscious information to make certain outcomes more likely. However, what separates nudges and most advertisements from dark patterns is the difficulty listeners face in overcoming their influence and the degree to which listeners would approve of their behavioral outcomes.³⁹⁷ Nudges influence subconscious information processing and decision-making in ways that subtly increase the likelihood of certain outcomes, and listeners would likely view those outcomes as beneficial.³⁹⁸ In contrast, dark patterns influence subconscious information processing and decision-making in ways that make certain outcomes nearly unavoidable, and listeners would likely view those outcomes as undesirable.³⁹⁹

Most advertisements would likely be closer to nudges than dark patterns because they can be easily ignored. Consumers can typically change the channel, turn off the television, cover their ears, or look away. The same can be said of most media and other data sources that might alter the flow of subconscious information, including books, films, art, nature, and other people. Like advertising, these sources of information might evoke memories, influence opinions, or even attempt to persuade listeners and provoke a specific response by leveraging cognitive biases. However, like undesirable advertisements, these sources can usually be avoided, and if they succeed in persuading their audience, those listeners would be unlikely to resent that outcome. The listeners willingly exposed themselves to the stimulus and likely retained significant control over their thoughts and actions. In contrast, dark patterns are more difficult to avoid, ignore, and

395. *See id.* at 662.

396. *See* THALER & SUNSTEIN, *supra* note 370, at 83.

397. Sunstein, *supra* note 388, at 661.

398. *Id.* at 659–60.

399. *Id.* at 661.

overcome. They are placed squarely in one's path. To move forward, listeners must typically confront them and comply.⁴⁰⁰

Consider a television ad urging people to create Facebook accounts. The ad might try to persuade viewers by appealing to their emotions. It might imply that they will drift away from friends and loved ones if they do not create an account. Though such an ad might be annoying or inconvenient, it could easily be ignored or avoided. In contrast, forcing people to view similar information when trying to cancel their Facebook account would impede their achievement of a specific objective, which those individuals would likely resent. Admittedly, the difficulty of targets overcoming the influence of behavioral interventions and the degree to which targets might benefit from or approve of their outcomes are imperfect means of distinguishing between nudges, dark patterns, and other sources of information. However, they are helpful guides, and they can be empirically tested.⁴⁰¹

The Federal Trade Commission (FTC) has taken an interest in combatting commercial dark patterns. The Agency recently published a report that includes a detailed taxonomy of coercive choice architecture.⁴⁰² In 2022, video game developer Epic Games agreed to pay more than half a billion dollars to settle FTC allegations that it breached child privacy laws and used dark patterns to trick children into making unintentional purchases.⁴⁰³

Government-implemented sludge could be annoying, inefficient, or immoral. State employees might create a visa application process that requires people to navigate a confusing website, frustrating visa applicants and discouraging them from visiting foreign countries.⁴⁰⁴ People seeking to enroll or

400. See Luguri & Strahilevitz, *supra* note 379, at 46 (distinguishing dark patterns from marketing efforts).

401. See *id.* at 98.

402. See generally BUREAU OF CONSUMER PROT., *supra* note 72, at 4–19 (providing common templates of dark patterns).

403. Press Release, Fed. Trade Comm'n, Fortnite Video Game Maker Epic Games to Pay More Than Half a Billion Dollars over FTC Allegation of Privacy Violations and Unwanted Charges (Dec. 19, 2022), <https://www.ftc.gov/news-events/news/press-releases/2022/12/fortnite-video-game-maker-epic-games-pay-more-half-billion-dollars-over-ftc-allegations> [<https://perma.cc/5RZJ-9MN2>].

404. See Sunstein, *supra* note 388, at 655–56.

withdraw from state health insurance programs might face similar obstacles.⁴⁰⁵

Under the Trump Administration, the Internal Revenue Service issued stimulus payments as an economic boost to struggling families.⁴⁰⁶ However, choice architecture implemented by the Administration made it confusing and difficult for people to receive the payments.⁴⁰⁷ Some payment emails were addressed to nonexistent names composed of the intended recipients' first names and their significant others' maiden names.⁴⁰⁸ Though recipients were promised a direct deposit to their bank accounts, many received debit cards, which made it difficult to spend the funds on necessities such as rent or medical bills.⁴⁰⁹

Under the information-based theory of mind, government-implemented sludge potentially becomes unconstitutional when it becomes coercive. In those instances, people cannot avoid the sludge and would likely disapprove of its outcome. But fundamentally, government-implemented sludge is unconstitutional because it interferes with the flow of subconscious information, obstructs unhindered decision-making, violates one's right to free thought, and frustrates the goals and values believed to underlie the First Amendment.

The remainder of this Subsection explains how the information-based theory of mind intersects with existing First Amendment doctrine to impact dark patterns implemented by the government or the private sector. Attempts to limit government-implemented dark patterns may run afoul of government speech doctrine, and efforts to restrict privately implemented dark patterns may be challenged under the commercial speech doctrine.

The government speech doctrine suggests that the Free Speech Clause does not apply to government expression, even

405. See Nathan J. Robinson, *The ACA Marketplace Is a Scam Covered with the Veneer of "Choice"*, CURRENT AFFS. (July 2, 2022), <https://www.currentaffairs.org/2022/07/the-aca-marketplace-is-a-scam-covered-with-the-veneer-of-choice/> [<https://perma.cc/8NMX-GWBB>] ("Purchasing health insurance on the marketplace is so confusing that it is impossible for consumers to make rational choices.").

406. Catherine Woodiwiss, *Spotting Civic Dark Patterns*, MEDIUM (Oct. 19, 2020), <https://medium.com/moderniststudio/spotting-civic-dark-patterns-8167281ad9a3> [<https://perma.cc/KFW6-MHHF>].

407. See *id.* ("[I]t was not designed to be accessible . . .").

408. *Id.*

409. *Id.*

when it is harmful or misleading.⁴¹⁰ This emerging doctrine might frustrate efforts to limit government-implemented dark patterns.⁴¹¹

However, applying the information-based theory of mind might hinder the application of the doctrine. The theory frames government-implemented dark patterns as a form of manipulative state action that limits individuals' speech and undermines the First Amendment's goals. Professor Caroline Mala Corbin makes similar arguments regarding government propaganda.⁴¹² According to Corbin, "government propaganda violates the First Amendment" because, as a manipulative form of expression, it "undermines the core goals of the Free Speech Clause."⁴¹³ She defines manipulation as "intentionally undermining reasoned analysis."⁴¹⁴ To exert its desired effect, "propaganda must constantly short-circuit all thought and decision."⁴¹⁵ Corbin argues that government propaganda should be brought under the First Amendment because it "sufficiently undermines two of free speech's core functions[:] . . . promoting a marketplace of ideas in our search for truth and facilitating democratic self-governance."⁴¹⁶ Relatedly, the information-based theory of mind, which displays how dark patterns are a form of manipulation, can be used to take the government speech doctrine off the table.

Like government propaganda, dark patterns undermine reasoned analysis by hijacking the brain's decision-making machinery.⁴¹⁷ They interfere with free thought, which the Court recognizes as a central fundamental right, and frustrate commonly accepted goals of the First Amendment.⁴¹⁸ Instead of being viewed as government speech that lies outside the First Amendment's reach, both government propaganda and dark

410. Caroline Mala Corbin, *The Unconstitutionality of Government Propaganda*, 81 OHIO ST. L.J. 815, 819 (2020).

411. *See id.* at 820 (suggesting that changing the government speech doctrine, which protects the government even when its speech is harmful or misleading, to apply to nefarious propaganda is controversial).

412. *See id.* at 817.

413. *Id.*

414. *Id.*

415. *Id.* at 817–18.

416. *Id.* at 820.

417. *See Waldman, supra* note 8 (describing how dark patterns leverage people's cognitive biases to influence decision-making and ensure outcomes desired by the patterns' designers).

418. *See Corbin, supra* note 410, at 820 (contending that government propaganda undermines core functions of free speech, namely the promotion of the marketplace of ideas in search of truth and the facilitation of democratic self-governance).

patterns should be viewed as state action that restricts people's capacity for free thought and expression. Specifically, propaganda and dark patterns violate one's right to receive and process subconscious information.

Professor Helen Norton proposes "that the government's speech can violate the Free Speech Clause of the First Amendment when it is sufficiently coercive of its targets' beliefs or expression to constitute the functional equivalent of the government's direct regulation of that expressive activity."⁴¹⁹ When viewed from Norton's perspective, government manipulation of decision-making processes via speech that includes dark patterns is functionally equivalent to direct government regulation of decision-making, which violates one's right to free thought.⁴²⁰ As proposed above, the dividing line between permissible government nudges and impermissible manipulation could be drawn at points where the government's influence becomes too difficult to ignore or overcome and reasonable listeners would disapprove of the outcome.

Like attempts to limit government-implemented dark patterns, efforts to regulate commercial dark patterns may face legal challenges. Though companies may not admit to manipulating consumers, they might try to defend their use of dark patterns under the commercial speech doctrine. Nevertheless, the information-based theory of mind could give agencies such as the FTC added leeway to regulate commercial dark patterns. Specifically, the information-based theory explains why dark patterns should not qualify as protected commercial speech because they undermine the goals of commercial speech doctrine, and like government propaganda, they frustrate the First Amendment's purpose.

Commercial speech doctrine purports to promote the knowledge of consumers as a means of informing their decisions.⁴²¹ Accordingly, using commercial speech doctrine to protect dark patterns would be counterproductive. Rather than informing consumers to aid their decisions, dark patterns leverage cognitive biases to override and exploit consumers'

419. Helen Norton, *Government Speech and the War on Terror*, 86 FORDHAM L. REV. 543, 558 (2017).

420. *See id.*

421. *See* Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, Inc., 425 U.S. 748, 765 (1976) (reasoning that advertisements are necessary to support people's frequent decision-making in a complex commercial society).

decision-making capacity.⁴²² Instead of promoting freedom of thought and rational choice, dark patterns inhibit these processes.

Government regulation of commercial dark patterns would likely pass the test the Court provided in *Central Hudson Gas & Electric Corp. v. Public Service Commission*.⁴²³ To survive a challenge to its regulation of commercial speech, the government must demonstrate a substantial state interest, prove that its regulation directly and materially advances that interest, and show that the regulation is narrowly tailored.⁴²⁴ Efforts to regulate commercial dark patterns should pass this test.⁴²⁵ First, dark patterns may not even “get over the first part of the *Central Hudson* test.”⁴²⁶ Second, the government may be in a strong position to prove the harmful effects of dark patterns. In *Edenfield v. Fane*,⁴²⁷ the Court found that Florida had not established that a blanket prohibition on in-person solicitation by certified public accountants served the asserted substantial state interest.⁴²⁸ According to the Court, “This burden is not satisfied by mere speculation or conjecture; rather, a governmental body seeking to sustain a restriction on commercial speech must demonstrate that the harms it recites are real and that its restriction will in fact alleviate them to a material degree.”⁴²⁹ Compared to the harms of in-person solicitation, the effects of dark patterns are likely more easily demonstrated.⁴³⁰ These effects could even be tested empirically, which could help establish the government’s substantial

422. See Alexander Tsisis, *Marketplace of Ideas, Privacy, and the Digital Audience*, 94 NOTRE DAME L. REV. 1585, 1613 (2019) (describing how commercial speech can exploit cognitive biases, which undermines the goal of providing useful information to listeners).

423. 447 U.S. 557, 566 (1980) (“At the outset, we must determine whether the expression is protected by the First Amendment. For commercial speech to come within that provision, it at least must concern lawful activity and not be misleading. Next, we ask whether the asserted governmental interest is substantial. If both inquiries yield positive answers, we must determine whether the regulation directly advances the governmental interest asserted, and whether it is not more extensive than is necessary to serve that interest.”).

424. *Id.*

425. See, e.g., Tsisis, *supra* note 422, at 1611 (arguing that “[m]isleading speech does not even get over the first part of the *Central Hudson* test”).

426. *Id.*

427. 507 U.S. 761 (1993).

428. *Id.* at 770.

429. *Id.* at 770–71.

430. See Luguri & Strahilevitz, *supra* note 379, at 64 (demonstrating that the influence of dark patterns on consumer decision-making can be tested empirically).

interest in restricting dark pattern use.⁴³¹ If a company claimed its dark patterns warranted First Amendment protection as commercial speech, the government could potentially provide empirical evidence that the allegedly protected speech harms consumers by interfering with their ability to freely make decisions.⁴³² The government could then be in a strong position to win a challenge over dark pattern restrictions.

Commercial dark patterns may also be illegal *per se* because they arguably represent unfair or deceptive business practices, which are prohibited by the FTC Act.⁴³³ Determining that dark patterns are prohibited would remove them from the scope of commercial speech doctrine because, according to *Central Hudson*, protected commercial speech must concern lawful activity and not be misleading.⁴³⁴

In addition, there are theoretical reasons for restricting the use of commercial dark patterns. In 1927, Justice Louis Brandeis established the doctrine of counterspeech—the idea that instead of censoring allegedly harmful speech, the best response is to counter it with more speech, allowing listeners to weigh the merits of competing ideas for themselves.⁴³⁵ Commercial speakers might invoke counterspeech doctrine to avoid regulation of dark patterns. However, dark patterns are potentially more harmful than speech that merely expresses unpopular or undesirable opinions, which can be overcome by reason when listeners are presented with countervailing views. Dark patterns actively interfere with one’s ability to distinguish good speech from bad, which renders counterspeech doctrine inapplicable and undermines the informational goals of the commercial speech doctrine.⁴³⁶

The following Subsection describes situations in which the government facilitates or reinforces undesirable thought patterns associated with addiction and how the right to receive subconscious information could provide protection.

431. *Id.*

432. *See id.*; Tsesis, *supra* note 422, at 1613–14.

433. *See* Fed. Trade Comm’n, *supra* note 403 (describing FTC allegations that game publisher Epic Games used illegal dark patterns to deceive players of the video game *Fortnite*).

434. *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm’n*, 447 U.S. 557, 566 (1980).

435. Robert D. Richards & Clay Calvert, *Counterspeech 2000: A New Look at the Old Remedy for “Bad” Speech*, 2000 BYU L. REV. 553, 553.

436. *See* Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, Inc., 425 U.S. 748, 765 (1976) (stating that advertisements are necessary to support people’s frequent decision-making in a complex commercial society).

3. Government-Facilitated Addiction

In his article *Addiction and Liberty*, Professor Matthew Lawrence proposes a First Amendment right to be free from addiction.⁴³⁷ He claims that liberty protected by the Fifth and Fourteenth Amendments includes not only a right to freedom from bodily restraint but also a right to freedom from mental restraint, including the intrusive impulses experienced by people who are addicted to substances, gambling, or various forms of technology.⁴³⁸

According to Lawrence, the government violates the right to be free from addiction when it causes or exacerbates the symptoms of addiction.⁴³⁹ This may occur through the operation of government-run lotteries, which allegedly cause or contribute to gambling addiction.⁴⁴⁰ The government might also infringe this right by operating state-run liquor stores that sell alcohol or cigarettes or by restricting one's ability to avoid or free oneself from addiction, for instance, by denying or limiting access to addiction treatment services.⁴⁴¹ Finally, when private actors promote or cause addiction, a constitutional right to be free from addiction could bolster the government's ability to implement protective regulations, which might otherwise be vulnerable to First Amendment challenges.⁴⁴² For example, social media platforms may be subject to regulation because, by facilitating addiction to internet-enabled technologies, they undermine First Amendment values such as one's right to free thought.⁴⁴³ As with commercial dark patterns, the First Amendment would not apply directly to addictive online products. However, the negative impact of addictive technologies on free thought makes them less deserving of commercial speech protections, giving the government greater latitude to restrict them.

Addictions produce repetitive and intrusive thoughts that are difficult to ignore, and they compel people to engage in

437. See Lawrence, *supra* note 12, at 263.

438. See *id.* at 260–61, 263.

439. *Id.* at 263.

440. See *id.* (stating that government-run lotteries can cause or exacerbate addiction).

441. See *id.* (describing how some states allegedly restrict or prohibit access to various addiction treatment or support services).

442. *Id.*

443. See *id.* at 290, 292–93 (noting that “social media are addiction machines,” but that “[t]he constitutional implications of th[e] intrusion are not . . . straightforward”).

harmful behaviors.⁴⁴⁴ Lawrence contrasts the thoughts associated with addiction with other, more benign thoughts that merely compete for one's attention.⁴⁴⁵ For instance, in *Public Utilities Commission v. Pollak*,⁴⁴⁶ commuters claimed that a streetcar operator violated their freedom to think as they choose by playing a radio station's music at loud volumes.⁴⁴⁷ In the majority opinion, Justice Harold Burton wrote that, although the Fifth Amendment applied in this context, "[t]he liberty of each individual in a public vehicle or public place is subject to reasonable limitations in relation to the rights of others."⁴⁴⁸ In a concurring opinion, Justice Hugo Black acknowledged that he would have reached a different conclusion had the streetcar radio played political advertisements rather than music.⁴⁴⁹

Though the Court may be unwilling to protect people's right to hear what they please in public places because others may find the messages useful or appealing,⁴⁵⁰ presumably, the Court might reach a different conclusion regarding unavoidable messages that are repeated only within an individual's mind. Lawrence frames such messages as forms of mental restraints because, like physical restraints, they influence and constrain affected individuals, compelling them to engage in harmful behaviors.⁴⁵¹

Under an information-based theory of mind, repetitive thought patterns associated with addiction are framed as undesired changes in the flow of subconscious information and potentially a form of unconstitutional cognitive content moderation.⁴⁵² When the government sells alcohol, cigarettes, or lottery tickets to consumers, these addictive products and services change the flow of subconscious information, activating the brain's reward centers and stimulating repetitive, undesired cravings to engage in addictive behaviors.⁴⁵³ Like

444. *Id.* at 329.

445. *See id.* at 239–30.

446. 343 U.S. 451 (1952).

447. *See* Lawrence, *supra* note 12, at 329.

448. *Pollak*, 343 U.S. at 465.

449. *Id.* at 466 (Black, J., concurring).

450. *Id.* at 465 (majority opinion).

451. *See* Lawrence, *supra* note 12, at 309.

452. *See id.*

453. *See* Dan I. Lubman et al., *Addiction, a Condition of Compulsive Behavior? Neuroimaging and Neuropsychological Evidence of Inhibitory Dysregulation*, 99 ADDICTION 1491, 1493 (2004) (describing the role of the brain's reward circuitry in the repetitive thoughts and behaviors of addiction).

restrictions on free speech, government actions that induce repetitive thoughts undermine common First Amendment goals. People cannot participate in politics or democratic self-governance when their thoughts are dominated by impulses to engage in addictive behaviors. They cannot contribute to the marketplace of ideas or effectively weigh the value of ideas competing for their attention. Nor can they achieve personal autonomy or make meaning for themselves.

Because addiction produces repetitive and intrusive thought patterns, Lawrence suggests that government-facilitated addiction could be framed “as a form of compelled speech (or compelled thought).”⁴⁵⁴ The Court has often held that instances of speech compulsion are as constitutionally suspect as limitations on speech.⁴⁵⁵ However, as Professor Eugene Volokh explains, the details of compelled speech doctrine are difficult to pin down.⁴⁵⁶ According to Volokh, the doctrine contains two strands.⁴⁵⁷

Compelled speech doctrine “forbids speech compulsions that also restrict speech,” such as when the government compels speakers to include certain messages within their speech, preventing them from distributing messages that contain only the content the speakers want to distribute.⁴⁵⁸ The compelled speech doctrine also prohibits certain “pure speech compulsions’ which do not restrict speech but which unduly intrude on the compelled person’s autonomy.”⁴⁵⁹ For example, compelling people to say things they would otherwise not say or fund things they would prefer not to fund would fall under the pure speech compulsions category.⁴⁶⁰ If the repetitive thoughts or impulses of addiction are viewed as speech, or analogous to speech, then they could fall into either compelled speech category.

The pure speech compulsions category might seem most appropriate for government-facilitated addictions. These addictions compel thoughts that people would prefer not to think, constraining their autonomy. However, government-facilitated addictions might also be understood as speech

454. Lawrence, *supra* note 12, at 298.

455. Eugene Volokh, *The Law of Compelled Speech*, 97 TEX. L. REV. 355, 355 (2018).

456. *Id.* at 356–57.

457. *Id.* at 358.

458. *Id.*

459. *Id.*

460. *Id.* at 367.

compulsions that simultaneously limit speech. As people who experience addiction often describe, the thoughts associated with addiction can be all-consuming.⁴⁶¹ They can seemingly tinge every aspect of thought with intrusive impulses.⁴⁶² Consequently, the symptoms of government-facilitated addiction could be framed as compelled speech (or thought) that prevents people from thinking the thoughts they want to think.

Interestingly, psychedelic substances have anti-addictive properties.⁴⁶³ Studies show they may help people reduce the consumption of alcohol, tobacco, opioids, and other addictive substances.⁴⁶⁴ Psychedelics appear to achieve this effect by reducing the incidence of repetitive and intrusive thoughts or changing how people perceive those thoughts.⁴⁶⁵ Consequently, in addition to violating one's right to receive subconscious information, a government prohibition on psychedelics may violate one's right to be free from addiction by restricting people's access to resources that could address their harmful and intrusive thoughts.

The following Subsection discusses brain-computer interfaces, their potential for cognitive content moderation, and how that potential impacts the right to receive subconscious information.

4. Brain-Computer Interfaces

Lumon Industries' fictional use of brain-computer interfaces to control employees' minds seems like technology from the distant future.⁴⁶⁶ However, related technology is currently in use, and the prospect of reading and influencing people's

461. See, e.g., Jefferson A. Singer et al., *A Meaning-Based Intervention for Addiction: Using Narrative Therapy and Mindfulness to Treat Alcohol Abuse*, in THE EXPERIENCE OF MEANING IN LIFE 379–91 (Joshua A. Hicks & Clay Routledge eds., 2013) (describing the repetitive mental narratives associated with addiction).

462. See *id.* at 384–85 (describing how Bryn, a pseudonymous amalgam of several clients from the authors' practice, has had her understanding of relationships and interpersonal connections fundamentally altered by alcohol abuse).

463. See generally Matthew W. Johnson, *Classic Psychedelics in Addiction Treatment: The Case for Psilocybin in Tobacco Smoking Cessation*, 56 CURR. TOPICS BEHAV. NEURO. 213–27 (2022) (describing the anti-addictive properties of psychedelics and emphasizing their potential use in tobacco smoking cessation).

464. See *id.* at 221.

465. See Brown et al., *supra* note 268, at 155 (describing Howard Lotsof's insight that he should stop consuming heroin, which was facilitated by his use of the psychedelic substance ibogaine); Bogenschutz, *supra* note 160, at 3–5 (describing how psilocybin allowed several research participants to resist the urge to drink alcohol).

466. See *Severance*, *supra* note 1.

thoughts is not limited to science fiction. With these technologies, companies may soon read and sell the content of people's thoughts or pump advertising messages directly into their brains.⁴⁶⁷

Brain-computer interfaces are an emerging neurotechnology with two general functions: reading information from brains and writing information to them.⁴⁶⁸ The reading function allows people who are paralyzed to communicate with others by moving cursors or printing words on digital displays.⁴⁶⁹ Brain-computer interfaces that read mental information can also allow paralyzed individuals to control robotic limbs by transforming their thoughts into physical action.⁴⁷⁰ In contrast, writing information to brains can convey information from external sources, such as the internet, or alter how information flows within one's brain.⁴⁷¹

The public had mixed reactions when Elon Musk unveiled Neuralink's brain-computer interface prototype. Some dismissed Neuralink's technology as overhyped vaporware that

467. See Sigal Samuel, *Brain-Reading Tech Is Coming. The Law Is Not Ready to Protect Us.*, VOX (Dec. 20, 2019, 11:35 AM), <https://www.vox.com/2019/8/30/20835137/facebook-zuckerberg-elon-musk-brain-mind-reading-neuroethics> [<https://perma.cc/E9BV-NN87>].

468. Bernhard Graimann et al., *Brain-Computer Interfaces: A Gentle Introduction*, in BRAIN-COMPUTER INTERFACES: REVOLUTIONIZING HUMAN-COMPUTER INTERACTION 4 (Bernhard Graimann et al. eds., 2010).

469. See, e.g., Andrew Pollack, *Paralyzed Man Uses Thoughts to Move a Cursor*, N.Y. TIMES (July 13, 2006), <https://www.nytimes.com/2006/07/13/science/13brain.html> [<https://perma.cc/2BQZ-XVZF>] (detailing how a paralyzed man used a brain implant to control a cursor); Sigal Samuel, *Mind-Reading Technology Has Arrived*, VOX (May 4, 2023, 7:30 AM), <https://www.vox.com/future-perfect/2023/5/4/23708162/neurotechnology-mind-reading-brain-neuralink-brain-computer-interface> [<https://perma.cc/NNQ4-EYE7>] (noting a study that decoded unspoken language and translated it into digital text on screen).

470. See, e.g., Elizabeth Lopatto, *Paralyzed Man Sips Beer Using Robot Arm He Controls with His Mind*, VERGE (May 21, 2015, 6:47 PM), <https://www.theverge.com/2015/5/21/8639905/brain-control-robot-arm-paralyzed-quadruplegic> [<https://perma.cc/6AWG-P2TV>] (demonstrating that a paralyzed man was able to move a robotic arm using a brain-implanted chip).

471. See Ian Sample, *Brain-to-Brain Interface Lets Rats Share Information via Internet*, THE GUARDIAN (Mar. 1, 2013, 5:02 AM), <https://www.theguardian.com/science/2013/feb/28/brains-rats-connected-share-information> [<https://perma.cc/J7L5-JVK9>]; Daniel Susser & Laura Y. Cabrera, *Brain Data in Context: Are New Rights the Way to Mental and Brain Privacy?* 6 (Apr. 5, 2023) (unpublished manuscript), (available at <https://www.tandfonline.com/doi/epdf/10.1080/21507740.2023.2188275?needAccess=true> [<https://perma.cc/K6LC-Y979>]).

might never materialize.⁴⁷² Others saw it as proof of society's continued descent into a corporate surveillance dystopia.⁴⁷³ According to the company, its devices enable people "to communicate more easily via text or speech synthesis, to follow their curiosity on the web, or to express their creativity through photography, art, or writing apps."⁴⁷⁴ The technology could treat a variety of neurological conditions and expand how people interact with the world, each other, and themselves.⁴⁷⁵ Musk hopes it will eventually be used for direct mind-to-mind communication, a sort of "consensual telepathy."⁴⁷⁶

Some brain-computer interfaces transform brain activity into computer code before software translates it into language that humans can understand or instructions that move robotic limbs. One early Neuralink experiment translated a monkey's brain activity into virtual actions performed within a video game.⁴⁷⁷ Less physically invasive technologies, such as functional magnetic resonance imaging (fMRI), can translate thoughts into words or create images that approximate what people are thinking.⁴⁷⁸

Employers are using technologies to capture employees' biological data. Newer and more versatile head-mounted devices display and interpret brain activity by measuring

472. See, e.g., Rory Cellan-Jones, *Is Elon Musk Over-Hyping His Brain-Hacking Neuralink Tech?*, BBC (Sept. 1, 2020), <https://www.bbc.com/news/technology-53987919> [<https://perma.cc/T6GU-EEJG>].

473. See, e.g., Francis Agustin, *Twitter Users Are Comparing Elon Musk's Neuralink Chip Implants to a Similar Device Featured in the Hit Dystopian Series, 'Black Mirror,'* BUS. INSIDER (Jan. 23, 2022, 2:42 PM), <https://www.businessinsider.com/twitter-users-compare-elon-musks-neuralink-chip-to-black-mirror-2022-1> [<https://perma.cc/9L28-EACY>] (comparing Neuralink's implant to a similar device in the science fiction series *Black Mirror*).

474. Sai Balasubramanian, *Elon Musk's Neuralink Is Reportedly Trying to Advance to the Next Step: Human Trials*, FORBES (Mar. 29, 2023, 9:32 PM), <https://www.forbes.com/sites/saibala/2023/03/29/elon-musks-neuralink-is-reportedly-trying-to-advance-to-the-next-step-human-trials/?sh=23c3af8e1902> [<https://perma.cc/6NQC-JBDN>].

475. James Myers, *Where Do I End and Where Does the Machine Begin?*, QUANTUM REC. (Dec. 14, 2022), <https://thequantumrecord.com/philosophy-of-technology/drawing-the-line-between-human-and-machine/> [<https://perma.cc/3LEZ-VZFA>].

476. Nieva, *supra* note 152.

477. See Wakefield, *supra* note 20.

478. Jerry Tang et al., *Semantic Reconstruction of Continuous Language from Non-Invasive Brain Recordings*, 26 NATURE NEUROSCIENCE 858, 858–60 (May 2023); Zijiao Chen et al., *Seeing Beyond the Brain: Conditional Diffusion Model with Sparse Masked Modeling for Vision Decoding*, in PROCEEDINGS OF THE 2023 IEEE/CVF CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION 22710, 22710 (2023), <https://arxiv.org/pdf/2211.06956.pdf> [<https://perma.cc/B4JZ-8L9Z>].

changes in blood oxygenation of the scalp.⁴⁷⁹ Similar biometric devices are currently used to monitor the alertness and fatigue of truck drivers.⁴⁸⁰ They may soon become common in the workplace.⁴⁸¹ Private employers might use *Sorrell* and the commercial speech doctrine to defend their collection of employees' thought content.

While some neurotechnologies read and interpret mental information, others deliver information to the brain or influence its transmission. For decades, doctors have surgically implanted electrodes to perform deep brain stimulation, an FDA-approved therapy that delivers electrical impulses to brain targets.⁴⁸² The process is used to treat Parkinson's Disease and certain mental health conditions.⁴⁸³ However, deep brain stimulation is a treatment of last resort because the associated surgical procedure and implanted devices carry nontrivial risks.⁴⁸⁴ Moreover, success rates are often low, particularly when treating mental health conditions.⁴⁸⁵ Nevertheless, successful cases demonstrate that delivering

479. See *Cybin Announces Promising Results from Sponsored Kernel Flow Feasibility Study Measuring Psychedelic Effects on the Brain*, BUSINESSWIRE (Jan. 18, 2023, 7:30 AM), <https://www.businesswire.com/news/home/20230118005355/en/Cybin-Announces-Promising-Results-from-Sponsored-Kernel-Flow%C2%AE-Feasibility-Study-Measuring-Psychedelic-Effects-on-the-Brain> [https://perma.cc/E3D5-HVKK].

480. See, e.g., Julie Weed, *Wearable Tech That Tells Drowsy Truckers It's Time to Pull Over*, N.Y. TIMES (Feb. 11, 2020), <https://www.nytimes.com/2020/02/06/business/drowsy-driving-truckers.html> [https://perma.cc/FM45-27WS] (describing a biometric headband that records brain waves to monitor alertness or fatigue).

481. See Nick Keppler, *This Company Wants to Help Your Boss Monitor Your Brainwaves at Work*, VICE (Sept. 21, 2020, 9:00 AM), <https://www.vice.com/en/article/qj4qd7/this-company-wants-to-help-your-boss-monitor-your-brainwaves-at-work> [https://perma.cc/KK5P-PULP] (describing an earphone-like electroencephalography device that reads and interprets brain waves); see also Nita Farahany, *Opinion: Provide a Résumé, Cover Letter and Access to Your Brain? The Creepy Race to Read Workers' Minds*, L.A. TIMES (Mar. 19, 2023, 3:01 AM), <https://www.latimes.com/opinion/story/2023-03-19/work-employment-jobs-tech-ai-brain> [https://perma.cc/72TK-A9RF].

482. *Brain Stimulation Therapies*, NAT'L INST. OF MENTAL HEALTH, <https://www.nimh.nih.gov/health/topics/brain-stimulation-therapies/brain-stimulation-therapies> [https://perma.cc/98VN-4EK8].

483. See Khan et al., *supra* note 7, at 638.

484. Side effects may include infection, worsening of symptoms, or even death. *What Are the Risks of DBS?*, UNIV. OF FLA. HEALTH, <https://movementdisorders.ufhealth.org/for-patients/deep-brain-stimulation-information/uf-what-a-patient-needs-to-know-about-dbs/what-are-the-risks-of-dbs/> [https://perma.cc/L9HA-XNAD].

485. Paul B. Fitzgerald & Rebecca A. Segrave, *Deep Brain Stimulation in Mental Health: Review of Evidence for Clinical Efficacy*, 49 AUSTL. & N.Z. J. PSYCH. 979, 979 (2015).

electrical currents to brain targets can alter how they process information, influencing thought and behavior. For example, studies show that deep brain stimulation improves some patients' ability to recall information from memory.⁴⁸⁶ Deep brain stimulation has also been used to disrupt intrusive thoughts that affect the lives of people with obsessive-compulsive disorder.⁴⁸⁷

Someday, brain implants might bypass damaged neural pathways to treat conditions such as visual agnosia and face blindness. They might allow people to modulate their own perceptions and regulate access to memories.⁴⁸⁸ Third parties such as governments, corporations, and employers may control these experiences.

Authoritarian states already manipulate what information people can consume through internet-enabled devices.⁴⁸⁹ They might eventually use neurotechnologies to moderate the flow of subconscious information within people's brains. Lumon used brain implants to maintain employees' focus at work and prevent company secrets from leaving the building.⁴⁹⁰ Governments could use neurotechnologies to indoctrinate people, protect classified information, or prevent soldiers and other state employees from becoming distracted by emotionally laden or traumatic memories. These practices pose dire threats to freedom of thought and underscore the importance of the right to receive subconscious information, which encompasses not only a right to access subconscious information but also a right to its unhindered processing.

Under an information-based theory of mind, using brain-computer interfaces to manipulate thoughts would violate the First Amendment's free speech protections, presumably

486. See, e.g., Khan et al., *supra* note 7, at 638 ("Preclinical studies also have supported DBS as a viable tool to modulate memory.").

487. Patric Blomstedt et al., *Deep Brain Stimulation in the Treatment of Obsessive-Compulsive Disorder*, 80 *WORLD NEUROSURGERY* e245, e245 (2013) (concluding that "DBS is a promising treatment for . . . OCD").

488. In the film *Eternal Sunshine of the Spotless Mind*, the character played by Jim Carey elects to have memories of his ex-girlfriend erased and later seeks to recover them. *ETERNAL SUNSHINE OF THE SPOTLESS MIND* (Anonymous Content 2004).

489. See Tate Ryan-Mosley, *The World Is Moving Closer to a New Cold War Fought with Authoritarian Tech*, *MIT TECH. REV.* (Sept. 22, 2022), <https://www.technologyreview.com/2022/09/22/1059823/cold-war-authoritarian-tech-china-iran-sco/> [<https://perma.cc/TZ5B-BGK8>] (describing a trend toward mass digital surveillance and censorship by authoritarian states).

490. See *Severance*, *supra* note 1.

constituting unconstitutional cognitive content moderation.⁴⁹¹ Similarly, government-imposed restrictions or prohibitions on devices that restore or augment cognitive abilities could be equally unconstitutional. Governments may be unlikely to ban or severely restrict neurotechnologies that treat medical conditions, which are regulated as medical devices by the FDA unless they pose substantial safety risks.⁴⁹² However, restrictions might be placed on technologies that enhance human capabilities or confer unfair advantages on those who receive them. Similar concerns have been raised when athletes use prosthetic limbs to compete in track and field events.⁴⁹³ Competitions that prioritize intellectual ability over athletic skill might ban neurotechnologies that enhance cognitive performance.

The potential for brain-computer interfaces to promote commercial cognitive content moderation and influence consumers' ability to think and make decisions freely could give the government leverage to regulate content provided via brain-computer interfaces. As previously discussed, though the First Amendment does not protect consumers from commercial actors, speech that manipulates consumers ostensibly violates the FTC Act,⁴⁹⁴ and government regulation that restricts manipulative speech passes the *Central Hudson* test.⁴⁹⁵ By limiting commercial manipulation of thought by brain-computer interfaces, regulators can promote First Amendment values by defending freedom of thought.

The following Section addresses potential criticisms of the right to receive subconscious information. One likely objection

491. Cf. Devan Stahl et al., *Should DBS for Psychiatric Disorders Be Considered a Form of Psychosurgery? Ethical and Legal Considerations*, 24 SCI. & ENG'G ETHICS 1119, 1128–29 (2018) (explaining how legislation to regulate the use of psychosurgical procedures may violate a patient's First Amendment and privacy protections).

492. See, e.g., Kris Holt, *FDA Clears Synchron's Brain-Computer Interface Device for Human Trials*, ENGADGET (July 28, 2021, 3:02 PM), <https://www.engadget.com/fda-brain-computer-interface-clinical-trial-synchron-stentrode-190232289.html> [<https://perma.cc/Q5KJ-Y2UV>].

493. See, e.g., *Amputee Blake Leeper Won't Be Allowed to Race with Running Blades*, JAPAN TIMES (Apr. 27, 2021), <https://www.japantimes.co.jp/sports/2021/04/27/track-field/blake-leeper-prosthetic-blades-rejected/> [<https://perma.cc/5ZBG-B8WN>] (illustrating that even a disabled athlete was unable to use his enabling prosthesis for fear of its performance-enhancing capabilities).

494. FED. TRADE COMM'N, *supra* note 403 (describing FTC allegations that Epic Games used illegal dark patterns to deceive players of the video game *Fortnite*).

495. See *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n*, 447 U.S. 557, 566 (1980).

is that the government has no business regulating commercial content. To be fair, the foregoing discussion is not intended to imply that the government should develop fine-grained rules to govern the content delivered by brain-computer interfaces. Consumers and content providers should likely play that role. Instead, the government's role should be reserved for instances where content passes the threshold from being entertaining or informative to being deceptive or manipulative.

B. Potential Criticisms of the Right to Receive Subconscious Information

This Section addresses potential objections to the information-based theory of mind and the right to receive subconscious information. These criticisms fall into three categories. The first objection holds that thought is not like speech, so free speech principles are not applicable to thought. The second claims that applying free speech principles to thought advances the trend of First Amendment expansionism. The third argues that the information-based theory of mind is overly complex and the right to receive subconscious information is an impractical solution to address the risks of cognitive content moderation.

1. Thought Is Not Speech

This Article describes the flow of subconscious information as if it were identical to speech. One might argue that this analogy has been stretched too far. However, thought and speech need not be identical for free speech principles to apply to thought. Further, instead of claiming that thought and speech are the same, the information-based theory of mind emphasizes their shared features and common purpose.⁴⁹⁶ Both thought and speech transfer information and require the flow of subconscious information.⁴⁹⁷

Treating thought like speech is not merely descriptive or convenient. The comparison has utility. Applying well-established free speech principles to thought adds clarity to an otherwise foggy area of law. The information-based theory of mind accounts for how the brain processes information and how various technologies impact thought. It brings freedom of thought into the twenty-first century and strengthens the First Amendment against emerging threats to cognitive liberty.

496. See *supra* Section II.A–B.

497. See *supra* Section II.B.

Treating thought like speech may seem radical. However, courts already apply speech-like protections to many things that are not literally speech, including corporate activities,⁴⁹⁸ political campaign expenditures,⁴⁹⁹ and doctors' prescribing habits.⁵⁰⁰ As described in the following Subsection, while applying free speech protections to these examples expands the boundaries of the Free Speech Clause, applying free speech principles to thought merely bolsters the protection of activities that are already at its core.

2. First Amendment Expansionism

In recent decades, the Supreme Court has applied First Amendment speech protections to many activities that have not traditionally been considered speech-related.⁵⁰¹ Some scholars and Supreme Court justices describe this trend as First Amendment expansionism or *Lochnerism*.⁵⁰² At first glance, extending free speech protections to subconscious information could be seen as contributing to this phenomenon. However, extending speech-like protections to thought defends against the uncontrolled expansion of free speech doctrine.

While free speech expansionism arguably promotes commercial and economic objectives,⁵⁰³ the information-based theory of mind protects personal liberties and is a partial antidote to free speech *Lochnerism*. Instead of expanding the First Amendment outwards to encompass an increasing variety of commercial activities, the information-based theory of mind promotes the inward expansion of free speech doctrine to protect freedom of thought, which is widely regarded as a central First Amendment right.

The information-based theory defends personal liberties by acting as a bulwark against First Amendment *Lochnerism*. For example, by framing dark patterns as mechanisms that interfere with the free flow of subconscious information and

498. See *Citizens United v. Fed. Election Comm'n*, 558 U.S. 310, 343 (2010).

499. See *Ted Cruz for Senate v. Fed. Election Comm'n*, 542 F. Supp. 3d 1, 4–5 (D.D.C. 2021), *aff'd*, 596 U.S. 289 (2022).

500. See *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 580 (2011).

501. See Leslie Kendrick, *First Amendment Expansionism*, 56 WM. & MARY L. REV. 1199, 1209 (2015) (arguing that the “speech”-related umbrella is wide, especially in an information economy).

502. See Morgan N. Weiland, *Expanding the Periphery and Threatening the Core: The Ascendant Libertarian Speech Tradition*, 69 STAN. L. REV. 1389, 1392–93 (2017); Enrique Armijo, *Faint-Hearted First Amendment Lochnersim*, 100 B.U. L. REV. 1377, 1380 (2020).

503. See Weiland, *supra* note 502, at 1393; see also Armijo, *supra* note 502.

thereby undermine the goal of commercial speech doctrine to inform consumers in support of rational decision-making, the information-based theory of mind removes dark patterns from the First Amendment's scope. In this respect, it is an antidote to First Amendment expansionism rather than a symptom of it.

3. A Complex and Impractical Solution

One might argue that the information-based theory of mind and the right to receive subconscious information are too complex to operationalize. For instance, it may be impractical to differentiate between permissible forms of persuasion and impermissible means of cognitive content moderation, and it may be undesirable to expect courts and the government to make these distinctions.

It is true that the information-based theory of mind adds complexity to First Amendment law. However, the human mind and brain are incredibly complex. As neuroscience, artificial intelligence, and psychopharmacology advance, the law can no longer rely on vague and outdated eighteenth century conceptions of consciousness to protect freedom of thought. Free speech theory and doctrine are evolving to accommodate modern modes of communication.⁵⁰⁴ Similarly, free thought theory and doctrine must advance to reflect our evolving understanding of how the brain functions and how various technologies impact cognition.

If freedom of thought means anything, it must protect minds from extant and emerging forms of thought manipulation. The Constitution's Framers lacked our knowledge of the brain and the influence of technology on free thought. However, they understood the dangers of unrestrained power, and they would have recoiled at the thought of cognitive content moderation, which enables the tyranny they sought to avoid by adopting the First Amendment.

Though the information-based theory of mind adds complexity to First Amendment jurisprudence, it also provides

504. See, e.g., *NetChoice, LLC v. Paxton*, 49 F.4th 439, 494 (5th Cir. 2022), *cert. granted*, 144 S. Ct. 477 (2023) (applying the First Amendment in the social media context); *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 636 (1994) (applying the First Amendment in the television broadcasting context); Stephanie Kan, Comment, *Split Net Neutrality: Applying Traditional First Amendment Protections to the Modern Interweb*, 53 HOUS. L. REV. 1149, 1166 (2016) (considering First Amendment protections for internet service providers); see also Katja Kukielski, Note, *First Amendment and Facial Recognition*, 55 LOY. L.A. L. REV. 231, 246–48 (2022) (applying the Free Speech Clause to facial recognition technology).

guidance for its implementation. When the government interferes with the flow of subconscious information or restricts access to substances or technologies that promote it, the presumption should be that the government's actions are subject to heightened scrutiny. Because freedom of thought is regarded as a fundamental right,⁵⁰⁵ the government should be required to meet strict scrutiny. However, the information-based theory of mind must also allow for government nudges that promote healthy behaviors through means that are persuasive rather than coercive. In other words, it is necessary to distinguish between permissible forms of government persuasion and impermissible cognitive content moderation. Otherwise, the right to receive subconscious information would be boundless, and the government might be powerless to compel behavior, even in exceptional circumstances such as national security emergencies or public health crises.

Distinguishing permissible persuasion from impermissible cognitive content moderation is aided by the two-part test for distinguishing nudges from dark patterns. This test assesses the difficulty of avoiding or resisting a behavioral intervention and the likelihood that reasonable listeners would disapprove of the resulting outcome.⁵⁰⁶ At one extreme, if a government action is relatively easy to ignore or overcome and listeners are unlikely to disapprove of the outcome, then the intervention need only survive rational basis review. An FDA advertising campaign to educate children on healthy food options would be one example. Consumers could easily ignore this attempt at persuasion, and few would object to educating children about nutrition.

Alternatively, if an intervention is difficult or impossible to avoid or resist and reasonable listeners are likely to disapprove of the outcome, then the government's action should be subjected to strict scrutiny. Imagine that the Internal Revenue Service (IRS) forces people to visit a website before they can file their taxes. The site requires visitors to decide whether to share personal information with an advertising company that will repeatedly contact users. It displays a red-colored button to convey user consent and a green-colored button to withhold consent. This design leverages a cognitive bias regarding color

505. See *supra* note 10 and accompanying text.

506. See THALER & SUNSTEIN, *supra* note 370, at 6 (“To count as a mere nudge, the intervention must be easy and cheap to avoid.”); Thaler, *supra* note 369 (discussing that harmful choice architecture can either discourage behavior that is in one’s best interest or promote self-defeating behavior).

to influence users' decisions.⁵⁰⁷ People likely associate green with giving consent and red with withholding consent, potentially making it more difficult for users to decline to share information with the advertising company. In addition to being impossible to avoid, this government action could be highly offensive; a reasonable person would likely object to being manipulated by the website's design. Consequently, this potential infringement on the right to receive subconscious information should be construed as presumptively suspect cognitive content moderation and potentially warrant strict scrutiny.

Intermediate cases may occur when government interventions are easy to overcome and the likelihood of disapproval is moderate or high. If the IRS website described above was optional and, instead of misleading users, clearly explained the purpose of sharing data with the advertising company and appealed to users' reason to obtain consent, then the design might constitute permissible persuasion. Another intermediate case might occur when a behavioral intervention is difficult to avoid but the likelihood of disapproval is low. Requiring taxpayers to read online instructions before filing their taxes might be one example.

In the intermediate cases, the risks to free thought are low, the government action likely represents permissible persuasion rather than manipulation, and rational basis review may be the appropriate level of scrutiny. However, in circumstances where people's decision-making capacities are impaired, such as when they are intoxicated, injured, or under duress, the threshold for identifying mental manipulation warranting heightened scrutiny may be lowered. Similarly, when one's judgment is not fully developed, such as when children are the objects of state action, the threshold for identifying suspect cognitive content moderation may be lower.

Admittedly, these preliminary guidelines are likely incomplete. As the internet and social media often demonstrate, many issues of public importance are polarizing or divisive. Consequently, relying on people's opinions of government attempts at persuasion or mental manipulation could yield inconsistent or unhelpful results. Giving greater weight to the difficulty of avoiding or resisting government influence over mental processes may be preferable.

507. See BUREAU OF CONSUMER PROT., *supra* note 72, at 9 (describing examples of colors being used to trigger cognitive biases).

This preliminary guidance can also be applied to thought manipulation by private entities. In its recent complaint against Epic Games, the FTC alleged that the video game developer used dark patterns to manipulate children to make unauthorized purchases.⁵⁰⁸ By paying a fine, Epic Games avoided litigation.⁵⁰⁹ However, if the case had proceeded, the parties could have empirically tested how easily children could avoid or resist the influence of the alleged dark patterns to determine whether they represented mere persuasion or impermissible cognitive content moderation.⁵¹⁰ As discussed above, the involvement of children may lower the threshold for identifying manipulation.

In this case, the alleged dark patterns represent private rather than public action. Consequently, the right to receive subconscious information would not apply when consumers use Epic Games software. However, because the user interface allegedly manipulated users, it potentially undermined core First Amendment values such as freedom of thought. If the case had proceeded and Epic Games had argued that its interface represented constitutionally protected commercial speech, that argument should have been unpersuasive if credible evidence of manipulation was offered.

Analyzing dark patterns is undoubtedly challenging and complex. However, to protect freedom of thought in this internet-enabled, algorithmic age, courts and regulatory agencies must be equipped to make these distinctions. The following Subsection addresses potential concerns that the right to receive subconscious information is overbroad, potentially encompassing countless government actions. It proposes limits to constrain the right.

4. A Limitless Right

Some critics might object to the right to receive subconscious information because governments routinely do countless things that interfere with information flow. Everything from public

508. See Complaint at 7–9, 14–16, 22–24, *United States v. Epic Games, Inc.*, No. 22-CV-00518 (E.D.N.C. filed Dec. 19, 2022) (explaining that Epic Games targeted children and caused them to make unauthorized purchases).

509. Press Release, Fed. Trade Comm'n, FTC Finalizes Order Requiring Fortnite Maker Epic Games to Pay \$245 Million for Tricking Users into Making Unwanted Charges (Mar. 14, 2023), <https://www.ftc.gov/news-events/news/press-releases/2023/03/ftc-finalizes-order-requiring-fortnite-maker-epic-games-pay-245-million-tricking-users-making> [https://perma.cc/48HZ-Q5LV].

510. See Luguri & Strahilevitz, *supra* note 379, at 64 (demonstrating that the influence of dark patterns on consumer decision-making can be tested empirically).

education programs and economic regulations to national defense policies and media laws can affect the flow of subconscious information. These and other government actions affect the sources of information people can access. They also generate opinions and influence people's decisions. If a First Amendment right restricts the government from altering all subconscious information flow and processing, then the right could prevent the government from enacting any laws or regulations. As the *Zemel* majority noted, the First Amendment could protect all conduct due to its role in information gathering. However, as Chief Justice Warren noted, "The right to speak and publish does not carry with it the unrestrained right to gather information."⁵¹¹

Like freedom of speech, the right to receive subconscious information must have limits. One approach is to define its judicially enforceable protections as a negative right to avoid criminal prosecution for accessing, privately and without state support, certain sources of otherwise inaccessible information that promote free thought. Because freedom of thought is often regarded as the most central First Amendment right, from which other fundamental rights may spring, information originating from within one's mind may warrant the strongest constitutional protections. Prohibitions on privately viewing obscene content or consuming controversial substances within one's home likely violate the right to receive subconscious information. At the same time, *Zemel*-style limits on issuing passports for foreign travel might not.

In other words, the right to receive subconscious information is not a positive right requiring governments to provide people with the means to access all types of information, such as the knowledge gained by traveling abroad, viewing sexually explicit content, or consuming psychoactive substances. Rather, the right to receive subconscious information is principally a negative right to access reasonably safe information sources without criminal sanction, particularly in private as in *Stanley*, and where the connection between information access and thought or speech is not merely incidental or overly attenuated, as the *Zemel* majority found foreign travel to be.

Consider the federal prohibition on personal possession and use of Schedule I controlled substances such as psychedelics. The right to receive subconscious information does not require the government to provide psychoactive substances to people or

511. *Zemel v. Rusk*, 381 U.S. 1, 17 (1965).

preclude the government from regulating the substances in medical or commercial contexts. However, the right to receive subconscious information presumes that the government shall not interfere with the private and reasonably safe possession and use of substances that promote subconscious information flow or processing. If the government infringes this negative right, its actions should be subject to strict scrutiny, as they are when infringing other fundamental rights. Further, when speaker- or content-based restrictions impact access to subconscious information or its unhindered processing, they must be narrowly tailored to achieve a compelling government purpose. In the context of personal use or possession of psychedelic substances, an outright ban is unlikely to be sufficiently narrowly tailored, and less restrictive alternatives should be pursued.

Similarly, the right to receive subconscious information entails a negative right to be free of government coercion or manipulation. The government may take non-coercive actions that nudge people to make certain choices or influence thought in ways that are relatively easy to ignore or override while receiving the deference that courts presumptively extend to the legislature under rational basis review. However, when government actions influence subconscious information flow or processing with manipulative or coercive effects, then those actions should receive heightened scrutiny. Examples include deploying dark patterns, promoting addictive behaviors, and mandating brain monitoring or control. Requiring strict scrutiny for these forms of cognitive content moderation does not preclude their use, it merely sets an appropriately high bar for their legal justification.

CONCLUSION

Cognitive content moderation, made possible by extant and emerging technologies, increasingly threatens freedom of thought. However, despite periodic mention by courts and legal scholars, freedom of thought remains heavily undertheorized and underused. Most courts and scholars accept freedom of thought as a fundamental right protected by the First Amendment. Yet its contours remain unclear, rendering freedom of thought ineffective protection against coercion by cognitive content moderation.

The information-based theory of mind claims that thought and decision-making involve the continuous movement, combination, and processing of information from internal and

external sources, which occur largely outside conscious awareness. When these processes are interrupted, thought and decision-making are impaired. Consequently, freedom of thought is characterized by the unrestricted flow and processing of subconscious information. Framing thought in terms of information flow allows the application of free speech principles to cognitive processes. For instance, the First Amendment right to receive information and ideas can be used to derive a right to receive subconscious information. Just as speech provides useful information to listeners, the unrestricted flow of subconscious information provides useful information to the conscious mind, which can be considered a listener for First Amendment purposes.

The right to receive subconscious information can protect listeners from coercion by cognitive content moderation. The government potentially infringes this right by interfering with the flow of subconscious information or by restricting access to technologies that promote it. When the government's intervention would be difficult to overcome and listeners would likely disapprove of the outcome, the government's action could be subject to strict scrutiny. In cases where the intervention is easy to avoid, and listeners are unlikely to disapprove of the outcome, rational basis review may be the appropriate level of judicial scrutiny. In intermediate cases, rational basis review or intermediate scrutiny may be applicable depending on the relevant facts and circumstances.

The information-based theory of mind is compatible with existing First Amendment doctrine regarding commercial speech, government speech, and compelled speech. Though the First Amendment does not protect consumers from commercial actors, when commercial actors use speech to engage in cognitive content moderation, their actions undermine the goals of commercial speech doctrine placing them outside the First Amendment's scope. In contrast, when the government uses speech to engage in cognitive content moderation, its speech is brought within the First Amendment's scope. If the government facilitates addictive behaviors, then the thoughts associated with addiction may be framed as compelled speech.

In addition to clarifying freedom of thought and making it more useful, the information-based theory of mind defends freedom of thought's role as a fundamental First Amendment right. The theory illustrates how the unhindered flow of subconscious information promotes accepted First Amendment ideals, including democratic

self-governance, the generation of knowledge, and personal autonomy.

