Intermédialités
Histoire et théorie des arts, des lettres et des techniques
Intermediality
History and Theory of the Arts, Literature and Technologies

Do Humans Dream of Electric Ads?

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Numéro 41, printemps 2023

dormir
sleeping

URI : https://id.erudit.org/iderudit/1106557ar
DOI : https://doi.org/10.7202/1106557ar

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Éditeur(s)

Revue intermédialités

ISSN

1705-8546 (imprimé)
1920-3136 (numérique)

Découvrir la revue

Citer cet article

Darnov, D. (2023). Do Humans Dream of Electric Ads? *Intermédialités / Intermediality*, (41), 1–21. https://doi.org/10.7202/1106557ar

Résumé de l'article

En réponse à la tentative de Molson Coors d'implanter des publicités dans les rêves des consommateurs endormis, j'explore comment les formes émergentes d'« incubation de rêves ciblés » menacent de transformer le sommeil d'une condition de refuge économique en un état d'exposition intensifiée à des rythmes d'engagement économique « 24/7 ». Plus précisément, je soutiens que le développement de la recherche en « ingénierie des rêves » modifie les relations contemporaines au sommeil en suggérant que le temps que nous passons à dormir pourrait devenir plus adapté aux procédures imposées de production et de consommation économiques que le temps passé à l'état d'éveil. Plutôt que de réaffirmer une incompatibilité fondamentale entre le sommeil et le capitalisme, je soutiens que l'incubation ciblée des rêves anticipe un avenir dans lequel le capitalisme incorporera et exploitera le sommeil comme une nouvelle frontière d'optimisation économique.

Do Humans Dream of Electric Ads?

Doron Darnov

In January 2021, the beer manufacturer Molson Coors announced a new advertisement that was designed to play in the dreams of sleeping consumers.[1] Based on the results of a research study built in collaboration with Harvard psychology professor Deirdre Barrett, Coors asked prospective recipients of their new dream commercial to watch a ninety second "stimulus film"[2] before listening to an eight hour "soundscape"[3] while sleeping. The idea was that participants would then experience dreams of "clean mountain air" and "refreshing streams,"[4] imagery that Coors often incorporates into their branding. Clips from a video offering a "behind the scenes"[5] look at the research study the ad campaign was based on seem to confirm this effect. The video shows study participants waking in the night to describe dreams of "waterfalls," "snow," "mountains," and as one bleary-eyed test subject ambiguously volunteers, "something to do with Coors."[6]

Coors' sleep study provides one example of how scientists and corporations are now beginning to commercialize research from the emerging field of "targeted dream incubation," a method of oneiric intervention that intends to "[guide] dreams towards specific themes."[7] Though scientists who work on this technique typically point to a variety of potential medical applications,[8] Coors is notably not the only company to turn targeted dream incubation towards the project of corporate advertising. Responding to this trend, one group of researchers found the increasingly pervasive

1. *Coors Big Game Commercial of Your Dreams: Dream Study*, 2021, YouTube, Coors Light, https://youtu.be/tU_0jU0mMLw?si=766MFkG7I3655_kU (accessed 25 October 2022).
2. *Ibid*.
3. *Ibid*.
4. *Ibid*.
5. *Ibid*.
6. *Ibid*.
7. "Targeted Dream Incubation," *the MIT Media Lab*, para. 1, https://www.media.mit.edu/projects/targeted-dream-incubation/overview/ (accessed 25 October 2022).
8. *Ibid*., para. 9.

use of dream incubation so alarming that they wrote an open letter in June 2021 calling on corporations and the general public to consider the social repercussions of ongoing attempts to transform dreams into an advertising medium.[9] Signed by thirty-five experts in the field of sleep and dream research, the letter names Coors, Microsoft, Sony, and Burger King as companies that have all pursued various kinds of dream advertisements.[10] More broadly, the letter suggests that "multiple marketing studies are openly testing new ways to alter and motivate purchasing behavior through dream and sleep hacking."[11] Unquestionably legitimizing the theoretical prospect of these approaches, the letter unambiguously affirms that "the commercial, for-profit use of dream incubation is rapidly becoming a reality."[12]

Clearly, such commercial appropriations signal a dramatic shift in contemporary attitudes towards the cultural, personal, and even physiological value of human sleep. Most obviously, the pursuit of targeted dream commercials fundamentally transforms sleep from a period of rest, withdrawal, and recuperation into a new frontier of economic activity. In *24/7: Late Capitalism and the Ends of Sleep*, Jonathan Crary argues that the human body's need for sleep inextricably disrupts the round-the-clock operations of the contemporary digital marketplace. "The huge portion of our lives that we spend asleep," Crary writes, "subsists as one of the great human affronts to the voraciousness of contemporary capitalism."[13] In contrast to other "irreducible necessities of human life"[14] that "have been remade into commodified or financialized forms,"[15] Crary maintains that sleep remains a key outlier: "Sleep poses the idea of a human need and interval of time that cannot be colonized and harnessed to a massive engine of profitability … The stunning, inconceivable reality is that nothing of value can be extracted from it."[16] Clearly, targeted dream advertisements challenge this view: through this emerging form of viral marketing, Coors and other companies signal their commitment to re-imagining sleep as an economic medium capable of

9. Robert Stickgold, Antonio Zadra and AJH Haar, "Advertising in Dreams is Coming: Now What?" *PubPub*, 7 June 2021, https://dxe.pubpub.org/pub/dreamadvertising/release/1 (accessed 25 October 2022).
10. *Ibid*., paras. 1–2.
11. *Ibid*., para. 2.
12. *Ibid*.
13. Jonathan Crary, *24/7: Late Capitalism and the Ends of Sleep*, New York, Verso, 2013, p. 10.
14. *Ibid*.
15. *Ibid*.
16. *Ibid*., p. 10–11.

facilitating novel operations of nonstop consumption. At stake in targeted dream incubation, accordingly, lies a neoliberal fantasy that commercialized dreaming might one day suture the human body into a condition of compulsory exposure to external flows of capital that operate continuously at all times of the day and night.

As targeted dream incubation gains a foothold into the fabric of twenty-first-century oneiric experience, my aim in this article is thus to trace how both clinical and commercial applications of this technique now promise (or threaten) to transform contemporary relationships to sleep in three ways. First, I turn to the MIT Media Lab's "Sleep and Dreams" collective—a research group responsible for much of the contemporary science surrounding targeted dream incubation—to explore how emerging sleep technologies are now reconceptualizing the dream as a form of electronically transmissible data that can be made to interface with external machines. Second, I develop the idea that this translation of neurological information into electronic data produces what I refer to as a condition of "sleepless sleep"—that is, a condition that seeks to convert sleep from a period of economic refuge into a state of intensified exposure to "24/7" rhythms of economic production and consumption. "Sleepless Sleep," as we will see later, registers the idea that the time we spend asleep might become even more suitable to imposed procedures of economic production and consumption than time spent awake. Third, and finally, I argue that targeted dream incubation inevitably repositions unmodified sleep and dreaming as an unwelcome "glitch" that forcibly removes consumers from the instant gratification of digital content networks. Though each of these interventions draws on Crary's analysis in *24/7*, my argument ultimately suggests that targeted dream incubation radically challenges Crary's central conclusion. While Crary suggests that sleep is incompatible with the always-on temporality of electronic capitalism, I argue the precise opposite: that targeted dream incubation presages a future in which capitalism incorporates and exploits sleep as a novel frontier of economic optimization.

Bashing the Brain to Bits

One of Crary's significant points of departure in *24/7* unfolds from his analysis of Chris Marker's *La jetée* (1962). Broadly, the film depicts a post-apocalyptic future in which humanity's only hope for survival lies in the ability to communicate with the future through dreams. In several scenes, we watch as an unnamed prisoner is hooked up to a host of external systems that allow "*la police du camp*" to surveil and monitor

his dreams.[17] Of particular concern to Crary is, accordingly, the way "the narrative elements of Marker's film can be linked to a significant number of science fiction scenarios, beginning in the mid 1950s, in which dreams or memories are presented as phenomena accessible to outside examination or intervention."[18] For Crary, at stake in this "examination" of dreams lies the emergence of a rapidly expanding "mass imagination"[19] in which the thoughts or imagery of human cognition might be flattened into quantifiable and thus commodifiable forms of electronic data. The idea that we might upload or download discrete clusters of cognitive information points towards a broader "homogenization of inner experience and the contents of communication networks."[20] Or, as Crary furthers, such thinking fosters "an unproblematic reduction of the infinite amorphousness of mental life to digital formats."[21] Attempts to digitize dreams or other forms of consciousness, in other words, ask us to collapse the difference between human cognition and streams of electronic data.

Though Crary maintains that "dreaming will always evade such appropriation,"[22] it is precisely this kind of digitization of consciousness that characterizes the research of MIT's "Sleep and Dreams"[23] research collective. Not unlike *La jetée*, Fluid Interfaces' "Sleep and Dreams" group presents an emerging technology of dreams that largely affirms emerging understandings of the dream as a kind of electronic data subject to the interventions of what they broadly refer to as "Dream Engineering."[24] One article written by numerous authors associated with Fluid Interfaces captures this logic in its description of using targeted dream incubation as a technique for gaining access to the "circuitry between the sleeping body and the dreaming mind."[25] Clearly, such language animates the view that dreams can be made into a kind of objective substance or digital information that can be pumped or downloaded into the body in order

17. Chris Marker, *La jetée*, Argos Films, 1962.
18. Crary, 2013, p. 96.
19. *Ibid*., p. 97.
20. *Ibid*., p. 98.
21. *Ibid*.
22. *Ibid*.
23. "Theme: Sleep + Dreams," https://www.media.mit.edu/projects/theme-engineering-dreams/overview/ (accessed 25 October 2022).
24. Adam Horowitz, Pattie Maes, and Michelle Carr, "A Dream Engineering Ethic," *the MIT Media Lab*, 29 January 2021, para. 2, https://www.media.mit.edu/articles/a-dream-engineering-ethic/ (accessed 25 October 2022).
25. Michelle Carr, Adam Haar, Judith Amores et al., "Dream engineering: Simulating worlds through sensory stimulation," *Consciousness and Cognition*, vol. 83, August 2020, p. 1.

to generate any number of intended, controlled outcomes in one's sleep. As another article on targeted dream engineering describes, "Information processing during sleep is active, ongoing and accessible to engineering."[26]

Though the Fluid Interfaces team has produced research on a variety of targeted dream incubation techniques and technologies, arguably their most prominent contribution to the field comes in the form of a device called Dormio. In simple terms, Dormio is a "wearable electronic device"[27] that aims to influence dreams by tracking a patient's sleep state and providing audio cues as they begin to enter the specific stage of sleep known as hypnagogia—a state between wakefulness and sleeping.[28] More specifically, Dormio works by monitoring a person's sleep using sensors that track their brain waves, eye movements, and muscle activity. When the sensors detect that the person has entered the hypnagogic state, the system plays a pre-recorded audio cue, such as a word or phrase. The idea is that these cues will influence the content of the person's dreams, based on the principle of "priming," which suggests that exposure to certain stimuli can influence our thoughts and behavior.[29]

Dormio's role in gesturing towards developing capacities to engineer a "homogenization" between human cognition and electronic data becomes especially apparent in Fluid Interfaces "Cocoon" video project. The group explains that they created Cocoon to "generate discussion"[30] around the kinds of "boundaries and comfort levels"[31] public audiences might hold around "sleep and dream hacking."[32] They further that to achieve this end, "we created Cocoon, a dystopian video showcasing a fictional programmable dream machine enabled by the synthesis of real work-in-progress prototypes developed at the MIT Media Lab's Fluid Interfaces Group."[33] Combining Dormio with adjacent sleep technologies, Cocoon claims to offer "an embodied investigation of one's own consciousness, a philosophy in

26. Adam H. Horowitz, Tony J. Cunningham, Pattie Maes, et al., "Dormio: A targeted dream incubation device," *Consciousness and Cognition*, vol. 83, August 2020, p. 1.
27. Horowitz, Cunningham, Maes et al., 2020, p. 2.
28. "Dormio: Interfacing with Dreams," *the MIT Media Lab*, para. 6, https://www.media.mit.edu/projects/sleep-creativity/overview/ (accessed 25 October 2022).
29. Horowitz, Cunningham, Maes et al., 2020.
30. "Cocoon: Speculative Dream Engineering," *the MIT Media Lab*, https://www.media.mit.edu/projects/cocoon/overview/ (accessed 25 October 2022).
31. *Ibid*.
32. *Ibid*.
33. *Ibid*.

the flesh."[34] But perhaps running contrary to Fluid Interfaces' intentions, Cocoon seems to present Dormio as a technology for gaining unmitigated electronic access to the human body and mind. Just over two minutes in length, the video features a transparent dome occupied by a fetal-positioned sleeping body hooked up to an assortment of machines connected to their head and wrists. The video makes dramatic use of glowing, cyberpunk lighting as pastel purples and blues illuminate the sleeper's dome. Near the end of the video, dancing lines reminiscent of those created by medical equipment measuring a person's vital signs dance across the dome and the dreamer's exposed body. The imagery here invokes an immediate sense of transmissibility or compatibility between the activity of the dreaming mind and the machines that measure it. More concretely, it calls to mind a similar image from Steven Spielberg's *Jurassic Park (1993)* in which, as W. J. T Mitchell explains, "a velociraptor is caught in the projector beam of the park's orientation film, its skin serving as a screen for the display of the DNA codes that were used in cloning the creature from fossil traces of living tissue."[35] While Mitchell writes that Jurassic Park's velociraptor gestures towards a "dream of control over life,"[36] the phantasmagoric chamber of Cocoon seems to reach for a "dream of control *over dreams*"—a control, more specifically, that emerges from the flattening of neurological activity into "calculable processes"[37] which can be made subject to external intervention and manipulation.

At issue in such models of digitized consciousness is not a generic technophobia but a particular understanding of oneiric experience that enables and pursues, as Crary anticipates, "a broad remodeling of the dream into something like media software or a kind of 'content' to which, in principle, there could be instrumental access."[38] The logic of smashing the brain to bits—that is, of seeking to reduce the prodigiously subtle variations, patterns, triggers, and manifestations of human thought into bits and bytes of readable computer data—likewise terminates in a totalizing grasp on human life that permeates both mind and body with equal indifference.

More precisely, we might contextualize the cultural threat of targeted dream engineering by turning to the philosopher Achille Mbembe's understanding of how

34. *Ibid*.
35. W. J. T. Mitchell, "The Work of Art in the Age of Biocybernetic Reproduction," *Modernism/modernity*, vol. 10, no 3, September 2003, p. 485.
36. *Ibid*., p. 498.
37. *Ibid*.
38. Crary, 2013, p. 97.

ongoing equivocations between thought and data increasingly signal an acutely damaging reconceptualization of the human subject. In a 2019 interview, Mbembe reflects on "the belief that the best way to generate information is with computers and that which is not computable does not exist."[39] Such thinking, he explains, has increasingly lead to "the creeping sense that the computer is our new brain."[40] This substitution or transformation marks the precondition for the construction of a new kind of economic subject—the kind of figure Mbembe elsewhere refers to as a "*sujet neuro-économique*,"[41] or "neuroeconomic subject." This figure—a "*homme-machine, homme-code et homme-flux*"[42]—enables new capacities and imaginations for ensuring the electronic compatibility between the human body and novel technologies of economic exposure. In language that seems to explicitly predict the "neuroeconomic" capacities of more recent developments in targeted dream incubation and "dream engineering," Mbembe furthers that "As a repository of our desires and emotions, dreams, fears and fantasies, our mind and psychic life have become the main raw material which digital capitalism aims at capturing and commodifying."[43] As in Mitchell's analysis of *Jurassic Park*'s velociraptor, Mbembe's reference to the capture of "dreams" again points to something alarmingly literal. At the root of targeted dream incubation lies a fixed, unwavering insistence on re-figuring the dream as a "raw material": that is, as something that can be treated, processed, and industrially manufactured into a more polished and economically "complete" form.

To be clear, the researchers behind Fluid Interfaces' "Sleep and Dreams" group continue to make a sustained effort to differentiate themselves from the commercial extractivism of projects like Coors' dream commercial. The collective's public-facing documents illustrate that the group is motivated not by corporate profit-seeking or a willingness to sacrifice and degrade the possibility of restful sleep but by a desire to make sleep *more* restorative. As one of the group's research papers describes, the hope is that technologies like Dormio will make it possible to "influence" and maximize

39. Torbjørn Tumyr Nilsen and Sindre Bangstad, "Thoughts on the Planetary: An Interview with Achille Mbembe," *New Frame*, 5 September 2019, https://www.newframe.com/thoughts-on-the-planetary-an-interview-with-achille-mbembe/ (accessed 25 October 2022).
40. *Ibid*.
41. Achille Mbembe, *Critique de la raison nègre*, Paris, La Découverte, 2013, coll. « Cahiers Libres », p. 14.
42. *Ibid*.
43. Tumyr Nilsen and Bangstad, 2019.

sleep's restorative function in facilitating "memory enhancement, creativity, emotion regulation and physical rehabilitation."[44]

More directly, Fluid Interfaces' "Sleep and Dreams" group has explicitly aligned itself against the commodification of dreams. Adam Haar Horowitz—one of the central developers behind Dormio—is a lead author on the aforementioned open letter condemning Coors' dream commercial. An ethics statement posted to the group's website that again lists Horowitz as a lead author affirms that "Your dream is your own, always."[45] While expressing that "at their best," dream technologies "function as keys to open doors to ourselves,"[46] the statement simultaneously acknowledges that "At their worst, they are simply an expansion of a techno-optimist, capitalist imperative that asks us to yield more of ourselves to a normative notion of 'optimized' which does not serve us."[47] In language that appropriately foregrounds the danger of reducing cognition to digital bits and bytes that can be exchanged back and forth through data ports, the statement likewise warns that dream engineering could invite "the threat of the capture, sale and colonization of the dreaming self in the form of data; the outsourcing of introspection, trusting sensors more than senses; and the infiltration of our most private spaces by those who may wish to harm or manipulate us."[48]

There is, to be sure, much to support in Fluid Interface's philosophical approach to dream engineering. It is, if anything, in the spirit of like-minded collaboration and interlocution that I foreground the importance of examining how some of the group's public-facing and scientific discourse surrounding targeted dream incubation (especially the scientific embrace of an apparent "homogenization" between the "circuitry" of consciousness and external digital systems, Cocoon's visual enthusiasm for a complete penetrability of human cognition, and, as we will see in the next section, the uncritical desire to extend the labor of creative productivity into our sleep) might undermine their own ethical commitments. Part of the problem here is that even if Fluid Interfaces denounces the move from clinical to commercial applications of dream engineering, its research—including the ways its scientists conceptualize,

44. Carr, Haar, Amores et al., 2020, p. 2.
45. Horowitz, Maes and Carr, 2021, para. 6.
46. *Ibid*., para. 5.
47. *Ibid*.
48. *Ibid*., para. 4.

visualize, and describe dreams—inevitably contributes to a wider public imagination that actively facilitates exactly the aspects of commercialized dreaming that the group condemns. In the language of "dream engineering" or in the imagery of presenting dreams as something like computer code that can be fantastically extracted from the body, Fluid Interfaces naturally emboldens enthusiasms for precisely the "sale … of the dreaming self" that they reject.

At the same time, the efforts of companies like Coors, Microsoft, Sony, and Burger King make it apparent that even if Fluid Interfaces intends to preserve the economic disengagement of sleep, powerful corporations standing in the wings will not offer this same withdrawal. The group writes in their ethics statement that "The implications [of dream engineering] could range far and wide."[49] Clearly, this includes implications that carry well beyond Fluid Interfaces' own intentions. With or without Fluid Interfaces' approval, targeted dream incubation has already become the basis of a corporate vision intent on seizing even dreams within a logic of economic extraction.

In a public-facing page describing targeted dream incubation, Fluid Interfaces reports that we can confidently dismiss concerns that the technique might be used for "authoritarian mind control."[50] But this perhaps falls short of understanding the larger problem that targeted dream incubation raises. At stake here is not a vague conception of "mind control" so much as an irrefusable demand to accept the necessity of living in a world in which no individual is permitted to reserve any personal enclave of rest, privacy, or domestic withdrawal capable of persisting beyond increasingly pervasive imperatives to subject every moment of one's lived experience to wider patterns of economic engagement. But to explore in more precise terms how the digitization of sleep enables novel economizations of oneiric experience, I now turn to the emerging condition of what I call "sleepless sleep".

Sleepless Sleep

One of the "Sleep and Dreams" group's most frequently cited refrains concerns the idea that targeted dream incubation might help increase one's creativity. The group mentions this benefit in its targeted dream incubation overview,[51] its aforementioned

49. *Ibid*., para. 2.
50. "Targeted Dream Incubation," *the MIT Media Lab*, para. 12, https://www.media.mit.edu/projects/targeted-dream-incubation/overview/ (accessed 25 October 2022).
51. *Ibid*.

ethics statement,[52] and in its public webpage on Dormio, which they suggest will make it possible to modernize a technique purportedly used by Thomas Edison, Nikola Tesla, Edgar Allen Poe, and Salvador Dalí to wake themselves from hypnagogic sleep and capture embryonic ideas from their dreams.[53]

But with or without echoing the techniques of famous inventors or artists, the idea that one might understand sleep as an opportunity to incubate hypnagogic creativity seems to tread in the wake of broader imperatives for workers to pursue their personal "optimization" at the expense of any area of life representing genuine rest. Transforming sleep into a scientifically rationalized wellspring of "creativity," targeted dream incubation thus precisely encapsulates what Byung-Chul Han refers to as neoliberalism's "psychopolitical"[54] command to subject oneself to infinite exertions of "neuro-enhancement"[55] in order to remain economically competitive; dream incubation gestures towards a future in which those who do not readily submit to the task of dedicating their dreams to augmenting creativity and "problem-solving" will inevitably find themselves and their labor rendered obsolete by those who do acquiesce to this burden. More broadly, the idea that dream engineering might allow us to turn sleep into a laboratory of creativity or problem-solving implicitly suggest that, with the proper tools or training, we can continue to remain focused even in our sleep on the quotidian problems and career obstacles that occupy our minds during our time spent awake. In a world in which even dreaming has become a site of labor, we could perhaps imagine being scolded by a boss or corporate administrator because we dared to spend our time asleep wandering in aimless dreamscapes rather than intentionally cultivating dreams that allow us to continue working on the reports, presentations, and proposals of waking life. In targeted dream incubation's promise of bolstered "creativity," then, the neoliberal drive towards constant "self-optimization" punctures even sleep.

52. "A Dream Engineering Ethic," *the MIT Media Lab*, 29 January 2021, para. 4, https://www.media.mit.edu/articles/a-dream-engineering-ethic/ (accessed 25 October 2022).
53. "Dormio: Interfacing with Dreams," *the MIT Media Lab*, para. 1, https://www.media.mit.edu/projects/sleep-creativity/overview/ (accessed 25 October 2022).
54. Byung-Chul Han, *Psychopolitics: Neoliberalism and New Technologies of Power*, Erik Butler (trans.), New York, Verso, 2017.
55. *Ibid*., p. 25.

Such thinking naturally invokes Marx's famous description of capitalism's' "vampire-like"[56] drive towards "the prolongation of the working day beyond the limits of the natural day, into the night."[57] Because "it is physically impossible to exploit the same individual labour-power constantly, during the night as well as the day,"[58] the limits of personal vitality present capital with an inherent "physical obstacle."[59] The "neuro-enhancement" of targeted dream incubation provides the means to dissolve this obstacle—to ensure that even one's time spent sleeping and ostensibly recovering from the previous workday can simultaneously extend one's commitment to production. The "neuroeconomic" subject of sleepless capitalism ensures that the "appropriation of labour throughout the whole of the 24 hours in the day"[60] finally becomes possible even without having to alternate between different shifts of workers.

Along these lines, it might prove helpful here to turn to what ultimately marks Crary's central intervention in *24/7*—the idea that digital, always-on capitalism has re-organized the kinds of temporalities and durations that define the experience of contemporary human life. The key idea here is that what Crary terms "24/7" time is not just a time that never stops or a time that refuses to concede the close of the working day: more fundamentally, it describes the lived sensation of inhabiting a time that never moves forward. For Crary, the broken cyclicality of waking each day to a world that unwaveringly demands nonstop production and consumption provokes a feeling of temporal stagnation, a sense that there is no true forward or backward but only an unending condition of economic engagement. In Crary's own description, "24/7 announces a time without time, a time extracted from any material or identifiable demarcations, a time without sequence or recurrence."[61]

Whether manifesting in the form of dream commercials or in the demand to "optimize" one's creative and productive output by instrumentalizing one's dreams, targeted dream incubation exacerbates precisely this logic of a "derelict diachrony"[62] characterized by an unrelenting presence of economic operations we can never power off. If it is possible to transform even dreams into yet another algorithmically generated

56. Karl Marx, *Capital: A Critique of Political Economy* [1867], Ben Fowkes (trans.), New York, Penguin Books, 1990, p. 342.
57. *Ibid*., p. 367.
58. *Ibid*.
59. *Ibid*.
60. *Ibid*.
61. Crary, 2013, p. 29.
62. *Ibid*., p. 57

stream of "content," sleep would no longer mark the passage of time from one day to the next but only the passage from one state of economic activity to another: we move only from consuming targeted advertisements online to targeted dream commercials while sleeping, or from working during the day to augmenting creativity at night in order to boost our productivity the next day. Directly challenging Fluid Interfaces' interest in re-centering sleep's restorative qualities, competing uses of targeted dream incubation might instead use the technology to indefinitely extend the restlessness of production.

We might accordingly note that although Crary does mention Christopher Nolan's *Inception* (2010) in *24/7*, he does not discuss what is perhaps the most striking resonance between the film and his own understanding of "24/7" time. One of the core principles of *Inception* lies in the idea that the deeper one delves into the concentric layers of sleep and dream, the more the time of physical reality slows down compared to the time of the dream. "Five minutes in the real world," as Arthur explains, "gives you an hour in the dream."[63] But as we learn later, "when you go into a dream within that dream the effect is compounded."[64] By the time one gets to a "third level" dream—that is, a dream within a dream within a dream—ten hours of sleep in the "real world" would slow to the experience of "ten years" within the dream.[65]

Naturally, this conception of dreams would only supercharge more recent desires to imagine that sleep is not economically inactive but actually provides an opportunity to multiply eight hours of unconsciousness into exponentially longer periods of cognitive productivity. Towards the beginning of *24/7*, Crary imagines that pharmaceutical supplements intervening against the body's need for sleep might one day enable "the sleepless worker or consumer,"[66] writing "non-sleep products … would become first a lifestyle option and, eventually, for many, a necessity."[67] But the logic of *Inception* would seemingly invert this prediction: if sleep could indeed radically augment productivity rather than threaten it, then instead of the "sleepless worker" capitalist markets would undoubtedly demand workers that remain perpetually asleep (of course, we are left to imagine that even those who prolong their work through

63. *Inception*, Christopher Nolan, 2010.
64. *Ibid*.
65. *Ibid*.
66. Crary, 2013, p. 3.
67. *Ibid*.

"dream time" would likely still only be paid for the corresponding "real-time" hours in which they were actually asleep).

In their own research, Fluid Interfaces engages similar attempts to optimize the productivity of sleep through controlled experiments in lucid dreaming.[68] Citing a 2020 study,[69] one of the group's articles on Dormio summarizes: "It was recently shown that controlling a Brain-Computer Interface (BCI) device is possible from within a lucid dream."[70] More specifically, "using a consumer BCI, a lucid dreamer was able to, while asleep, control a moving block on a computer screen as instructed."[71] It is perhaps not difficult to imagine that such research might eventually draw funding from corporations who hope to see a combination of targeted dream incubation and lucid dreaming technologies make it possible to fill out spreadsheets even in one's sleep.

The main premise of *Inception*—the idea that one might create an entire clandestine industry around penetrating and tampering with dreams for the purpose of manipulating business or personal outcomes—likewise gestures towards a refusal to accept that sleep and dreams exist beyond circulations of financial exchange. It is in the spirit of this refusal that the film presents a world in which sleep and dreams form the center of a multi-million or even billion-dollar industry. The fantasy here is precisely a banishment of the possibility that sleep (or, by extension, any other physiological limit to human labor) cannot be privatized and turned towards the pursuit of spectacular profit. Regardless of group intentions, Fluid Interfaces' sustained interest in learning to optimize the creative function of sleep likewise gestures towards emptying sleep of economically inert restfulness by instead transforming it into a burdened site of economic production.

Ultimately, then, the idea that sleep might multiply rather than reject our potential for economic output crystallizes into what we might call a condition of "sleepless sleep" or a kind of "sleep-without-sleep": a condition in which sleep is drained of any recuperative or amelioratory qualities and instead manifests another kind of production, another manifold infinity buried within the glitched temporality

68. Carr, Haar, Amores et al., 2020, p. 2–4.
69. Remington Mallett, "A pilot investigation into brain-computer interface use during a lucid dream," *International Journal of Dream Research*, vol. 13, no. 1, p. 62–69.
70. Carr, Haar, Amores et al., August 2020, p. 13.
71. *Ibid*.

of a 24/7 time in which the hands on the clock change but lived reality remains locked to a perpetual stasis of infinite, repetitive, all-consuming work. Yet perhaps it is also in precisely this "glitched temporality" of sleep that we might discover a key challenge to ongoing homogenizations of dreaming and wakefulness.

Glitched Dreams

In her book *Glitch Feminism* (2020), Legacy Russell situates the "glitch" as a rupture that fractures dominant operations of power. Early in the book, Russell writes that "a glitch is an error, a mistake, a failure to function ... an indicator of something having gone wrong."[72] But it is precisely as an "error" that the glitch frustrates the injurious norms of homogenizing techno-economic institutions. Russell particularly explores this potential of the glitch in the context of queer or gendered bodies that repudiate the need to "perform the score"[73] of conventional gender norms. For Russell, the desire to "glitch" out of traditional social arrangements concretizes the idea that one might "embrace malfunction"[74] as a form of political noncompliance.

Of course, it is possible to imagine that targeted dream commercials would inevitably surface their own forms of glitched malfunctioning. At stake here are scientific and historical conceptions of the dream as a cognitive process that operates through a guiding logic of substitution. Of course, no advocate of this idea is more prominent than Sigmund Freud, who famously considers various kinds of oneiric "censorship" and "displacement" in *The Interpretation of Dreams* (2010).[75] As unpopular as Freud may be in contemporary biological dream research, many of his fundamental assumptions on the mechanisms of dreaming seem to have carried into current scientific paradigms. Deirdre Barrett, the Harvard psychologist behind Coors' dream commercial, wades into what some might consider a dangerously Freudian territory in her book *Pandemic Dreams* (2020).[76] In the book, Barret responds to the results of a survey collecting dream information from "over 3,700 dreamers, all around

72. Legacy Russell, *Glitch Feminism: A Manifesto*, New York, Verso, 2020, p. 7.
73. *Ibid*., p. 8.
74. *Ibid*., p. 17.
75. Sigmund Freud, "Distortion in Dreams," *The Interpretation of Dreams*, James Strachey (trans.), New York, Basic Books, 2010, p. 159–185.
76. Deirdre Barrett, *Pandemic Dreams*, Oneiroi Press, 2020.

the world"[77] in order to examine the kinds of "metaphoric guises"[78] and "dream metaphors"[79] through which the Covid-19 pandemic has manifested in our dreams. Across a wide array of disciplines—even including contemporary neuroscience—dreams remain notorious for re-coding and fundamentally distorting the stimulus of waking life.

Naturally, this inclination towards oneiric distortion would present a significant problem for the prospect of large-scale dream advertising. The propensity of dreams to transform experiences and memories into novel images and scenarios raises a key question: how might we interpret or understand moments in which dream engineering "goes wrong"—for example, when targeted dream incubation meant to generate dream imagery of Coors beer instead turns into a nightmare? In addition to Russell's conception of gender nonperformance, this question invites us to consider another kind of glitch—the glitched perversion or twisting of dream imagery that inevitably refuses to acquiesce to external demands and directives.

But perhaps the more fundamental glitch might not lie in the process of digitizing dreams but in the fact of the dream itself. Collapsing into the surreality of dreams, the sleeping body refuses to "perform the score" of neoliberal demands for personal optimization and production. From this perspective, we might understand the homogenizing impulse of targeted dream incubation as an attempt to construct a "patch" or fix for the glitch of the dream's economic noncompliance.

Here we might return to *Inception* through Mark Fisher's observation that one of the film's most striking qualities lies in precisely how un-dreamlike its dream sequences feel. Rather than a space of the bizarre or the incomprehensibly strange, Nolan's dreamscapes instead emerge as backdrops for what has perhaps become the most banal thing on Earth: Hollywood action sequences. As Fisher writes, "An unsympathetic viewer might think that the entirety of *Inception*'s complex ontological structure had been constructed to justify clichés of action cinema––such as the ludicrous amount of things that characters can do in the time that it takes for a van to fall from a bridge into a river."[80]

77. *Ibid*., p. 2.
78. *Ibid*., para. 1.
79. *Ibid*.
80. Mark Fisher, "The Lost Unconscious: Delusions and Dreams *Inception*," *Film Quarterly*, vol. 64 no. 3, Spring 2011, p. 40.

More broadly, Fisher suggests *Inception*'s transformation of the dream into something that can properly function as a Hollywood set piece seems to reflect a broader desire to fundamentally flatten the inherent weirdness of oneiric experience. As Fisher notes, "The spatial distortions at work in *Inception* do not resemble the ways in which dreams distend or collapse space."[81] Put another way, we might say that the function of dream distortion in *Inception* is *to distort dreams back into shape*. That is, *Inception* corrects the *glitch* of dreaming: it empties the dream of its strange, unbound capacity to collapse into irrationality (and, through this irrationality, its capacity to refuse the transactional logic of economic exchange). Through the distortion of distortion (the bending back into shape of the dream), *Inception* re-imagines the dream as something as abjectly familiar as men in suits chasing each other with guns.

Yet, it is not just corporations but the general public that seems to have adopted a critical attitude towards the "glitch" of economically nonproductive dreaming. The efforts of companies like Microsoft and Sony to facilitate dreams of one's favorite games[82] point to a popular imagination that figures the dream as an unwelcome removal from the matrix grid of digital capitalism's infinite generation of algorithmically selected "content." Sleep, in other words, is not just a dead zone that kills one's capacity to produce: it also kills one's capacity to *consume*. From this perspective, the desire to turn one's dreams into an extension of their favorite video game seems to register a cultural intolerance to moments of unplugged boredom: one is now expected to reject even sleep as a biological rhythm that threatens to remove us from the hypnotic illumination of digital entertainment.

In *Le système des objets* [1968], Jean Baudrillard seemingly anticipates contemporary figurations of sleep as a glitch or error that forcibly kicks one offline.[83] Suggesting an affinity between dreams and advertisements, Baudrillard writes that "*Comme les rêves nocturnes ont fonction de préserver le sommeil les prestiges de la publicité et de la consommation ont pour fonction de favoriser l'absorption spontanée des valeurs sociales ambiantes et la régression individuelle dans le consensus social.*"[84] Because advertising structures our immersion within a wider cultural milieu, Baudrillard asserts that eliminating advertising would produce an immediate discomfort: "*Si on*

81. *Ibid*., p. 40.
82. Stickgold, Zadra and Haar, 2021.
83. Jean Beaudrillard, *Le système des objets* [1968], Gallimard, coll. « TEL », 1988.
84. *Ibid*., p. 242.

supprimait toute publicité, chacun se sentirait frustré devant les murs vides … il penserait qu'« on » ne s'occupe plus de lui."[85] To answer the question of why one would decide to incubate their dreams with a Coors commercial, Baudrillard seems to point to the response that the ultimate function of advertising is to make one feel wanted and desired. Dream advertising affirms to consumers that markets and corporations will continue to compete for their attention *even when that attention is completely unconscious*. More broadly, we might understand the consumer who enthusiastically desires to incubate their dreams with Coors' commercials as an individual who dreads the possibility that the "*consensus social*" of the marketplace might turn away from them or cease vying for their attention. In the willingness to concede one's own dreams as a canvas of corporate marketing, we consequently discover something like the precise opposite of Freud's famous *fort-da* game: too anxious to even rehearse the momentary disappearance of capitalism, one finds a way to manifest the presence of corporate solicitude even in their sleep.

Against increasingly uncompromising demands for digital infrastructures capable of capturing all lived experience within the pulsing glow of digital content networks, how might we re-imagine the "glitch of sleep"—the dream's capacity to "crash" broader frameworks of economic exchange—not as a burdensome and isolating excision from electronic instant gratification but as a protected limit that restoratively interrupts capital's access to the body?

Conclusion: Dreams of Another World

Perhaps one answer to this question might lie in the suggestion that the most significant implication of targeted dream engineering lies not in the dreams it forces us to see but in the ones it deprives us of seeing. Despite conventional tendencies to understand dreaming as a nightly descent into an irrational or even incoherent state, dreams persist as an enduring cultural symbol for our capacity to imagine a better world. But when we cover our dreams with advertisements or position sleep as yet another facet of daily life we might optimize in the pursuit of maximum economic gain, we signal a willingness to sacrifice our very desire to imagine a world beyond the mandated precarity and austerity of contemporary neoliberalism. Dream advertisements and

85. *Ibid*., p. 243.

the broader project of commercializing sleep would literalize the idea that not even in "our wildest dreams" can we imagine alternatives to capitalism.

Along these lines, we might conclude by taking up what first appears to present a core contradiction within Coors' dream commercial. The idea of having consumers voluntarily incubate their dreams with commercial imagery seems to raise an inherent redundancy. Clearly, any individual who would have watched Coors' "stimulus clip" before sleeping would already have been aware of Coors and its commercial offerings. What, then, is the point of the advertisement? In *Dialectic of Enlightenment* [1947],[86] Max Horkheimer and Theodor Adorno deliver an account of advertising that seems to precisely capture the purpose of Coors' dream commercial. Just as in Horkheimer's and Adorno's assessment of advertising in *Dialectic of Enlightenment*, the ultimate function of Coors' dream commercial lies in the way it develops a "pure representation of social power": it presents a power over the idea that one might ever—even under the shadow of night and the obscured thought of dreams—discover a refuge beyond neoliberal demands to monetize human life; and, perhaps even more fundamentally, it expresses a power over the possibility that one might discover visions of a world beyond the logic of capitalism.

But it is also worth considering at least one reason why one might be willing to exchange the unbound imagination of dreams for oneiric visions of a stagnant world. Put simply, a willingness to dream requires a willingness to encounter the unknown and the unexpected—perhaps even the monstrous. Just as in Russell's conception of the "glitch," dreaming presents another way to "surface the unnamable" and "point toward a wild unknown." When we dream, we do not know what will happen. The issue here is not just that we might encounter something monstrous but that dreaming forces us to confront a part of ourselves that we retain seemingly no capacity to direct or restrain. Perhaps the sense of mystery, eeriness, horror, utopia, fear, delight, and prophecy that has driven generations of writers, scholars, and scientists to study dreams emerges from the uncanny feeling that dreams present us with a part of ourselves that we cannot

86. Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment* [1947], Edmund Jephcott (trans.), Gunzelin Schmid Noerr (ed.), Stanford, Stanford University Press, 2002.

control. Especially when we have a nightmare,[87] it might be easy to understand why this encounter with our own body might feel disturbing. Perhaps it's easier to face the Coors commercial you know than the nightmare you don't.

But maybe it is also this sense of the unexpected that makes dreams valuable. When we dream, we might have a nightmare. But we might catch a glimpse of something—something so strange and diaphanous and fragile and gossamer thin that we can barely safeguard its memory against the long, dark hours of the night but that finally leaves us waking in the morning to the feeling that perhaps a better world is possible.

87. With some irony, it is worth observing that Fluid Interfaces gestures toward the possibility that targeted dream incubation might facilitate medical treatments for chronic nightmares (though they themselves admit "reliable techniques have proven elusive in the laboratory")—see their targeted dream incubation overview: https://www.media.mit.edu/projects/targeted-dream-incubation/overview/ (accessed 18 July 2023). We might imagine, however, that perhaps the ultimate nightmare might simply be the image of a world in which unregulated dreaming has become impossible.

Do Humans Dream of Electric Ads?

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Abstract:

Responding to Molson Coors' 2021 attempt to implant commercials into the dreams of sleeping consumers, I explore how emerging forms of "targeted dream incubation" threaten to transform sleep from a condition of economic refuge into a state of intensified exposure to "24/7" rhythms of economic engagement. More specifically, I argue that developing research in "dream engineering" shifts contemporary relationships to sleep by suggesting that the time we spend asleep might become even more suitable to imposed procedures of economic production and consumption than time spent awake. Rather than re-affirming a fundamental incompatibility between sleep and capitalism, I argue that targeted dream incubation anticipates a future in which capitalism incorporates and exploits sleep as a novel frontier of economic optimization.

Résumé :

En réponse à la tentative de Molson Coors d'implanter des publicités dans les rêves des consommateurs endormis, j'explore comment les formes émergentes d'« incubation de rêves ciblés » menacent de transformer le sommeil d'une condition de refuge économique en un état d'exposition intensifiée à des rythmes d'engagement économique « 24/7 ». Plus précisément, je soutiens que le développement de la recherche en « ingénierie des rêves » modifie les relations contemporaines au sommeil en suggérant que le temps que nous passons à dormir pourrait devenir plus adapté aux

procédures imposées de production et de consommation économiques que le temps passé à l'état d'éveil. Plutôt que de réaffirmer une incompatibilité fondamentale entre le sommeil et le capitalisme, je soutiens que l'incubation ciblée des rêves anticipe un avenir dans lequel le capitalisme incorporera et exploitera le sommeil comme une nouvelle frontière d'optimisation économique.

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Doron Darnov is a PhD candidate in Literary Studies at the University of Wisconsin-Madison. His dissertation explores terraforming, geoengineering, and necropolitics. He is currently the Mellon Morgridge Graduate Fellow of Planetary Humanities in the University of Wisconsin's Constellations Program. Some of his recent work has appeared in *Alienocene: Journal of the First Outernational* (28 March 2022) and *Edge Effects* (30 March 2021).