

Internet as Modern Plague:

An Analogical Framework for Analyzing Rapid Change

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Introduction

Historical plagues, like the one that ravaged ancient Athens, represent more than calamities. Thucydides' chronicle demonstrates they were critical junctures, exposing societal fragility and compelling adaptation. These historical events offer potent analytical tools. This essay employs the "plague analogy" as one such framework, directing attention to rapid proliferation, systemic consequences, hidden costs termed 'pathologies', and the crucial requirement for societal adaptation when examining large-scale disruptions. The internet serves as this essay's primary case study. Its relative maturity as a disruptive force allows observation of a more complete adaptation cycle compared to newer phenomena, making it ideal for demonstrating the framework's application and utility. Applying the plague framework to the internet—analyzing its rapid spread, its cognitive effects, its existential challenges, and its long-term adaptation patterns —reveals insights into our digital interactions and mental states. More importantly, this application demonstrates the framework's power and limitations for critically engaging with *any* large-scale modern disruption. The goal is to urge a more historically informed and systemically aware perspective as we confront ongoing transformations, a task of increasing urgency given phenomena like the rapid rise of generative AI. The subsequent sections will analyze the internet's proliferation, cognitive effects, challenge to presence, and adaptive responses, extracting methodological lessons at each stage, before concluding with a dedicated reflection on the analogy's broader value.

The Digital Contagion

The internet saturated global society with astonishing velocity. Its expansion from niche academic networks to ubiquitous mobile access occurred within a single generation, a diffusion dynamic faster than nearly any prior technology (*cf. Rogers, 2003*). This swift integration often outpaced considered societal reflection, leaving behind initial utopian narratives of connection and information democracy. Simultaneously, the underlying infrastructure—fiber optic cables, server farms, complex algorithms—remained largely unseen, an invisible architecture shaping daily life. This combination of speed, pervasiveness, and infrastructural obscurity makes objective analysis difficult, yet

necessary. Concerns about its effects mount, revealing a more complex reality than early visions suggested, including persistent inequalities in access and use (*Van Dijk, 2020*).

Facing the Athenian plague centuries earlier, Thucydides charted a course through similar ambiguity and fear. While the challenges were different in nature, his method offers a parallel. He prioritized meticulous observation of the disease's progression, its societal fallout, and even nascent biological patterns like acquired immunity (*Longrigg, 2000; Kallet, 2013; Tangye, 2015*). His account moved deliberately beyond rumor and superstition to document the tangible consequences of an overwhelming, poorly understood phenomenon. Applying this Thucydidean observational imperative, drawn analytically from the plague framework, to the internet compels a similar commitment. It demands we look past both celebratory marketing and reactive alarmism to document the actual speed, the differential reach, and the observable societal shifts accompanying the internet's establishment.

From this application emerges a core methodological lesson for analyzing modern disruptions: the plague framework necessitates an initial, rigorous focus on empirical observation of a phenomenon's spread and its immediate, demonstrable consequences. Before debating deeper meanings or prescribing solutions, one must first map the contours of the disruption itself. This observational grounding provides the essential foundation for understanding the systemic impact of *any* rapidly unfolding change.

Cognitive Pathologies or Environmental Miasma?

Beyond its rapid spread, the internet's integration correlates with observable shifts in cognition and psychological well-being. Research documents associations between heavy digital media use and challenges to sustained attention, particularly in developing minds (*Stockdale & Coyne, 2022*). The constant availability of external information appears to alter memory strategies; one foundational study suggested reliance on digital storage over internal recall (*Sparrow et al., 2011*), though subsequent research presents a complex picture. Furthermore, the digital environment often demands continuous partial attention and multitasking, which can increase cognitive load and perceived stress (*Wirzberger et al., 2024*). Studies also indicate *small but statistically significant associations* between extensive social media engagement and increased symptoms of anxiety and depression, especially among adolescents, though effect sizes vary and causal pathways remain debated (*Gabrielle et al., 2024*). In some cases, usage patterns escalate into Problematic Internet Use, exhibiting characteristics akin to addiction (*Štefancová et al., 2023*). These documented effects, synthesized in analyses like Carr's (2011), constitute the "pathologies" observed in this digital landscape. Establishing direct causality between the overall digital environment and specific cognitive changes remains challenging and requires more longitudinal work, but the correlations are persistent.

Ancient medical thought, particularly within the Hippocratic tradition, offered the concept of *miasma* to explain widespread illness. This theory posited that corrupted air, an unhealthy environment, could simultaneously affect entire populations, distinct from diseases caused by individual behavior or direct contact (*Jouanna, 2012*). Although distinct from literal airborne disease, the *environmental aspect* of miasma theory offers a useful lens for the plague framework here. It suggests viewing the digital sphere itself as a potential source of cognitive miasma. The issue may lie less with specific "contagious" pieces of harmful content and more with the *overall nature* of the environment—its ceaseless notifications, algorithmically optimized stimuli, information abundance, and the constant pressure for engagement. Immersion in this milieu could create the conditions for the widespread cognitive and psychological shifts observed.

The second core lesson derived from applying the plague framework emerges here. Its conceptual tools, like miasma, push analysis toward a systemic, environmental diagnosis. This perspective encourages investigation beyond isolated negative events or specific platform features. It compels us to assess the health of the entire informational and attentional ecosystem generated by a disruption, a critical approach for understanding phenomena driven by pervasive technological environments.

The Existential Challenge

The constant connectivity facilitated by the internet cultivates a state of divided awareness, an "absent presence." Individuals may physically occupy one space while their attention resides elsewhere, mediated through screens, an experience detailed ethnographically by Turkle (*2011*). This condition carries measurable costs; studies suggest that limiting mobile internet access correlates with improved subjective well-being, hinting at a toll exacted by perpetual online engagement (*Castelo et al., 2025*). Philosophical critiques further suggest that digitally mediated experiences struggle to replicate the richness of embodied, real-world interactions, potentially diminishing the value of physical presence and challenging traditional notions of selfhood (*Dreyfus, 2001*). Online identities become curated performances, sometimes diverging sharply from offline realities (*Turkle, 2011*).

Historical accounts of plagues, like Thucydides' description of Athens, detail not only mortality but also the profound breakdown of social bonds, established norms, and even religious reverence – a disruption of meaning itself. The plague analogy, by invoking such deep historical ruptures, inherently directs analytical attention beyond the internet's functional benefits or measurable cognitive shifts. This focus on fundamental societal stress within the analogy encourages us to probe for similarly deep, *existential* alterations caused by modern disruptions. How does this pervasive mediation reshape our fundamental

experience of being present in the world, relating to others authentically, or understanding ourselves?

Thus, the third lesson emerges from applying the framework: its historical weight encourages investigation into the deeper, often qualitative or existential, consequences of a disruption. It pushes analysis beyond immediate utility or surface-level changes to explore potential transformations in the fundamental texture of human experience and self-perception, impacts easily missed by purely functional or quantitative assessments.

Tracking Adaptation through the long lifecycle of the Internet Plague

Decades after its initial spread, the internet's presence allows observation of long-term societal adaptation. Efforts to mitigate perceived harms manifest in various ways. Educational initiatives promote digital literacy, aiming to equip users with survival skills for the online environment (*Eshet-Alkalai, 2004*). Wellness trends encourage mindful use and digital detoxes, representing individual attempts to manage exposure. Simultaneously, persistent calls for structural change address the underlying economic models driving data exploitation and demand more ethical design or regulatory oversight (*Zuboff, 2019*). Yet, alongside these conscious adaptations and the emergence of clear benefits (like efficient communication or access to information), a degree of normalization has occurred; online interaction is now a baseline condition for many aspects of life. Critically, the internet itself continues to evolve rapidly (e.g., towards immersive virtual environments), meaning adaptation targets a constantly moving object, unlike recovery from a historical epidemic with a clearer end point.

This complex picture of ongoing adaptation resonates with historical responses to environmental threats like plagues, although direct equivalence is unwarranted. Ancient societies combined individual coping mechanisms and rituals—perhaps reflected in legends like Hippocrates employing fire for purification *(Pinault, 1992)*—with limited attempts at collective action. However, ancient public health measures often lacked the scope, scientific basis, or political will for systemic environmental management, focusing instead on individual resilience or the actions of powerful individuals (*Larsen, 2017; Nutton, 2000b; Davies, 2012*). The internet's established history allows us to use the plague framework to view adaptation not as a finished state, but as a protracted, uneven societal negotiation with a persistent, evolving force. We can observe which strategies gain traction, which fail, and how equilibrium shifts over time.

This extended observation, facilitated by the internet's relative maturity as a disruption, yields the fourth lesson from the framework. Its application is valuable for long-term analysis, enabling the tracking of adaptation across a disruption's lifecycle. It highlights the

dynamic interplay between individual resilience, collective action, normalization, potential benefits, and the potential for incomplete resolution as societies learn to live with transformative changes that become permanent environmental features.

Evaluating the Framework: Lessons Learned and Broader Applicability

Applying the plague analogy to the internet demonstrates a valuable critical methodology, yielding specific analytical benefits applicable to other modern disruptions. In a condensed view, the internet case study validates the framework by showing how invoking historical parallels encourages empirical observation of scale and consequence; how concepts like miasma prompt systemic, environmental diagnosis; how the analogy's weight pushes inquiry towards deeper, existential impacts; and how its long-term perspective aids in tracking societal negotiation and resilience. These lessons illustrate the cognitive power of metaphor to structure understanding and echo historical uses of *pestis* metaphors to analyze societal crises (*Gardner, 2019*). This structured approach—examining proliferation, diagnosing systemic effects, probing existential shifts, and tracking adaptation—offers a template for analyzing other rapid phenomena, such as the spread of potent misinformation or volatile financial contagions.

However, the framework demands critical self-awareness. Illness metaphors carry risks; they can oversimplify complex issues or stigmatize groups (*Sontag, 1978*), and the plague framework inherently focuses analysis on negative aspects, potentially overlooking significant benefits or neutral transformations. Furthermore, the core concepts are historically contingent: "contagion," for instance, held different meanings and less prominence in ancient medicine than miasma (*Nutton, 2000a*). The rhetoric of disease can also be weaponized politically, justifying extreme measures as necessary "cures" for a "sick body politic" (*Mebane, 2024; Liong, 2016*). Therefore, the plague analogy serves best not as a literal truth, but as a heuristic—a potent, historically resonant tool for generating critical questions about the dynamics and consequences of rapid change, used with careful attention to its limitations and potential biases.

Conclusion

Analyzing the internet through the historical lens of plague illuminates its complex societal integration and yields valuable analytical lessons. This framework encourages empirical observation, systemic diagnosis, attention to existential shifts, and tracking long-term adaptation. Employing such critical, historically-informed perspectives allows for deeper understanding and promotes more deliberate, adaptive responses to the powerful disruptions shaping our world.

Bibliography

- Castelo, N., Kushlev, K., Ward, A. F., Esterman, M., & Reiner, P. B. (2025). Blocking mobile internet on smartphones improves sustained attention, mental health, and subjective well-being. *PNAS Nexus*, 4(2), pgaf017.
<https://doi.org/10.1093/pnasnexus/pgaf017>
- Carr, N. (2011). *The Shallows: What the Internet Is Doing to Our Brains*. W. W. Norton & Company.
- Davies, P. J. E. (2012). Pollution, propriety and urbanism in Republican Rome. In M. Bradley & K. Stow (Eds.), *Rome, Pollution and Propriety: Dirt, Disease and Hygiene in the Eternal City from Antiquity to Modernity* (pp. 67-80). Cambridge University Press.
<https://doi.org/10.1017/CBO9781139028479.007>
- Dreyfus, H. L. (2001). *On the Internet*. Routledge. DOI: 10.4324/9780203466464
- Eshet-Alkalai, Y. (2004). Digital Literacy: A Conceptual Framework for Survival Skills in the Digital Era. *Journal of Educational Multimedia and Hypermedia*, 13(1), 93-106.
- Farkas, J., & Maloney, M. (Eds.). (2024). *Digital media metaphors: A critical introduction*. Routledge.
- Gabrielle, T., Sonne, M., & Indolo, N. N. (2024). The Impact of Social Media on Adolescent Mental Health: A Meta-Analysis. *Scientia Psychiatrica*, 5(3), 551-564.
- Gardner, H. (2019). Roman Pestilence: Tenor and Vehicle. In *Pestilence and the Body Politic in Latin Literature* (pp. 17-44). Oxford University Press.
- Jouanna, J. (2012). Air, Miasma and Contagion in the Time of Hippocrates and the Survival of Miasmas in Post-Hippocratic Medicine. In P. van der Eijk (Ed.), *Greek Medicine from Hippocrates to Galen: Selected Papers* (pp. 121-136). Brill.
- Kallet, L. (2013). Thucydides, Apollo, the plague, and the war. *American Journal of Philology*, 134(3), 355-382.
- Lakoff, G., & Johnson, M. (1980). *Metaphors We Live By*. University of Chicago Press. DOI: 10.7208/chicago/9780226470993.001.0001
- Larsen, Ø. (2017). History of Public Health in the Ancient World. In S. R. Quah (Ed.), *International Encyclopedia of Public Health, Second Edition* (Vol. 4, pp. 19-22). Academic Press. <https://doi.org/10.1016/B978-0-12-803678-5.00204-9>

- Liong, K. (2016). Breathing Crime and Contagion: Catiline as “Scelus Anhelans” (Cic. Cat. 2.1). *Rheinisches Museum für Philologie*, 159(3/4), 348-368.
- Longrigg, J. (2000). Death and epidemic disease in classical Athens. In V. M. Hope & E. Marshall (Eds.), *Death and disease in the ancient city* (pp. 55-64). Routledge.
- Mebane, J. (2024). The Sick Body Politic. In *The Body Politic in Roman Political Thought* (pp. 61-94). Cambridge University Press.
- Nutton, V. (2000a). Did the Greeks Have a Word for It? Contagion and Contagion Theory in Classical Antiquity. In L. I. Conrad & D. Wujastyk (Eds.), *Contagion: Perspectives from Pre-Modern Societies* (pp. 137-162). Routledge.
- Nutton, V. (2000b). Medical thoughts on urban pollution. In V. M. Hope & E. Marshall (Eds.), *Death and disease in the ancient city* (pp. 65-73). Routledge.
- Pinault, J. R. (1992). Hippocrates and the plague. In *Hippocratic lives and legends* (pp. 35-60). Brill. DOI: 10.1163/9789004328908_004
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Sontag, S. (1978). *Illness as Metaphor*. Farrar, Straus and Giroux.
- Sparrow, B., Liu, J., & Wegner, D. M. (2011). Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips. *Science*, 333(6043), 776-778. DOI: 10.1126/science.1207745
- Štefancová, M., Krch, F. D., Ergang, P., Görnerová, N., Mikolajková, N., Příhodová, T., & Anders, M. (2023). Problematic internet use during the COVID-19 pandemic: A systematic review and meta-analysis of prevalence data. *Neuropsychopharmacologia Hungarica*, 25(3), 131-141.
- Stockdale, L. A., & Coyne, S. M. (2022). The association between screen time and attention in children: A systematic review. *Developmental Neuropsychology*, 47(4), 175-192.
- Tangye, S. G. (2015). Thucydides and longer-lived plasma cells. *Blood*, 125(11), 1684-1685.
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.
- Van Dijk, J. A. G. M. (2020). *The Digital Divide*. Polity Press.
- Wirzberger, M., et al. (2024). Media Multitasking in Younger and Older Adults: Associations with Cognitive Abilities and Biological Stress Responses. *Media Psychology*. Advance online publication. <https://doi.org/10.1080/15213269.2023.2298686>

Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. PublicAffairs.