Internet as Modern Plague:

An Analogical Framework for Analyzing Rapid Change

Harry Luo

ILS 400 Integrative Essay

Introduction

Historical plagues—most famously the epidemic that swept through classical Athens—serve as more than grim episodes in collective memory. Thucydides' account presents them as turning points that lay bare hidden weaknesses and force societies to reinvent themselves. Because of that dual role, plague narratives supply a valuable analytic lens.

This essay adopts that lens—the "plague analogy"—to investigate four recurring features of large-scale disruption: rapid proliferation, cascading systemic effects, latent pathologies, and the imperative of collective adaptation. The internet provides the central case. Decades of global diffusion give a nearly complete view of its adaptive arc, a luxury unavailable for newer shocks.

By tracing the web's swift spread, its influence on cognition, the existential questions it raises, and the evolving strategies for accommodation, the discussion highlights both the texture of digital life and the reach of the analogy itself. The exercise seeks to foster a historically grounded, system-level awareness—an outlook increasingly necessary as forces such as generative AI accelerate.

The sections that follow track the internet through those four analytic stages, distill methodological lessons at each step, and conclude with a reflection on the framework's wider value.

The Digital Contagion

The internet swept across the globe with remarkable speed. What began as a cluster of academic networks became near-universal mobile access within a single generation—a diffusion curve steeper than almost any earlier technology *(Rogers, 2003)*. Because expansion raced ahead of careful public reflection, early utopian promises of frictionless connection soon met harsher realities. Meanwhile the enabling infrastructure—submarine cables, server farms, and recommendation algorithms—quietly shaped everyday life while remaining largely out of view. This mix of velocity, reach, and hidden machinery complicates analysis even as it makes such analysis essential. Growing evidence points to

consequences more tangled than first imagined, including persistent divides 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?

Heavy digital immersion coincides with measurable shifts in attention and mood. Longitudinal and experimental work links sustained media use to shorter attention spans in younger users *(Stockdale & Coyne, 2022).* Easy access to search engines shapes memory strategy: people recall where to find facts more readily than the facts themselves *(Sparrow et al., 2011).* Constant prompts to multitask elevate cognitive load and perceived stress *(Wirzberger et al., 2024).* Meta-analytic evidence, though modest in effect size, associates extensive social-media engagement with greater anxiety and depressive symptoms among adolescents *(Gabrielle et al., 2024)*. For a subset of users, the pattern escalates into Problematic Internet Use, sharing features with behavioral addiction *(Štefancová et al., 2023*). Syntheses such as Carr's The Shallows group these findings under a single heading: a new class of digital pathologies *(Carr, 2011).*

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

With several decades of hindsight, observers can watch societies adjust to the internet in real time. Schools weave digital literacy into curricula, giving students survival skills for an attention-dense environment *(Eshet-Alkalai, 2004)*. Wellness movements promote mindful use and scheduled detox periods, individual strategies designed to modulate exposure. Policy conversations target structural levers: business models built on data extraction face calls for ethical design, stronger privacy law, and new regulatory oversight *(Zuboff, 2019)*. Positive gains—instant communication, open knowledge—sit alongside these risk-mitigation efforts, yet equilibrium remains elusive because the technology keeps evolving toward immersive virtual and mixed-reality spaces.

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 —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 clarifies its strengths. First, the metaphor insists on empirical grounding; mapping scale, pace, and impact precedes prescription. Second, concepts such as miasma steer diagnosis toward system-level conditions rather

than isolated faults. Third, historical gravity pushes inquiry beneath surface utility to question shifts in meaning, identity, and presence. Fourth, the analogy's long temporal lens illuminates adaptation as an uneven, continuing negotiation rather than a finished cure. 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.

Yet the same rhetoric demands caution. Illness metaphors can simplify complexity or cast whole groups as sources of "infection," a danger Sontag highlighted decades ago *(Sontag, 1978)*. Historical nuance matters as well: in Greek medicine, contagion held a different, less central role than miasma *(Nutton, 2000a).* Moreover, political actors sometimes deploy disease language to justify extreme "cures" for a supposedly ailing body politic *(Mebane, 2024; Liong, 2016)*. For these reasons, the plague analogy works best as a heuristic—one vivid lens among many, useful when handled with awareness of its distortions and biases.

Conclusion

Treating the internet as a modern "plague" clarifies four decisive tasks for analysts: observe its spread, diagnose system-wide conditions, probe existential consequences, and monitor the long arc of adaptation. Followed in sequence, those tasks transform a diffuse subject into an intelligible field of inquiry. History supplies both the template and the caution—metaphors enlighten when handled precisely, yet distort when taken too literally. Applied with that awareness, the framework equips researchers and policymakers to face coming disruptions with sharper insight and stronger institutional design, whether the challenge arises from generative AI, climate shocks, or crises still unforeseen.

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.