

The Filtration Metaphor: An Analysis of Delays in New York’s 7 Line Extension

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In a Tortoiseshell: *In this excerpt of a research paper, the author creates his own **key term**, “the filtration metaphor,” which he applies to his discussion of the 7 line extension of the New York subway system. The key term showcases an excellent mastery of **framing** for the purposes of his argument.*

Excerpt

On December 20, 2013, the outgoing mayor of New York, Michael Bloomberg, took what was billed as a “ceremonial ride” on the newest track of the New York City Subway system, a one-stop extension of the 7 line to a terminal at 34th Street and 11th Avenue.¹ The extension was the centerpiece of Bloomberg’s multi-year effort to develop Hudson Yards, “the country’s biggest and densest real estate development,” on the Far West Side of Manhattan, and at the time of this event, it was generally viewed as an example of good transit planning and construction.² *The New York Times* noted Bloomberg’s claim that the project remained “on time and on budget,” and even the scholars David Halle and Elisabeth Tiso, writing in 2014, called the extension “a stunning success in a city that...finds it...difficult to build new subway lines.”³

However, over the next two years, the 7 line extension experienced a string of delays: in monthly reports given to Metropolitan Transportation Authority (MTA) board members, the project’s completion date was revised eight times.⁴ It was moved from a proposed opening date of June 2014 to an actual opening date of September 2015, nearly two years after the ceremonial ride and over six years after the project began construction.⁵ Newspapers and transportation blogs kept an intense focus on the month-to-month setbacks of the project, especially the delays associated with installing two Italian-made inclined elevators into the station.⁶ These delays might seem inconsequential, but the damage done to public trust

¹ Matt Flegenheimer, “For a Mayor on His Way Out, a Subway Station on Its Way In,” *New York Times*, December 20, 2013, <http://www.nytimes.com/>.

² David Halle and Elisabeth Tiso, *New York’s New Edge: Contemporary Art, the High Line, and Urban Megaprojects on the Far West Side* (Chicago: University of Chicago Press, 2014), 1-2.

³ Flegenheimer, “For a Mayor on His Way Out.”; Halle and Tiso, *New York’s New Edge*, 1.

⁴ “Transit and Bus Committee Meeting,” MTA, Metropolitan Transportation Authority, January 20, 2014–November 14, 2016.

⁵ Patrick Arden, “Crews begin work on 7 line extension,” *Metro—New York*, February 20, 2009, <http://infoweb.newsbank.com/resources/doc/nb/news/127290F45E11CCB8?p=WORLDNEWS>.

⁶ Some examples include: Matt Flegenheimer, “In Expansion of No. 7 Line, One Problem: An Elevator,” *New York Times*, May 29, 2014, <http://nyti.ms/1jwHply>, Benjamin Mueller, “Transit Hub and Work on No. 7 Line Face Delays,” *New York Times*, June 23, 2014, <http://nyti.ms/1llhWBb>, and Benjamin Kabak, “On the elusive finish line for the 7 line extension,” *Second Avenue Sagas* (blog), June 1, 2014,

in the MTA was significant: an MTA board member described a “significant blemish on the agency” after yet another setback—the discovery of leaks in the 34th Street station—occurred months after the extension opened.⁷

Modern megaprojects seem to be plagued by these kinds of highly publicized delays; urban geographer Bent Flyvbjerg has even created an “iron law of megaprojects,” which describes them as “over time, over budget, over and over again.”⁸ However, the specific conditions for the 2014 and 2015 delays of the 7 line extension are underexplained by the current scholarly literature. For example, Halle and Tiso discuss a variety of “blocking factors,” including “jurisdictional squabbles,” “incompetent leadership,” and “changes in the economic environment,” that serve to delay the completion of a megaproject.⁹ They use the Moynihan Station project, a plan to relocate Penn Station, as a case study that demonstrates these blocking factors.¹⁰ In the case of the 7 line extension, though, most of these factors were absent: the city of New York paid the \$2.1 billion cost of the project before construction began, and the project did not run over budget. Michael Bloomberg himself was a strong leader who actively secured funding and political will for the project.¹¹ Finally, while interagency tension was a factor (as will be seen later), there was nothing in the 7 line project even roughly equivalent to the three railroads and multiple government agencies involved in the Moynihan Station development.

Economist Albert Hirschman and Flyvbjerg have both developed theoretical models that examine megaproject forecasting, models which this paper seeks to complicate: Hirschman’s “principle of the Hiding Hand” stated that “misjudging the nature of [a] task, ...presenting it to ourselves as more routine...than it will turn out to be” is beneficial, because without this misinformation no difficult project would ever get started.¹² Flyvbjerg extended this idea, arguing that a combination of ignorance, excessive optimism, and purposeful manipulation among politicians and decision-makers results in overly

<http://secondavenuesagas.com/2014/06/01/on-the-elusive-finish-line-for-the-7-line-extension/>.

⁷ Emma G. Fitzsimmons, “Leaks at Hudson Yards Station Frustrate M.T.A. Board,” *New York Times*, March 21, 2016, <http://nyti.ms/1XJoTfb>.

⁸ This paper will use Halle and Tiso’s definition of a “megaproject” as “a very big project in the context of where it is being planned or built, and with a significant public component.” This definition takes into account definitions from both Flyvbjerg and Alan Atshuler and David Luberoff. Halle and Tiso, *New York’s New Edge*, 11, 405.; Bent Flyvbjerg, “What You Should Know About Megaprojects and Why: An Overview,” *Project Management Journal* 45, no. 2 (2014): 6-19, Business Source Elite, EBSCOhost, 11.

⁹ Halle and Tiso, *New York’s New Edge*, 12.

¹⁰ *Ibid.*, 314-344.

¹¹ William Neumann, “It’s a Deal: \$1.4 Billion to Extend No. 7 Train,” *City Room* (blog), October 24, 2007, <http://cityroom.blogs.nytimes.com/2007/10/24/its-a-deal-14-billion-to-extend-no-7-train/>; Charles V. Bagli, “East Side, West Side: 7 Line’s Fate Pits City Against State,” *New York Times*, March 19, 2004, <http://nyti.ms/2f7DgP6>.

¹² Albert O. Hirschman, “The Principle of the Hiding Hand,” *The Public Interest* 0, no. 6 (1967): 10, <http://search.proquest.com/docview/1298118396?accountid=13314>, 13.

optimistic forecasts for a megaproject.¹³ While its “activation” is occasionally unintentional, Flyvbjerg’s Hiding Hand is more often the result of “tactical,” intentional “power plays” by advocates eager to begin a megaproject.¹⁴ Responding to Hirschman’s claim that distorted forecasts are beneficial, Flyvbjerg rightfully pointed out the “reputational damage” and subsequent economic harm that delayed megaprojects can cause.¹⁵ This claim certainly held true for the 7 line extension: as New York City Council members argued in a June 2014 meeting, the “embarrassing” delays on the project created a “credibility gap” that seriously threatened city and state funding for MTA capital programs.¹⁶

By analyzing the descriptions of and rationalizations for delays on the 7 line extension, this paper proposes a new model to describe megaproject forecasting and communication: in the 7 line extension, there was no single “Hiding Hand.” Rather, information about the project had to pass through a succession of several institutions; each of these groups acted as part of a filter, downplaying certain details and highlighting others. This complex information-processing system served to distort the causes for delay, ultimately portraying delays caused by a mixture of black-swan events and forecasting errors as solely the result of bad luck. Unlike the principle of the Hiding Hand, this filtration metaphor suggests a strategy for uncovering the more general shortcomings that underlie specific delays. With megaprojects around the world suffering from seemingly unexplainable setbacks, analyzing these broader weaknesses could prove valuable for finishing future megaprojects on time, thereby helping restore public trust in infrastructure agencies.

¹³ Bent Flyvbjerg and Cass R. Sunstein, “The Principle of the Malevolent Hiding Hand; or, the Planning Fallacy Writ Large,” *Social Research* (forthcoming): <https://ssrn.com/abstract=2654423>, 5.

¹⁴ *Ibid.*, 5.; Flyvbjerg, “What You Should Know,” 12.; Flyvbjerg and Sunstein, “The Principle of the Malevolent Hiding Hand,” 5.

¹⁵ Flyvbjerg, “What You Should Know,” 16.

¹⁶ In this meeting, councilman Corey Johnson directly stated, “This is embarrassing! You all have a \$14 billion capital gap, you’re asking the city and state for more money...It doesn’t inspire confidence of the city putting money into these projects if they’re not gonna get done in time, and then, when they’re not done on time, to not get real solid answers of when we should expect it to be complete.” Councilman James G. Van Bramer, discussing an unrelated MTA capital program, noted that a similar “credibility gap” impaired support for a dedicated MTA commuter tax among his constituents. New York City Council, Committee on Finance, “The New York City Council – Video,” June 1, 2015, <http://legistar.council.nyc.gov/Video.aspx?Mode=Auto&URL=aHRocDovL2NvdW5jaWxueWMudmllyml0LmNvbS9mbGFzaC9tZWVpYV9wbGF5ZXJfNzk4Yy5zd2Y%2fc2VydmVyPW55Yy1ydG1wLnBlZ2NlbnRyYWwuY29tJmFjY291bnQ9Y291bmNpbG55YyZ2aWRlboZpbGVuYW1lPU5ZQoMtUFYtQogtQo9NMTUwNjAxLTEwMTgyNy5tcDQ%3d&Mode2=Video,05:29:30,05:08:00>.

Author Commentary

Jonah Hyman

When I began writing the opening paragraphs of this essay, I felt confident in my ability to write a paper for an audience that was already aware of the 7 line extension and convinced of its importance. Of course, I couldn't assume that about my readers, so I essentially had to give them a crash course in New York megaproject planning, without confusing them or testing their patience.

The opening juxtaposition of Bloomberg's ceremonial ride with subsequent delays seemed to convey the emotional significance of the project, while setting the story up as something like a comedy of errors. This portrayal not only helped draw the reader into the argument, but it also introduced a foil for my argument at an early stage: Later in the essay, I argue that the comedy-of-errors storyline is a poor description of delays on the extension and that journalists' focus on "emotionally salient symbols" helped create a distorted perception of delays. Presenting the conventional narrative of the project right from the start gave me enough leverage to begin chipping away at it early in my argument.

As I began to do so, highlighting how the current scholarship "underexplains" the 7 line extension, I became aware of a pacing problem. My readers would only be willing to hear a certain amount of context before my thesis, so I had to carefully select which information to include. Including quotations from other sources was a useful technique because it allowed me to introduce key claims in direct language. For instance, if I unequivocally stated that project planners "should do a better job of anticipating" delays, I would lose some scholarly credibility. Instead, I quote a transit advocate who makes this claim and then follow up with a more qualified statement ("both slow progress and poor forecasting must be considered as part of any megaproject analysis"). This strategy created clearer and more succinct orienting while bringing different voices into my argument.

While revising the essay, I realized that responses to counterarguments needed to be a central part of framing the argument. Much of the argument after the thesis was devoted to countering the established narrative of the 7 line extension; it extensively responded to the skeptical reader who claimed that the delays were random. However, I didn't initially recognize that another skeptical reader could exist—a reader who questions whether megaproject delays matter at all. It seemed obvious to me that megaproject delays were harmful, but I still needed to introduce some evidence to show that repeated delays harmed the MTA's reputation. Because scholar Bent Flyvbjerg addressed this point in an article, I split this evidence into two parts: one statement about the effects of delays appears almost immediately, to keep a skeptical reader interested in the argument, while a fuller discussion logically accompanied my discussion of Flyvbjerg's work. By the time the titular "filtration metaphor" was introduced, the reader should have a solid understanding of what delays in the 7 line extension were and why they mattered.

Fellow Commentary

Ron Martin Wilson

It is instructive that an essay ostensibly about public endeavors in large-scale civil engineering, and how best to describe, to predict, and to mitigate their notorious delays, should have organized itself so visibly around a single poetic device. One could say without exaggeration that Jonah's metaphor of *filtration* itself constitutes the argument's centermost achievement. Admittedly, this might seem like faint praise in an era where literary matters are depreciated (or exoticized) for their perceived frivolity, while disciplines marked (or marketed) as "harder," and thus of greater practical value, are pursued with unreflective intensity on every college campus. All the more welcome, then, is Jonah's essay, "The Filtration Metaphor," which demonstrates *the uses* of poetic imagination quite apart from archliterary purposes. The essay, therefore, is uniquely instructive for students of writing and its pedagogy, the goals of which are akin to, but also increasingly isolated from, the objects and objectives of contemporary literary studies. What Jonah's writing illustrates is how metaphors need not be mere decorative embellishments superadded to otherwise well-formed thoughts. Reading him, we are rather reminded that metaphors often precede, and even *enable*, the scholarly insights without which there would simply be nothing to write.

If "The Filtration Metaphor" is open about its debts to poetic language, the essay also makes plain that this rhetorical figure has a real job to do. No mere ornament, Jonah's metaphor does more than announce or advertise "An Analysis of Delays in New York's 7 Line Extension." Precisely what work the metaphor will do is stated in the essay's declaration of intent, where Jonah writes: "By analyzing the descriptions of and rationalizations for delays on the 7 line extension, this paper proposes a new *model* [emphasis added] to describe megaproject forecasting and communication...." Despite Jonah's shift to the conventional scholarly metaphor of "models," his conceptualization of the 7 line extension and its many logistical vicissitudes is nevertheless still the result of what can only be called a poetic, if also then a scholarly, vision. Witness the following passage. After dismissing the rival explanatory models (and thus also the metaphors that had structured them), Jonah presents "this filtration metaphor" as "a strategy for uncovering the more general shortcomings that underlie specific delays," arguing that

information about the project had to pass through a succession of several institutions; each of these groups acted as part of a filter, downplaying certain details and highlighting others. This complex information-processing system served to distort the causes for delay, ultimately portraying delays caused by a mixture of black-swan events and forecasting errors as solely the result of bad luck.

Jonah's metaphor of *filtration*, as if allowing us to borrow its author's own sight, lets us see the otherwise insensible complex of fluid civil forces in motion around the slow-moving 7 line project. With one well-chosen word, the intangible dynamics of a citywide and years-long "megaproject," from its inauguration to construction to eventual completion, become for us, his readers, as *thinkable* as the smoke we can picture on its way through the cottonlike stuffing of a cigarette butt, and yet as *tangible* as the tap water dripping through our tabletop Brita pitchers. Yet metaphor's strange capability to make real for one's reader such otherwise bodiless abstractions is not what Jonah's essay most eloquently demonstrates.

Even more helpfully for us students of writing, what "The Filtration Metaphor" still more perfectly models is the use of intellectual models itself—which is to say, the intellectual use of metaphors—and yet not as means to express X, so much as a means to see X in the first place: If Jonah's filtration model also makes his writerly expression clearer, it is only because first, mysteriously, this of all metaphors had distilled something about the 7 line extension which until then was visible to no one, perhaps not even to him, despite such frequent and open discussion in the pages of The New York Times.

Works Cited

- “7 Line Extension: Inclined Elevators.” MTA, Metropolitan Transportation Authority, April 28, 2014, <http://web.mta.info/mta/news/books/docs/7Line-Inclined-Elevators.pdf>.
- Arden, Patrick. “Crews begin work on 7 line extension.” *Metro—New York*, February 20, 2009, <http://infoweb.newsbank.com/resources/doc/nb/news/127290F45E11CCB8?p=WORLDNEWS>.
- Atshuler, Alan and David Luberoff. *Mega-Projects: The Changing Politics of Urban Public Investment*. Washington, D.C., Brookings Institution Press, 2003.
- Bagli, Charles V. “East Side, West Side: 7 Line’s Fate Pits City Against State.” *New York Times*, March 19, 2004, <http://nyti.ms/2f7DgP6>.
- Fitzsimmons, Emma. “Leaks at Hudson Yards Station Frustrate M.T.A. Board,” *New York Times*, March 21, 2016, <http://nyti.ms/1XJoTfb>.
- Flegenheimer, Matt. “For a Mayor on His Way Out, a Subway Station on Its Way In.” *New York Times*, December 20, 2013, <http://www.nytimes.com/>.
- . “In Expansion of No. 7 Line, One Problem: An Elevator.” *New York Times*, May 29, 2014, <http://nyti.ms/1jwHply>.
- Flyvbjerg, Bent. “What You Should Know About Megaprojects and Why: An Overview.” *Project Management Journal* 45, no. 2 (2014): 6-19, Business Source Elite, EBSCOhost.
- Flyvbjerg, Bent and Cass R. Sunstein, “The Principle of the Malevolent Hiding Hand; or, the Planning Fallacy Writ Large.” *Social Research* (forthcoming): <https://ssrn.com/abstract=2654423>.
- Halle, David, and Elisabeth Tiso. *New York’s New Edge: Contemporary Art, the High Line, and Urban Megaprojects on the Far West Side*. Chicago: University of Chicago Press, 2014.
- Hirschman, Albert O. “The Principle of the Hiding Hand.” *The Public Interest* 0, no. 6 (1967): <http://search.proquest.com/docview/1298118396?accountid=13314>.
- Kabak, Benjamin. “On the elusive finish line for the 7 line extension.” *Second Avenue Sagas* (blog), June 1, 2014, <http://secondavenuesagas.com/2014/06/01/on-the-elusive-finish-line-for-the-7-line-extension/>.
- Mueller, Benjamin. “Transit Hub and Work on No. 7 Line Face Delays.” *New York Times*, June 23, 2014, <http://nyti.ms/1llhWbb>.
- Neumann, William. “It’s a Deal: \$1.4 Billion to Extend No. 7 Train.” *City Room* (blog), October 24, 2007, <http://cityroom.blogs.nytimes.com/2007/10/24/its-a-deal-14-billion-to-extend-no-7-train/>.
- New York City Council, Committee on Finance, “The New York City Council – Video,” June 1, 2015, <http://legistar.council.nyc.gov/>.

Schweitzer, Lisa and Max Stephenson, Jr., "Planning, Development, and Media: A Case Study of the Woodrow Wilson Bridge." *Journal of Planning Education and Research* 36, no. 2 (2016): doi:10.1177/0739456X15620280.

"Transit and Bus Committee Meeting," MTA, Metropolitan Transportation Authority, January 20, 2014-November 14, 2016.

Bios

Jonah Hyman '20 is a prospective math major who nevertheless spends a lot of time watching plays and reading German literature. Originally from Fayetteville, Arkansas, he joined Princeton's mock trial team this year and did some reporting for the campus radio station, WPRB. In his spare time, he enjoys doing crossword puzzles and watching game shows. This essay relates to his longstanding interest in transportation and was written for his first-year writing seminar.

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