

PRIOR TEMPORAL LOGIC, TIRED

PORT AUTHORITY — “Take the statement ‘I am tired,’ for example. While its meaning does not change, it is sometimes true and sometimes less so, and a person acts differently depending on the extent of tiredness — going to bed versus going on a hike.”

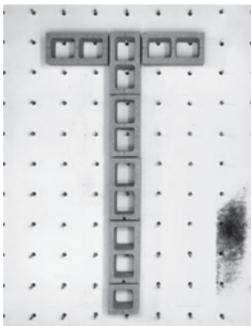
This example of Temporal Logic is borrowed from last Sunday’s *New York Times* obituary of computer scientist / philosopher Amir Pnueli. Temporal Logic is a formal system of logical reasoning used to evaluate statements whose truth changes over time. Dr. Pnueli did not invent this branch of logic, but he was the first to apply it to the operation of computer systems, with his fundamental 1977 paper, “The Temporal Logic of Programs.”

Before Dr. Pnueli, self-taught Oxford professor Arthur Norman Prior rigorously articulated Temporal Logic and gave the subject its name. Of course, the multi-part problem of truth as it varies over time sits at the root of the basic philosophical problems of determinism and free will. However, Prior’s Temporal Logic specifically distills the fundamental concepts of a truth which is negotiated over time into a mathematically rigorous logical language whose formality and abstraction allows it to address an infinitely wide scope of truth claims, and to remain specific in its conclusions.

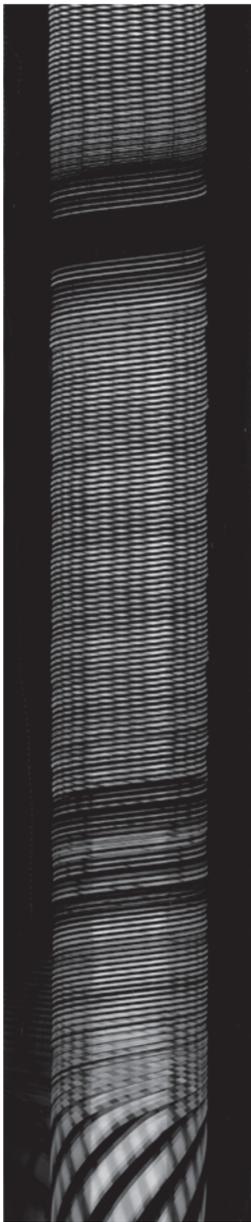
Prior built his temporal logic on the work of nineteenth-century philosopher-mathematician Charles Sanders Peirce. Peirce, who also coined the philosophically-proper term “Pragmatism,” argued for a logic which makes accommodation for the changing truth of a statement over time. As within the wider scope of Pragmatism, Peirce argued that truth must be determined fully contingent on the present situation and that truth is actually produced by this negotiation, or “back and forth with the world.”

When he started teaching logic at Canterbury University and publishing his work, Prior knew only modest mathematics and was almost entirely self-taught in logic. He published his first logic paper at age 38, a remarkably late debut in mathematics where the best thinking is said to be all done by age 28. Prior published his seminal book fully articulating Temporal Logic just two years before his death — *Past, Present, Future* (1967).

The practical value of Prior’s Temporal Logic is being able to speak concretely, precisely, of the past, present, and future at the same time — at the only time that it is ever possible to actually bring an idea into the world — the (continuous) present. I am tired. I have been tired. I will be tired. I have already been tired. I will probably not always be tired. Then, to bed, for now. (DS)



THE FIRST/LAST NEWSPAPER



Gareth Spor’s Dreammachine at 45 rpm as described by HP Scanjet G3110 at 600 dpi. Photograph by Waleed Deshty

REMINGTON LAUNCHES GHOSTWRITER

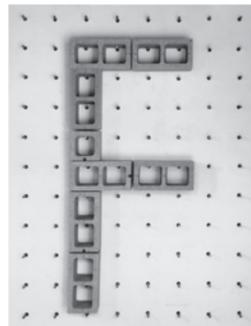
HARTFORD, CT — Shortly after buying his Remington Model 1 typewriter, Mark Twain dashed a letter off to his brother in 1875. In his note, he seems equal parts addled and satisfied with his new purchase:

“I am trying to get the hang of this new fangled writing machine, but am not making a shining success of it. [. . .] I believe it will print faster than I can write. One may lean back in his chair & work it. It piles an awful stack of words on one page. It don’t muss things or scatter ink blots around. Of course it saves paper.”

Knowing they had a notable writer for a customer, Remington’s salespeople contacted Twain to see if he’d vouch publicly for their Remington Model 2, which he’d purchased as soon as it was released. In a typed note of all caps he declined, signing off not as Twain, but with his given name, Samuel Clemens:

“Please do not use my name in any way. Please do not even divulge the fact that I own a machine. I have entirely stopped using the Type-Writer, for the reason that I never could write a letter with it to anybody without receiving a request by return mail that I would not only describe the machine but state what progress I had made in the use of it, etc., etc. I don’t like to write letters, so I don’t want people to know that I own this curiosity breeding little joker. Yours truly, Saml. L. Clemens.”

It’s easy to speculate as to why Twain might’ve signed his note as Clemens. He routinely signed “Sam” to friends and used Clemens both in business and for personal notes. Perhaps he didn’t want his more famous pen name used in any way with Remington’s products, so he refused to even sign it. But it also seems at least a little bit possible that when he wrote as Twain, Clemens felt he had a kind of creative power he did not possess as Clemens alone, but that when he wrote with the Remington it had a kind of power over him, and even over Twain, that made them both uncomfortable, even



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anxious. “Mark Twain” started out not as a given name but as a sailor’s pseudonym. Before that it was a sailor’s call — “mark twain!” — meaning the river’s depth was two fathoms (12 feet) deep, and the boat could navigate its passage safely. When Clemens selected Mark Twain, he selected not only the name of a storyteller but the sign of a technician, who, with this piece of information, could signal the crew that the ship was in control and could be guided safely down its course.

Cybernetics, which is the study of communication and control between humans and machines, takes its name from the Greek “kybernetes,” who is the oarsman, pilot, or rudder: the one who can skillfully bring a boat to port. Clemens’s pseudonym, Twain, was another name for the author himself. But, according to his letters, his typewriter often behaved as an allomym — a ghostwriter. While the pen name Twain helped to put Clemens in control of the writing process, the Remington’s ghostwriter effect contracted that control, placing the invention of text somehow just beyond its operator’s reach, or total understanding.

Like Twain, German philosopher Friedrich Nietzsche’s experience with his Hansen Writing Ball, a typewriter Nietzsche purchased in 1882 directly from its inventor, seemed somehow beyond his control — even supernatural. Living in Genoa with his eyesight failing, Nietzsche hoped the writing ball would make it easier for him to write away from home, but he arrived to find his machine damaged in transit. The Hansen’s already fussy keys only became more difficult in inclement weather. “The typewriter has been unusable since my last card,” Nietzsche wrote, “for the weather is dreary and cloudy, that is, humid; then each time the ribbon is also wet and sticky, so that every key gets stuck, and the writing cannot be seen at all.” The typewriter, which was meant to free Nietzsche from his pen and make it easier for him to write, had left him blocked. No longer in control of his own output, Nietzsche’s productivity would now rise and fall with the barometer. By 1882, he’d pounded out a well-known poem, which reads, “The Writing Ball is a thing like me: of iron / Yet twisted easily — especially on journeys. / Patience and tact must be had in abundance / As well as fine little fingers to use it.” As Professor Friedrich Kittler points out in his study *Gramophone, Film, Typewriter*, in Nietzsche’s poem, “three moments of writing coincide: the equipment, the thing, and the agent. An author, however, does not appear [. . .] Our writing tool not only works on our thoughts, it ‘is a thing like me.’”

Nietzsche would soon give up his typewriter, but he would never dismiss it entirely. In one of his last typewritten letters, he observes, “This machine is delicate as a little dog and causes a lot of trouble — and provides some entertainment. Now all my friends have to do is invent a reading machine: otherwise I will fall behind myself and won’t be able to supply myself with sufficient intellectual nourishment.” Nietzsche feared his own typewriter might outproduce him. Its mechanistic drive to produce text faster than his owner could read it harkens back to the scene that Twain described previously, when he was first entranced by the typewriter in the shop. Fifty-seven words a minute! If only he could write that fast. But recall that the salesgirl who’d impressed Twain had a trick: she always typed the same text, over and over and over again. In Stanley Kubrick’s *The Shining*, in a touchstone image of typewriter-as-ghostwriter, the ceaselessly repeated typescript reappears as Wendy discovers that her husband Jack’s novel isn’t a novel at all. Instead, he has typed “All work and no play makes Jack a dull boy” on sheet after endless sheet. Jack isn’t using his Adler typewriter; the Adler is using him. Realizing her husband has lost his mind, Wendy’s face pales, terrified.

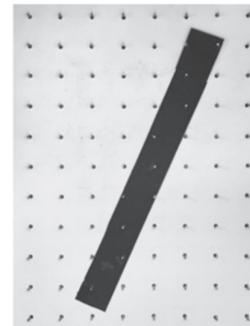
Kubrick’s film is fictional, but cautionary. Kittler, too, tells of a 1941 detective play by Jean Cocteau called *La Machine à écrire* (*The Typewriter*) involving “an unknown woman who has been tormenting her community with anonymous typewritten letters.” Kittler continues, “[the detective] ‘imagines the culprit at work at her typewriter, aiming and operating her machine gun.’ Typewriters are simply ‘fast,’ not just ‘like Jazz’ [. . .] but also like rapid-fire weapons.” When Cocteau’s antiheroine finally confesses, she explains, “I wanted to attack the whole city. [. . .] I wanted to stir that muck, attack and reveal it. It was like a hoax! Without accounting for myself, I chose the dirtiest and cheapest of all weapons, the typewriter.” She terrorizes the city with the stroke of a key.

A vividly real and far more terrifying letter from an anonymous typist was received by *The New York Times* on 26 April 1995. It had been keyed on an old machine later identified as a 1920s-era L.C. Smith-Corona. Enclosed was a lengthy typewritten manifesto that began, “The Industrial Revolution and its consequences have been a disaster for the human race.” *The New York Times* shared the letter with the FBI, who explained that it was from a domestic terrorist known as the Unabomber. The letter demanded that the manifesto be published “in *The New York Times*, *Time* or *Newsweek*, or in some other widely read, nationally distributed periodical,” and, if promised, “if you can get it published according to our requirements we will permanently desist from terrorist activities.” As for the text, its author stipulated that “after six months from the first appearance of the article or book it must become public property, so that anyone can reproduce or publish it.” Also: “because of its length, we suppose it will have to be serialized.”

The Washington Post instead opted to print the text whole as a four-page supplement that September. It would prove to be the Unabomber’s undoing. The following April, authorities raided the one-room cabin of a former UC Berkeley professor named Theodore Kaczynski, whose brother had called in a tip that Kaczynski’s writings reminded him the Unabomber’s. By the time they finished their search, they’d found the smoking gun: amidst firearms, handmade bombs, and various disguises, sitting on a desk littered with carbon copies of the letters and manifesto, was the Smith-Corona. (RG)

But isn’t the act of recording, as well as the record itself, about becoming rather than being? When a newspaper editor in New York asked who was going to write Kaplan’s obituary, a staff writer responded, “Kaplan already did.”

Obituaries are irrevocable, but when the newspaper is the corpse, the cat suddenly has nine hundred lives. The newspaper, our much fussed over pussy, began dying in 1765. These first last words were printed as *The Pennsylvania Journal*, suffering from a terminal British Stamp Act, designed the front page like a tombstone, “EXPIRING: In Hopes



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representative from the New Jersey police / Ten four / Hazmat battalion was unable to reach anyone on the Jersey side / Ten four / First battalion / We are in touch with the New Jersey side / We are going to let everyone off the boat / Hazmat battalion / Ten four / Negative for Jersey authorities / We are letting people off the boat / Battalion one / Hazmat one / Hey Manhattan / Subway near the Atlantic wall / Unknown / They say they have a unit on the scene / ten four / One five one four / Can you call it city wide / City wide one five seven oh / Fire apartment on eddy / Reporting a fire apartment 1A / Battalion two seven / Two seven / We are going to leave it at four two for your response / Forty two we just got a phone call from transit that you were holding up a train, is that correct / We had to momentarily, but it’s long gone / Forty two thank you / Battalion two / One five four nine Manhattan / Ten four / Wheel chair bound occupant needing to get up too / Automatic alarm in a private dwelling / It’s been over for a few minutes already / Ten four / No injury no EMS needed / Ten four / Division one five / Sixteen hundred hours / Construction fire between avenue X and T - Tom / Reporting a fire on the fourth floor / Brooklyn battalion three eight / Four nine seven fire on the fourth floor / Isolated wings floors number A B C D vents on roof / South side exposure / One six oh five dispatching one oh seven / Ten twenty box three nine oh / One six oh six / Dispatching two oh seven / Ten four on way / Standby / One five six / Three eight six / Ten four will notify / One four four / Central alarm company who called this in / One six oh eight dispatch two oh seven / One six oh eight Manhattan / Transformer emergency / Engine one five six / Ten four / Engine one five six / ConEd has been notified they have a crew responding / Recorded fire on a roof of a multiple dwelling / One six one three / EMS Kennedy bridge unknown direction for an auto accident / Calling battalion four nine / One six one five Manhattan / Ten four / One six one seven hours / Apartment four D occupant just arrived home there was a water leak we shut it down / Two six three / Heading into Manhattan reported motor vehicle accident / Let me know if you see anything going in / One six two one five five / Four nine to Manhattan / ten thirty six it’s going to be a code three / Box three one / Smoke coming from a building on the corner / Battalion two two / Ten four / Incident going eastbound / One six three / Ten four / Grand central eastbound / Engine two six three / Battalion four five / Ten four / Bus fire / Engine two eight two / Six nine / Battalion two oh seven / One six two nine oh / Luigi Sono, None (Ninth Hour), November 14 (PE)

Today, the moon shows signs of water. Militants killed 17 outside a courthouse in Peshawar. A British helicopter with a failed sight system shot itself down over Afghanistan. The temperature is forty-seven. The humidity is eighty-nine. (SS)

How Media Masters Reality #6

CORRECT ME IF I’M WRONG

TIVOLI, NY — “Feedback is a method of controlling a system by reinserting into it the results of its past performance,” according to Norbert Wiener.

In this series of six articles, *How Media Masters Reality*, we’ve described the media as a feedback loop that collapses the difference between producer and consumer. As users of email and social networking sites or as participants in non-scripted TV shows we work to provide content for formats that are owned by somebody else. At the base of this media ecosystem we generate and trade information, and as we create it — lots of friends on Facebook, lots of photos on Flickr, a massive list of email addresses — we use it to heighten our visibility and increase our value as self-performing commodities. Although celebrities float at the top of the information economy’s celestial canopy, they are constituted as media subjects by the same stuff as you and me — bits of information feeding back through the system.

Although scripted forms of entertainment remain dominant, non-scripted TV is gaining ground during primetime. This is partly because non-scripted TV is simply cheap to produce, but also because it constructs a narrative about TV production that the medium feeds back into itself. In this new narrative, you the viewer are the central character and, if you work hard enough, you get a speaking part. And why fill the screen with above-board Colgate-clean actors when the screen time can be filled with someone more or less like you and me?

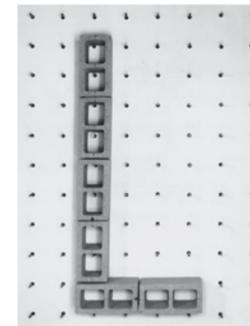
The non-scripted TV show doesn’t only give us the opportunity to perform, it also provides us with the means to assess, test, and judge people more or less like ourselves — and to be assessed, tested, and judged by people more or less like ourselves. The feedback between watching and doing constitutes a pan-media surveillance system in which we police ourselves, and in which we translate the duties and obligations that are thrust upon us to be always “on,” to be conspicuously visible, to be incredibly busy, to acquiesce to the judgement of our peers) into choices . . . into freedom. So “freedom of information” translates into us all giving things away for free — our talents as performers, as producers, as content providers.

It’s easy to forget how old the idea of the audience as commodity is. We should have seen it coming. In 1975, the same year that Ant Farm mounted their spectacular anti-media offensive, B. Livant wrote: “Virtually everyone is organized into the complex tapestry of these audiences, whose underlying priorities we are just beginning to understand. For one thing, the production, destruction, division, and recombination of audiences is a vast and turbulent motion. For another, the Audience Commodity is a multipurpose capacity. It is the other side of labor power that Marx discovered in the production of commodities-in-general, and it is Protean in its capacities. The first great form of the organization of this commodity [is] the Audience Commodity as a market. This form emerged first historically and with the greatest clarity in the United States . . . This form is the first, but not the last.”

Although the grandiloquence of this text speaks of a bygone time, it nevertheless proposes an understanding of media which classic Marxist media critique failed to fully recognize. Dallas W. Smythe takes up the story, pointing out that the only time we’re not productive is when we’re asleep, because our waking time is itself sold as a commodity to advertisers. Audience production is the material connection between advertisers and content providers — audiences are as much commodities as TV sets and cars. The difference is that you can’t sell a car to a TV set but you can sell the audience to an audience.

The end product of the media machine, therefore, is not the passive consumer living in a relationship of “bad faith” with the products they consume, because in the post-mass media world there is no endpoint, as the producer-consumer feeds back production in the form of content in the form of participation. The spectacle doesn’t alienate us from the real and make us passive; it unthinkingly seeks to involve us, requiring us to test ourselves, measure ourselves, retain visibility as a self-performing commodity. This excitation is fed back through the system and comes out as the narrative of the hard-working, self-reliant, independent, efficient, networked individual.

For optimists, the shift to self-performance — the demand to be as visible as possible — affords new opportunities for freedom, as new technological devices give access to more information and to new modes of social interaction. In this reading, we are caught in a virtuous feedback loop in which desire can be expressed and fulfilled, and in which technology will ultimately take care of the inequalities in the world. But we’ve heard all this before. Every technological innovation comes with the promise of greater personal freedom and social equality. The chemical technology of drugs turned the hip-



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pies on to a communal future that ended in ruins. The technologies of community radio stations and video collectives sporting Portapaks and satellite dishes promised a future where, once again, technology would help to build a cozy global village. And the dream was revived yet again when Howard Rheingold announced the “virtual community,” a new “Jeffersonian democracy” of cybernetic free expression.

So we come to the stage where, to be part of the virtual community, we are entreated at every turn to have our say. But who wants to listen to my opinion on Britney’s mental stability, Kirstie’s waistline, Barack’s Middle East strategy . . . and you know what I think of global warming? I hate it!

Anyone who would value my ill-informed opinion on these matters already understands knowledge to be radically provisional. If the crop circle maker and the flat earther fight with the Pulitzer Prize winner for my attention — and I am called on to evaluate all three — what kind of hierarchy of knowledge production are we dealing with? The “have your say” principle represents the uncoupling of democracy from democratic institutions. It floats freely in a bubble of self-legitimation.

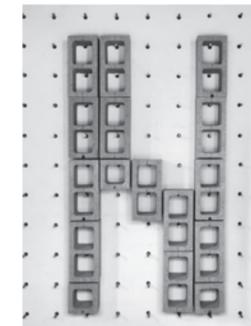
Throughout the twentieth century, “public opinion” was regarded as something to be feared, but it was also understood as something that could be fashioned. The public could be educated in regimes of self-improvement and self-maintenance. The rise of social policies such as the Welfare State and the New Deal corresponded with the rise of the public information documentary, in which knowledge was mediated by the expert — the man (always a man) in the white coat. Knowledge was “democratizing” on both sides of the Atlantic, but people had to learn how to learn. As Otto Neurath, the pioneer of public education, put it in the 1933: “We consider our selves the executive agent of the spectators. In order to do this it is necessary to simplify and eliminate things, he who makes the better choice will be the better pedagogue.” Everything from education to inoculation was championed. In the U.S., the role of information provision was soon taken over by major corporations, and as the Cold War got hotter, the same techniques were applied to civil defense media.

As far as factual, instructive documentary is concerned, our current position is ambiguous. While these days we reflexively tend to suspect some form of “propaganda” at play, we’re also comforted by the worldview presented by such as the Discovery Channel and National Geographic. There’s nothing as reassuring as a matter of fact clearly conveyed.

Perhaps these six installments of *How Media Masters Reality* have painted a bleak picture of us as lab rats in our own experiment — or maybe something like a post-mass media Hieronymus Bosch painting in which the damned labor on the eternal work of being watched. But once we gain knowledge of how media masters reality, we might begin to work out ways of finding our freedom within it.

French philosopher Michel Foucault was once asked: If we are socially constructed, is conscious change possible? Foucault turned the question on its head. We actually don’t realize how free we are, there are more freedoms than the horizon of the humanist tradition can show us, and the one thing we can learn from the development of human thought is that change is inevitable.

How Media Masters Reality was informed by many sources, including: Mark Andrejevic, *Reality TV: The Work of Being Watched*; Richard Barbrook & Andy Cameron, *The California Ideology*; Jack Z. Bratich, *Conspiracy Panics, Political Rationality and Popular Culture*; Stella Bruzzi, *New Documentary: A Critical Introduction*; John Corner, *Performing the Real: Documentary Diversions (with Afterword)*; Daniel Dayan & Elihu Katz, *Media Events: The Live Broadcasting of History*; Gilles Deleuze, *Postscript on Control Societies*; Rod Dickinson & Steve Rushton, *Who, What, Where, When, Why & How*; Michel Foucault, *Psychiatric Power: Lectures at the Collège de France 1973-1974 and Technologies of the Self*; Peter Gailson, *The Ontology of the Enemy*; Norbert Wiener and the *Cybernetic Vision*; Patricia Hayes, *My Mother Was a Computer and How We Became Postmodern*; Alison Hersh, *Hoaxing the Real*; David Josselit, *Feedback: Television Against Democracy*; Constance M. Lewallen & Steve Said, *Ant Farm 1968-1978*; Sven Lütticken, *An Arena in Which to Re-act*; Ted Magder, *Television 2.0: The Business of American Television in Transition*; Rux Martin, *Truth, Power, Self*; Michael Massing, *A New Horizon for the News and The News About the Internet*, No 14 and 15, volume 1.1, NYRB; Anna McCarthy, *Stanley Milgram, Allen Funt & Me*; Patricia Mellenkamp, *Video Politics: Guerrilla TV, Ant Farm, Eternal Frame*; Laurie Ouellette, *Take Responsibility for Yourself!*; Judge Judy and the *Neo-liberal Citizen*; Susan Murry & Laurie Ouellette (eds.), *Reality TV: Remaking Television Culture*; Mark Poster, *The Mode of Information: Poststructuralism and Social Context*; Felicity D. Scott, *Living Archive 7: Ant Farm: Allegorical Time Warp: The Media Fallout of July 21, 1969*; Richard



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CHICAGO — If you’ve read newspapers regularly for the past two decades, probably you encountered higher mathematics once: when Andrew Wiles proved Fermat’s Last Theorem in 1994. Maybe you paid enough attention to notice when the Poincaré Conjecture was confirmed in 2006. If you haven’t encountered anything else on math, it’s not your fault — zero divided by anything is still zero. Why isn’t there a popular-pressure coverage of mathematics?

BECAUSE IT’S TOO OBSCURE. An unspoken premise here is that the press doesn’t cover obscure things. Take as a simple counterexample the *New York Times* article of October 29 titled “7.3 Billion Light-Years Later, Einstein’s Theory Prevails,” which included this sentence: “Some theorists have suggested that space on very small scales has a granular structure that would speed some light waves faster than others — in short, that relativity could break down on the smallest scales.”

BECAUSE IT’S TOO DIFFICULT. Difficult things make the paper every day: education reform, complex political scandals, explaining the financial crash, and, as was already mentioned, science. It’s the job of the journalist to simplify complicated topics by prioritizing the information she collects and finding clear ways to express it. In journalism, the reader need not understand everything about the topic on a visceral level — hard-news stories are written so that a reader who quits reading in the middle will still have hit the main point. Readers of news first learn the main outline and why it’s important, then fill in broad strokes, then smaller details. There’s no *a priori* reason why math can’t be presented in this model.

BECAUSE IT’S TOO BORING. Boring is in the eye of the beholder. Scores of readers never open the sports section. Rafts of them never read travel. Masses won’t touch religion.

BECAUSE IT DOESN’T TALK ABOUT THE REAL WORLD. Math’s real-world applications are no farther ahead than science-park darlings like cosmology and string theory.

BECAUSE IT TAKES TOO LONG TO EXPLAIN ANYTHING. The article-lengthening terminology gap exists in writing about other specialized disciplines. When the Large Hadron Collider opened on the Swiss-French border, articles defined the still-theoretical Higgs boson as “a subatomic particle that would give matter mass.” Math terms can be explained, too, at least inasmuch as a casual reader needs to understand them.

BECAUSE IT’S TOO RIGOROUS. Now we’re getting somewhere. Math people are probably already spluttering that casual readers won’t really get it if simplistic explanations present just the broad strokes of their work. Here’s the central conflict: *Really getting it isn’t the point of journalism*. Math is about rigor. A mathematical statement enters the body of knowledge when it is proved. Journalism is about importance. A story is successful when it imparts the most important pieces of information with the greatest concision.

Science doesn’t pose this conflict. The minimization of unavoidable error and weighing of the statistical significance of correlation coefficients don’t come from the world of 100 percent certainty. Philosophy suffers as math does — if you can name a philosophy publication other than *On Bullshit* from the past 20 years, gold star.

BECAUSE PEOPLE DON’T LIKE IT. People don’t like it because they can’t wrap their minds around it. They can’t wrap their minds around it because no one presents it accessibly. No one presents it accessibly because people don’t like it. That’s really the essence of it, but goeters would call that argument circular. (GM)

Serra, *Television Delivers People*; Michael Shamburg, *Guerrilla Television*; Dallas W. Smythe, *On the Audience Commodity*; Ted Turner, *From Counterculture to Cyberculture*; Norbert Wiener, *Cybernetics: or, Control and Communication in the Animal and Machine* and *God and Golem, Inc.*



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BECAUSE IT’S TOO DIFFICULT. Difficult things make the paper every day: education reform, complex political scandals, explaining the financial crash, and, as was already mentioned, science. It’s the job of the journalist to simplify complicated topics by prioritizing the information she collects and finding clear ways to express it. In journalism, the reader need not understand everything about the topic on a visceral level — hard-news stories are written so that a reader who quits reading in the middle will still have hit the main point. Readers of news first learn the main outline and why it’s important, then fill in broad strokes, then smaller details. There’s no *a priori* reason why math can’t be presented in this model.

BECAUSE IT’S TOO BORING. Boring is in the eye of the beholder. Scores of readers never open the sports section. Rafts of them never read travel. Masses won’t touch religion.

BECAUSE IT DOESN’T TALK ABOUT THE REAL WORLD. Math’s real-world applications are no farther ahead than science-park darlings like cosmology and string theory.

BECAUSE IT TAKES TOO LONG TO EXPLAIN ANYTHING. The article-lengthening terminology gap exists in writing about other specialized disciplines. When the Large Hadron Collider opened on the Swiss-French border, articles defined the still-theoretical Higgs boson as “a subatomic particle that would give matter mass.” Math terms can be explained, too, at least inasmuch as a casual reader needs to understand them.

BECAUSE IT’S TOO RIGOROUS. Now we’re getting somewhere. Math people are probably already spluttering that casual readers won’t really get it if simplistic explanations present just the broad strokes of their work. Here’s the central conflict: *Really getting it isn’t the point of journalism*. Math is about rigor. A mathematical statement enters the body of knowledge when it is proved. Journalism is about importance. A story is successful when it imparts the most important pieces of information with the greatest concision.

Science doesn’t pose this conflict. The minimization of unavoidable error and weighing of the statistical significance of correlation coefficients don’t come from the world of 100 percent certainty. Philosophy suffers as math does — if you can name a philosophy publication other than *On Bullshit* from the past 20 years, gold star.

BECAUSE PEOPLE DON’T LIKE IT. People don’t like it because they can’t wrap their minds around it. They can’t wrap their minds around it because no one presents it accessibly. No one presents it accessibly because people don’t like it. That’s really the essence of it, but goeters would call that argument circular. (GM)

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