# Technology, Hyperbole, and Irony

Alan G. Gross *university of minnesota- twin cities*

Recommended Citation

# Technology, Hyperbole, and Irony

*Alan G. Gross*

> *University of Minnesota- Twin Cities*
> *Minneapolis, MN*

**Abstract:** Except for metaphor, tropes are arguably irrelevant to the analysis of science and technology. Among tropes, moreover, hyperbole and irony seem particularly ill-suited as the former exaggerates, while the latter undermines, two strategies at odds with a language intent on closely following the contours of the world of experience. While neither hyperbole nor irony has a place in the professional discourses of science and technology, both play a role, hitherto unnoticed, in their popular representations, expressing our complex relationship with the technology that surrounds us. Hyperbole expresses our sense that these achievements exemplify the sublime, a form of experience applied at first to feelings of awe generated by great literature, then in succession to natural wonders like the Grand Canyon, triumphs of science like Newtonian physics, and triumphs of technology like the Large Hadron Collider along with the computers that mediate the relationships between the Collider and its scientists and technicians. The Collider and its computer-mediated communication are unalloyed technological triumphs worthy of hyperbole. They also contain and direct computer mediation wholly within our control and wholly supportive of our empowerment. Nonetheless, some of the alterations in social life the computer mediates--relationships between us and our fellows-- are open to skeptical debate: to a growing sense of disempowerment, of a reduction in social capital and cohesion as a consequence of a digital revolution that is becoming more and more *out* of our control. Irony is this skepticism's vehicle.

**Keywords:** hyperbole, irony, the sublime, technology, computer-mediated communication

## Technology and Hyperbole

In 2008 a rap video by Kate McAlpine went viral. Not your typical rap video, it takes place in the tunnel of the Large Hadron Collider and on the grounds one hundred feet above. During the performance, the computer-generated voice of Stephen Hawking

chimes in as part of a periodic call and response. Throughout, the lyrics are replete with technical terms like "protons," "lead ions," "antimatter," "black holes," "dark matter," "Higgs boson," "Standard Model," "graviton," "top quark," and acronyms like "ALICE," "ATLAS," and "CMS." Here is the central refrain, laden with hyperbole:

> The LHC accelerates
> the protons and the lead,
> and the things that it discovers
> will rock you in the head.
>
> The Higgs boson, that's the one
> that everybody talks about,
> and it's the one sure thing
> that this machine will sort out.
>
> (McAlpine, 2008).

McAlpine's was a prophecy that proved on target. In 2016, Francois Englert and Peter Higgs won the Nobel Prize in physics for a conjecture that they had made over a half-century earlier, a mathematically-driven leap of faith that became a scientific fact when the Higgs boson was detected—a hitherto mysterious but absolutely central member of the particle zoo. It was a discovery that confirmed the otherwise highly confirmed Standard Model, the explanatory centerpiece of the quantum world. At five billion dollars, the detector of the Higgs, the Large Hadron Collider, is the most expensive scientific apparatus ever built. It is a Mt. Everest of machines, and the apotheosis of the technological sublime, a form of experience whose origin is a work of literary criticism, Longinus's *On the Sublime*. Longinus observes that sublimity in poetry or prose "consists in a consummate excellence and distinction of language." Such works, he writes, do not "persuade the audience but . . . transport them out of themselves," by drawing their attention away "from reasoning to the enthralling effect of the imagination" (Longinus, 1995, 163; 225). These works lift their readers "near the mighty mind of God" (Longinus, 1995, 277). Heights of literary expression like this are achieved in Homer's *Iliad*. Take this episode translated by Pope—Pope at his iambic best—an episode in which the gods intervene in the battle for Troy:

> The mountain shook, the rapid streams stood still:
> Above, the sire of gods his thunder rolls,
> And peals on peals redoubled rend the poles.
> Beneath, stern Neptune shakes the solid ground;

> The forests wave, the mountains nod around;
> Through all their summits tremble Ida's woods,
> And from their sources boil her hundred floods.
> Troy's turrets totter on the rocking plain;
> And the toss'd navies beat the heaving main.
> Deep in the dismal regions of the dead,
> Th' infernal monarch rear'd his horrid head,
> Leap'd from his throne, lest Neptune's arm should lay
> His dark dominions open to the day,
> And pour in light on Pluto's drear abodes,
> Abhorr'd by men, and dreadful ev'n to gods
> (Homer, 1887, 433).

In this passage, Homer's lofty language is combined with a conceptual grandeur: "The earth," Longinus asserts, "is split to its foundations, hell itself laid bare, the whole universe sundered and turned upside down; and meanwhile everything, heaven and hell, mortal and immoral alike, shares in the conflict and dangers of that battle" (Longinus, 1995, 147).

Although turned into English as early as 1652, it is not until 1704, in John Dennis's *The Grounds of Criticism in Poetry,* that *On The Sublime* finds its way into English literary criticism. Dennis defines the sublime as "nothing else but a great thought, or great thoughts moving the soul from its ordinary situation by the enthusiasm that naturally attends them" (Ashfield and de Bolla, 1996, 37):

> For the spirits being set in a violent emotion, and the imagination being fired by that agitation; and the brain being deeply penetrated by those impressions, the very objects themselves are set as it were before us, and consequently we are sensible of the same passion that we should feel from the things themselves. For the warmer the imagination is, the less able we are to reflect, and consequently the things are the more present to us of which we draw the images; and therefore where the imagination is so inflamed as to render the soul utterly incapable of reflecting, there is no difference between the images and the things themselves (Ashfield and de Bolla, 1996, 39).

It is in Addison and Steele's *Spectator* that we first come upon the natural sublime. It is impossible to overestimate the importance and popularity of this periodical. Addison's estimate of 60,000 readers is not an exaggeration (Cowan, 2004).  Trivial today, this figure represents ten per cent of the population of 18th century

London, the equivalent of a YouTube video gone viral (Wrigley, 1967). Moreover, the 18th century saw an astonishing fifteen editions or reprints of the collected essays. There were also translations into French and German. Other works promoting the natural sublime were also popular: Hugh Blair and Lord Kames went into seven editions and Edmund Burke into six. Burke was translated into French and into German. In the last decade of the century, Lord Kames was translated into German and reprinted in America. The natural sublime was on a roll.

What is the natural sublime? To Addison, "When we look on such hideous objects [as a precipice at a distance], we are not a little pleased to think we are in no danger of them. We consider them, at the same time, as dreadful and harmless; so that the more frightful appearance they make, the greater is the pleasure we receive from the sense of our own safety" (Addison, 1898, 6, 109). So long as we are safe, a storm fills us with an "agreeable horror" (Addison, 1898, 7, 75-76). Burke deepens Addison's analysis. He feels that pain and terror are the only sources of the sublime, pain and terror transformed—pain not painful and terror not terrifying— and both evoking a positive emotion akin to pleasure. Burke calls it delight*:*

> If the pain and terror are so modified as not to be actually noxious; If the pain is not carried to violence, and the terror is not conversant about the present destruction of the person, as these emotions clear the parts, whether fine or gross, of a dangerous and troublesome encumbrance, they are capable of producing delight; not pleasure, but a sort of delightful horror, a sort of tranquility tinged with terror; which, as it belongs to self-preservation, is one of the strongest of all the passions. Its object is the sublime. Its highest degree I call astonishment; the subordinate degrees are awe, reverence, and respect, which, by the very etymology of the words, show from what source they are derived, and how they stand distinguished from positive pleasure (Burke, 1889, 10).

To Burke, astonishment is a psychological state in which the mind is so filled with a sublime object that it can, while the experience lasts, entertain no other thought or image. The eruption of Vesuvius or a stormy coast in Brittany possess "the great power of the sublime, that, far from being produced by them, it anticipates our reasonings, and hurries us on by an irresistible force" (Burke, 1889, 40).

On the continent, Immanuel Kant synthesizes, analyzes, and deepens even more the idea of the natural sublime. For Kant, the sublime is an effect of the vastness and the power of nature. It is through its vastness that we experience the first category of the sublime, the mathematical. The immensity of the cosmos overwhelms us; it exceeds the capacity of our imagination. Despite our best efforts, we fail to grasp what our reason tells us must be the case:

> A tree that we estimate by a man's height will do as a standard for [estimating the height of] a mountain. If the mountain were to be about a mile high, it can serve as the unity for the number that expresses the earth's diameter and so make that diameter intuitable. The earth's diameter can serve similarly for estimating the planetary system familiar to us, and that [in turn] for estimating the Milky Way system. And the immense multitude of such Milky Way systems, called nebulous stars, which presumably form another such system among themselves, do not lead us to expect any boundaries here. Now when we judge such an immense whole aesthetically, the sublime lies not so much in the magnitude of the number as in the fact that, the farther we progress, the larger are the unities we reach. This is partly due to the systematic division in the structure of the world edifice; for this division always presents to us whatever is large in nature as being small in turn, though what it actually presents to us is our imagination, in all its boundlessness, and along with it nature as vanishing[ly small], in contrast to the ideas of reason, if the imagination is to provide an exhibition adequate to them (Kant, 1987, SS26).

In Kant's second category, the dynamic sublime, our imagination is overwhelmed by nature's power:

> Bold, overhanging, and, as it were, threatening rocks, thunderclouds piling up in the sky, and moving about accompanied by lightning and thunderclaps, volcanoes with all their destructive power, hurricanes with all the devastation they leave, the boundless ocean heaved up, the high waterfall of a mighty river, and so on. Compared to the might of any of these, our ability to resist becomes an insignificant trifle" (Kant, 1987, SS28).

It is a power that, if we are to experience it as sublime, must not have any actual power over us, lest we feel, not pleasurable agitation, but real fear.

Because the sublime first manifests itself as "violent to our imagination" (Kant, 1987, SS23), our moral sense must transform it into something more manageable. By placing us in contact with the Deity, this sense transcends any inadequacy we may feel in consequence of the sublime's emotional buffeting. It is our insight into the kinship between sublimity and Deity that is a source of the pleasure we experience:

> Hence sublimity is contained not in any thing of nature, but only in our mind, in so far as we can become conscious of our superiority to nature within us, and thereby also to nature outside us (as far as it influences us). Whatever arouses this feeling within us, and this includes the *might* of nature that challenges our forces, is then (although improperly) called sublime. And it is only by presupposing this idea within us, and by referring to it, that we arrive at the idea of the sublimity of that being who arouses deep respect in us, not just by his might, as demonstrated in nature, but even more by the ability, with which we have been endowed, to judge nature without fear and to think of our vocation as being sublimely above nature (Kant, 1987, SS28).

This experience must be free from any inference concerning the character of the natural objects and events we view:

> When we call the sight of the starry sky *sublime*, we must not base our judgment upon any concepts of worlds inhabited by rational beings, and then [conceive of] bright dots that we see occupying the space above us as being these worlds' suns, moved in orbits prescribed for them with great purposiveness; but we must base our judgment regarding it merely on how we see it, as a vast vault encompassing everything, and merely under this presentation may we posit the sublimity that a pure aesthetic judgment attributes to this object" (Kant, 1987, SS29).

For Kant, there is no category reserved for the scientific sublime.

It is not to Kant but to the British and Scottish schools, and especially to Adam Smith, that we owe the extension of the sublime from nature and art to science. It is Smith who provides us with the first satisfactory analysis of the psychology of the scientific sublime.

To him, a path to the sublime opens when a spectacular natural event—an eclipse of the sun for example—captures our attention and causes:

> the imagination and memory [to] exert themselves to no purpose, and in vain look around all their classes of ideas in order to find one under which it may be arranged. They fluctuate to no purpose from thought to thought, and we remain still uncertain and undetermined where to place it, or what to think of it. It is this fluctuation and vain recollection, together with the emotion or movement of the spirits that they excite, which constitute the sentiment properly called *Wonder*, and which occasions that staring, and sometimes that rolling of the eyes, that suspension of the breath, and that swelling of the heart, which we may all observe, both in ourselves and others, when wondering at some new object, and which are the natural symptoms of uncertain and undetermined thought. What sort of a thing can that be? What is that like? are the questions which, upon such an occasion, we are all naturally disposed to ask (Smith, 1982, 39).

It is in Newton's *Principia*, according to Smith, that this wonder culminates:

> Can we wonder then, that it should have gained the general and complete approbation of mankind, and that it should now be considered, not as an attempt to connect in the imagination the phenomena of the Heavens, but as the greatest discovery that ever was made by man, the discovery of an immense chain of the most important and sublime truths, all closely connected together, by one capital fact, [gravity], of the reality of which we have daily experience (Smith, 1982, 105).

C. P. Snow gives us a more contemporary example—the second law of thermodynamics, the principle that all closed systems eventually run down: "It has its own somber beauty; like all major scientific laws, it evokes reverence" (Snow, 1998, 72).

The 19th century ushers in the technological sublime.  To historian David Nye, we experience this sublime when we meet a startling man-made object like the Hoover Dam, an encounter that "disrupts ordinary perception and astonishes the senses, forcing the observer to grapple mentally with its immensity and power" (Nye, 1994, 15).  Nye's examples are drawn from American technology: the transcontinental railroad, the Erie Canal, atomic bomb, the

Apollo spacecraft, and the Brooklyn Bridge. Of the Brooklyn Bridge, Nye notes the many artistic renderings of its "monumental stone piers and ethereal spun-steel cables" and quotes one of the most famous painters of this sublime architecture, Joseph Stella: "Many nights… I stood on the bridge… I felt deeply moved, as if on the threshold of a new religion or in the presence of a new DIVINITY" (Nye, 1994, 85). To Nye:

> The sublime taps into fundamental hopes and fears. It is not a social residue, created by economic and political forces, though both can inflect its meaning. Rather, it is an essentially religious feeling, aroused by the confrontation with impressive objects, such as Niagara Falls, the Grand Canyon, the New York skyline, the Golden Gate Bridge, or the earth-shaking launch of a space shuttle. The technological sublime is an integral part of contemporary consciousness, and its emergence and exfoliation into several distinct forms during the past [three] centuries is inscribed within public life. In a physical world that is increasingly desacralized, the sublime represents a way to reinvest the landscape and the works of men with transcendental significance (Nye, 1994, xiii).

## *The Large Hadron Collider*

To describe the Large Hadron Collider, an apotheosis of the technological sublime, theoretical physicist and popular science writer Lisa Randall employs the vocabulary of hyperbole. Of her first visit, she says: "I was surprised at the sense of awe it inspired—this in spite of my having visited particle colliders and detectors many times before. Its scale was simply different. …The complexity, coherence, and magnitude, as well as the crisscrossing lines and colors, are hard to convey in words. The impression is awe inspiring" (Randall, 2006, 127-28). The LHC is "the most important experimental machine for particle physicists" (Randall, 2006, 143). Concerning its properties, there is no need to exaggerate: description is hyperbole enough. The LHC has a long list of arresting characteristics. The first is the triumph over time. The Collider will be able to simulate events that occurred in the "first trillionth of a millisecond after the Big Bang" (Randall, 2006, 129). The second is the triumph over space, the investigation of the tiniest components of the universe: "incredibly small sizes—on the order of a tenth of a thousandth of a trillionth of a millimeter . . . a factor of ten smaller in size than anything any experiment has ever looked at before" (Randall, 2006, 218). Other superlatives concern

energy: "up to seven times the energy of the highest existing collider"; temperature: "even colder than outer space"; magnetic field: "100,000 times stronger than the Earth's"; and cost: "the most expensive machine ever built" ($5 billion, with operating costs of one billion a year). At $350 million in today's dollars the Brooklyn Bridge was a bargain.

The story of the Higgs discovery is told in the documentary film, *Particle Fever,* the joint effort of director Mark Levinson, who holds a Ph.D. in physics, and Walter Murch, the winner of two Oscars as a film editor. A masterpiece of editing, *Particle Fever* begins with cows munching grass in a Swiss meadow just outside Geneva. In the near distance, in the midst of this bucolic tranquility, we see CERN, the *Conseil Européen pour la Recherche Nucléaire,* the location of the Large Hadron Collider, a machine in a garden, in the incisive formulation of Lewis Mumford. We see experimental physics post-doc Monica Dunford on her way to the Collider, cycling past Route Marie Curie and Route R. Feynman. She is an instant starlet who characterizes the Collider in such hyperbole as "a five-story Swiss watch," one that will when the Higgs experiment is carried out create a child's sense of excitement at a forthcoming birthday party where "there's goin' to be cake."

Upon their collision in the Large Hadron Collider, protons convert into other forms of matter or into energy. In computer-mediated conversation with the Collider, scientists monitor the decay products from which the existence of the Higgs boson, the signature of the Higgs field, is inferred. The result turns out to be ambiguous; it points in no definite theoretical direction. While the discovery supports the Standard Model, the new particle is too light to point definitively in the direction of a multiverse, a theory in which our universe is one of many, perhaps even infinitely many, and a too heavy to point into the direction of super-symmetry, an upgrade of the Standard Model. Still, there is little doubt that this discovery is the capstone of the

> extraordinary era in which we live. It is altogether new. The world has seen nothing like it before. I will not pretend, no one can pretend, to discern the end; but everybody knows that the age is remarkable for scientific research into the heavens, the earth, and what it beneath the earth… The ancients saw nothing like it. The moderns have seen nothing like it till the present generation.

It is not Peter Higgs speaking or Monica Dunford or Lisa Randall. It is Daniel Webster; the date is August 28, 1847, the day the Northern Railroad opened (Marx, 1964, 214).

## Technology and Irony

Dan Sperber and Deirdre Wilson interpret "all examples of irony . . . as echoic mentions," that is, words not employed in one of their ordinary senses, but instead singled out for interpretation (Sperber and Wilson, 1991, 558). Sperber and Wilson have a second criterion: their "analysis of irony as a case of echoic mention crucially involves the evocation of an attitude—that of the speaker to the proposition mentioned," an attitude that is always negative (Sperber and Wilson, 1991, 562). Alan Partington, another theorist, propounds a bi-sociative theory in which the ironist tells two stories at the same time, one straightforward, the other, skeptical of the first, an epistemological Möbius strip (Partington, 2007). It is an irony that is not always, but almost always negative. An exchange from *Pride and Prejudice* between Mr. Darcy and Elizabeth Bennett conforms to both these theories:

> "You take an eager interest in that gentleman's concerns," said Darcy in a less tranquil tone, and with a heightened color.

> "Who that knows what his misfortunes have been, can help feeling an interest in him?"

> "His misfortunes," repeated Darcy contemptuously, "yes, his misfortunes have been great indeed" (Austen, 1813, 198).

There are two Partington stories here. Elizabeth's naïve fiction and Darcy's devastating fact, his knowledge of Wickham's turpitude. Echo theory also explains the irony: Darcy's "his misfortunes" is clearly an echo, whose irony is signaled by the adverb "contemptuously" and the intensive "indeed." The novel's title is right on target. Elizabeth's prejudice—and her pride in her mistaken judgment of Wickham and Darcy's character—are evident. Darcy's pride and prejudice are also evident in his contempt for Elizabeth's opinion, his lack of understanding and sympathy for her sincere though misplaced compassion. Over the course of the novel, their pride and prejudice will entrap both in a complex reticulation of ironies that conforms to Quintilian's observation: while the trope irony applies to isolated instances, its figure applies to whole paragraphs, even to whole works (Quintillian, 95 C. E., 9.2.44-46).

How does figural irony manifest itself in popular discourse on the technological sublime? In the popular science writer James Gleick's essay, "Multiple Personality Disorder," figural irony is triggered by a coordinated set of departures from standard prose, not in themselves necessarily ironic (Glieck, 1999). These expressions are italicized:

> Rob Kling, professor of information science at Indiana University introduced a special issue of the journal Information Society this summer with a canonical version of anonymity's "*double-edged*" character: on the one hand, a fanatic signing e-mail as Asian Hater spreads fear at the University of California by threatening to hunt down and kill fellow students; on the other hand, human rights activists use anonymous.com to protect Kosovars trying to send out reports on the Balkan war.

> We understand the dilemma. On the one hand, freedom from persecution and embarrassment, on the other, a mask for criminal and antisocial behavior. *On the one hand, the Lone Ranger; on the other hand, the Ku Klux Klan.* On the one hand, hoaxes, libel, and fraud. On the other hand... *free speech*?

> But free speech never used to mean *nameless* speech. It has not, until now, entailed the power to broadcast anonymously to millions of listeners. Creating protection for unpopular expression was important, and expensive, precisely because everyone knew who those unpopular speakers were. *In the ancient small world we know from history books and black-and-white movies*—when people stayed in more or less the same place and encountered pretty much the same *dramatis personae* year after year—a person's name mattered. If someone's character was tarred or besmirched, the damage wasn't easily undone. Reputation stayed with you (Glieck, 2002, 253).

A network of tropical ironies inhabits these paragraphs, ironies indicated variously by quotation marks ("double-edged" is *not* a quotation), ellipsis, italics, and a question mark. The phrase "free speech" is introduced by ellipsis indicating hesitation; its ironic twist is created by the question mark and by its later echo, "nameless speech."

Tropic ironies inhabit but do not constitute the net. Framing this passage is a contrast between the world before and after

computer-mediated communication, a contrast created by a series of references that turn a relatively recent into an apparently ancient past, its people reduced from real to fictional, to "dramatis personae." While this contrast between worlds is not in itself ironic, it is evoked with ironic intent. It is this contrast that gives the last sentence an ironic twist: computer-mediated communication has undermined trust, the keystone in the social fabric whose chief vehicle is face-to-face communication.

Opinion is divided as to the justice of this skepticism. Writing in 2000, before the impact of the computer-mediated communication could be reliably assessed, Robert Putnam amply documents the diminution of social capital:

> Over the last three decades a variety of social, economic, and technological changes have rendered obsolete a significant stock of America's social capital. … Our growing social-capital deficit threatens educational performance, safe neighborhoods, equitable tax collection, democratic responsiveness, everyday honesty, and even our health and happiness" (Putnam, 2000, 367).

Steeply down are such activities as card-playing, entertaining friends at home, and visiting friends or family who do not live nearby, activities that lead to the accumulation of social capital. As we move forward from generation to generation, moreover, fewer and fewer people believe that most of their fellow citizens can be trusted, fewer work on community projects, and fewer attend church or clubs regularly. Since the accumulation of social capital correlates highly with social benefits— "where children flourish, where babies are born healthy, where teenagers tend not to become parents, drop out of school, get involved with violent crime, or die prematurely due to suicide or homicide" —these losses are both real and impressive (Putnam, 2000, 296). Writing six years later, as the effect of the internet was beginning to be felt, McPherson, Smith-Lovin and Brashears agree with Putnam's estimate (McPherson *et al.,* 2006).

Still, the matter cannot rest here.  Relying on the same data, Marsden feels that "declines in some forms of social connectivity are evident, but these are neither universal nor dramatic" (Marsden, 2012, 13).  Employing a different data set and a different set of questions, Hampton, Sessions, and Her find that since 1985 social isolation has not increased (Hampton *et al.*, 2010).  Paik and Sanchagrin and Fischer raise a serious methodological question; they argue that the declines that Putnam and McPherson *et al.*

observed might well have been an artifact of faulty interview techniques (Paik and Sanchagrin, 2013; Fischer, 2005, 2009). Furthermore, Putnam himself is hardly pessimistic about the impact of computer-mediated communication; on the contrary, he feels that "the early evidence . . . strongly suggests that computer-mediated communication will turn out to *complement,* not *replace,* face-to-face communication" (Putnam, 2000, 379; his emphasis). As internet usage has grown, this conviction seems to have been borne out (Amichai-Hamburger and Hayat, 2010; Hampton *et al.* 2010; Arampatz, Burger, and Novik 2016. Between 1999 and 2017, internet users in the developed world rose from 24 to 78 per hundred, while four billion world-wide were reached, their number having doubled twice since 2005 (Global Internet Usage). Smart phone usage has also increased in the US from 35 per hundred in 2011 to 77 in 2017 (Mobile Fact Sheet).

In *Networked,* Rainee and Wellman imitate Lisa Randall. The mere recital of the facts is hyperbolic, an instance of the digital sublime: the size of people's discussion networks—those with whom they discuss important matters—is 12 per cent larger among mobile phone users, 9 per cent larger for individuals who share photos online, and 9 per cent bigger for those who use instant messaging. The diversity of people's core networks—their closest and most significant confidants—tends to be 25 per cent larger for mobile phone users, 15 per cent larger for occasional internet users, and even larger for frequent internet users (Rainee and Wellman, 2012, 119).

However heartening, these results do not address Gleick's concern that computer-mediated communication, however wide-ranging, is altering for the worse who we are and how we relate to others. In *Reclaiming Conversation: The Power of Talk in a Digital Age,* Sherry Turkle makes the essential point: "Without conversation, studies show that we are less empathic, less connected, less creative and fulfilled. We are diminished, in retreat. But in generations that used their phones to text and message, *these studies may be describing losses they don't feel*" (Turkle, 2016, 13; her emphasis). Asked what's wrong with conversation, one of her respondents replies: "What's wrong with conversation? I'll tell you what's wrong with conversation! It takes place in real time and you can't control what you're going to say" (Turkle, 2016, 22).

It is Professor of Communication Gary C. Woodward who tells us what's wrong with computer-mediated communication:

> When two or more people are in the same space
> addressing each other, their exchanges are likely to

contain all of the critical yardsticks for measuring successful interaction. These essential processes include awareness of the other, the potential for immediate and unfiltered reciprocity in an exchange, and access to all the visual and verbal feedback that comes with direct person-to-person contact. All other channels of communication— including the devices that extend the range of human connectivity— alter or diminish one or more of one of these processes (Woodward, 2017, 146).

This is an absence that can have dire consequences. In medicine, for example, patients are becoming I-Patients:

The problem with this chart, as surrogate-for-the-patient approach is— to quote Alfred Korzybski, the father of general semantics— that the map is not the territory. If one eschews the skilled and repeated examination of the real patient, then simple diagnoses and new developments are overlooked, while tests, consultations, and procedures that might not be needed are ordered (Verghese, 2008, 2748).

In one study, when a physical examination supplemented the patient chart, conditions were discovered that required treatment in over one in four inpatients (Reilly, 2003).

The multi-tasking that computer-mediated communication encourages also leads to the erosion of a precious communicative resource—someone else's attention. According to one survey, during conference calls 63% of participants were sending emails, 47% were going to the restroom, and 21% were engaged in online shopping (Gavitt, 2014). In America 20% of 18 to 34 year olds answered their mobile phones during sex (Sherman, 2013); in Great Britain, the figure rose to one in four (Birch, 2011).

For sociologist George Herbert Mead, such erosion has serious consequences because "we must be others if we are to be ourselves" (Mead, 1964, 292). A process beginning at birth and extending over time to all our social contacts creates a "generalized other:"

The child must not only take the role of the other, as he does in . . . play, but he must assume the various roles of all the participants in the game, and govern his action accordingly. If he plays first base, it is as the one to whom the ball will be thrown from the field or from the catcher. Their organized reactions to him he has embedded in his own playing of the different positions and this organized reaction becomes what I have called

the "generalized other" that accompanies and controls his conduct. And it is this generalized other in his experience that provides him with a self (Mead, 1964, 285).

To Mead, face-to-face communication is essential to this process, the source, equally, of the socialization of the individual and the continuing health of society: "It has been the vocal gesture," he says, "that has preeminently provided the medium of social organization in human society" (Mead, 1964, 287).

Martin Buber's *Ich und Du* adds an existential dimension to Mead's sociology (Buber, 1995, Eng. trans. 1970). The choice of *du* is the foundation of a philosophy of human interaction. While *Ich* is *I, Du* is not *Thou,* its usual translation; rather, it is the *you* of intimate relationships, a word for which there is no equivalent in everyday English.  Buber's choice of *du* reflects his insistence that even in routine interactions between persons and things, there exists the possibility of the utmost intimacy, a relation between one essential self and another.

To this set, there must be added a third member: the *es,* the *it* that designates "an object of detached perception and experience," that is, any object or person, treated as a means rather than an end (Buber, 1970).  Most of our relationships are of this order. But not all: one *du* can encounter another in dialogue, both having been shaped by dialogue, Buber's term for any means of communication, tactile or verbal. The other need not be a human being. In the child, "little inarticulate sounds still ring out senselessly and persistently into nothing; but one day they will have turned imperceptibly into a conversation [*Gespräch*] —with what?  Perhaps with a bubbling tea kettle, but into a conversation" (Buber, 1970*,* 78).  It is through this "conversation"—*du* with *du*—that we become an *ich,* a person in our own right, a member of a community (Buber, 1970, 80).

Writing in the Europe of 1923, Buber feels that there is no such community, that the state and the business-industrial complex routinely treat human beings

> not as carriers of an inexperienceable *du* but rather as centers of services and aspirations that have to be calculated and employed according to their specific capacities. Wouldn't their world come crashing down upon them if they refused to add up He + He + He to get an *es,* and tried instead to determine the sum of *du* and *du* and *du,* which can never be anything else than *du*? (Buber 1970, 96).

Buber feels "that modern developments have expunged almost every trace of a life in which human beings confront each other and have meaningful relationships." There is, he fears, "nothing to be inherited but the despotism of the proliferating *es* under which the *ich,* more and more impotent, is still dreaming that it is in command" (Buber, 1970, 97). In these circumstances, the *ich* is "reduced from substantial fullness to a functional [point] of a subject that experiences and uses objects" rather than "confront[ing] them in the current of reciprocity" (Buber, 1970, 80). In effect, Mead's generalized other has shrunk from a *du* to an *es,* a node in a network of contending forces in which

> by far the greater part of what is called conversation among men would be more properly and precisely described as speechifying. In general, people do not really speak to one another, but each, although turned to the other, really speaks to a fictitious court of appeal where life consists of nothing but listening to him (Buber, 1996, 78– 79).

Buber is criticizing a Europe poised *entre deux guerres,* a decade away from disaster; he is also criticizing crucial aspects of a world he did not live to experience.

## Conclusion

I have treated hyperbole as a means of conveying a celebratory attitude toward the Large Hadron Collider and its computer-mediated communication, irony as means of conveying a skeptical attitude toward an analogous computer-mediated communication, a technology that intervenes between us and our fellows. Throughout the history of rhetoric, the technical aspect has been the standard approach to such tropes: they are viewed solely as devices of style. But we can see from the analysis of their use in popular works centering on technology that more is at stake. There is no question that such technologies as computer-mediated communication increase what we can accomplish, that they empower us as in the case of the Large Hadron Collider, and clearly hyperbole is the master trope designed to celebrate such an achievement. But without another master trope as its steady companion, without irony, hyperbole distorts the complexity of our experience; without irony, we miss a looming disempowerment, the loss in social capital and cohesion that computer-mediated communication also entails, our sense that in human relationships it is technology that is in the driver's seat. We see no need to repair the damage incurred by the erosion of face-to-face communication;

we do not recognize that both hyperbole and irony evoke an existential dimension with which it is a mistake not to reckon.

# Reference List

Addison, J. and Steele, R. *Spectator*. G. A. Aitken (Ed.) London: J. C. Nimmo, 1898.

Amichai-Hamburger, Y. and Z. Hayat. "The Impact of the Internet on the Social Lives of Users: A Representative Sample from 13 Countries." *Computers in Human Behavior* 27 (2011): 585-589. http://dx.doi.org/10.1016/j.chb.2010.10.10.009

Arampatz, E., M. J. Burger and N. Novik. "Social Network Sites, Individual Social Capital, and Happiness." *Journal of Happiness Studies* (2016). http://dx.doi.org/10.1007/s10902-016-9808-z

Ashfield A. and P. de Bolla (Eds). *The Sublime: A Reader in British Eighteenth Century Aesthetic Theory*. Cambridge: Cambridge University Press, 1996.

Austen, J. 1813. *Pride and Prejudice*. New York: C. Scribner's and Son, 1906.

Birch, J. "Shocking Stat: 25 Per Cent of People Answer Phone During Sex?" *Your Tango* (2011): http://www.yourtango.com/201165808/shocking-stat-25-percent-people-answer-phone-during-sex, accessed 3/7/2017.

Blair, H. *Lectures on Rhetoric and Belles Lettres*. New York: Richard Scott, 1815.

Buber, M. *I and Thou*. Kaufmann, W. (Trans.) New York: Simon and Schuster, 1970.

-------. *Ich und Du*. Stuttgart: Reclam, 1995.

-------. *The Knowledge of Man*. New York: Harper, 1966.

Burke, E. *A Philosophical Inquiry in the Origin of our Ideas of the Beautiful and the Sublime*. London: George Bell and Sons, 1889.

Cowan B. W. "Mr. Spectator and the Coffee House Public Sphere." *Eighteenth Century Studies* 37.3 (2004): 345-366. http://dx.doi.org/10.1353/ecs.2004.0021

Fischer, C. S. "Comment on McPherson Smith-Lovin, and Brashears ASR June 2006: The 2004 GSS Finding of Social Networks: An Artifact?" *American Sociological Review* 74 (2009): 657-669.

-------. "Bowling Alone: What's the Score?" *Social Networks* 27 (2005): 155-167. http://dx.doi.org/10.1016/j.socnet.2005.01.009

Gavitt, G. "What People are Really Doing When They're on Conference Call." *Harvard Business Review* (2014). http://blog.zedvance.com/what-people-are-really-doing-when-theyre-on-a-conference-call, accessed 3/17/2017.

Gleick, J. "Multiple Personality Disorder." In *What Just Happened: A Chronicle from the Information Frontier. (*Pp. 247-257). New York: Pantheon Books, 2002.

Global Internet Usage https://en.wikipedia.org/wiki/Global_Internet_usage

Hampton, K. N., Sessions, L. F. and Her. "Core Networks, Social Isolation, and New Media: How Internet and Mobile Phone Use is Related to Network Size and Diversity." *Information, Communication, and Society* 14 (1) 2011: 136-155 http://dx.doi.org/10.1080/1369118X.2010.513417

Homer. *Homer's Illiad.* A. Pope (Trans.) W.C. Armstrong (Ed.) New York: World, 1887.

Kames, H. H. *Elements of Criticism.* J. R. Boyd (Ed.) New York: A. S. Barnes, 1869.

Kant, I. *Critique of Judgment,* W. S. Pluhar (Trans.) Indianapolis: Hackett, 1987.

Longinus. *On the Sublime.* W. H. Fyfe (Trans.) Cambridge, MA: Loeb Classic Library, 1995.

Marsden, P. (Ed.) *Social Trends in American Life: Findings from the General Social Survey Since 1972.* Princeton: Princeton University Press, 2012.

Marx, L. *The Machine in the Garden: Technology and the Pastoral Ideal in America.* Oxford: Oxford University Press, 1964.

McPherson, M., L. Smith-Lovin, and M.E. Brashears. "Social Isolation in America: Changes in Core Discussion Networks over Two Decades." *American Sociological Review* 71.3 (2006): 353-375. http://dx.doi.org/10.1177/000312240607100301

Mead. G. H. *Selected Writings.* Reck, A. J. (Ed.) Chicago: University of Chicago Press, 1964.

McAlpine, K. "LHC Rap." (2008): www.youtube.com/watch?v=j50ZssEojtM, accessed 4/8/2017.

Murch, W. and M. Levinson. *Particle Fever.* 2013.

Mobile Fact Sheet. http://www.pewinternet.org/fact-sheet/mobile, accessed 5/6/2017.

Nye, D. E. *American Technological Sublime*. Cambridge: MIT Press, 1994.

Paik, A. and K. Sanchagrin. "Social Isolation in America: An Artifact?" *American Sociological Review* 78.3 (2013): 339-360. http://dx.doi.org/10.1177/0003122413482919

Partington, A. "Irony and the Reversal of Evaluation." *Journal of Pragmatics* 39 (2007): 1547-1569. http://dx.doi.org/10.1016/j.pragma.2007.04.009

Putnam, R. D. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster, 2000.

Quintilian. c. 95 CE. *The Orator's Education*. Donald A. Russell (Trans.) Cambridge: Harvard University Press, 2001.

Rainie, L. and B. Wellman. *Networked: The New Social Operating System*. Cambridge: MIT Press, 2012.

Randall, L. *Warped Passages: Unravelling the Mysteries of the Universe's Hidden Dimensions*. New York: Harper Perennial, 2006.

Reilly, B. M. "Physical Examination in the Care of Medical Inpatients: An Observational Study." *Lancet* 362 (2003): 1100-1105. http://dx.doi.org/10.1016/S0140-6736(03)14464-9

Sherman, E. "Cell phone during sex? Believe it." (2013). www.cbsnews.com/news/cell-phone-use-during-sex-believe-it, accessed 3/39/2017.

Smith, A. *Essays on Philosophical Subjects*. W. P. D. Wightman and J. C. Bryce (Eds.) Indianapolis: Liberty Fund, 1982.

Snow, C. P. *Two Cultures*. Cambridge: Cambridge University Press, 1998.

Sperber, D. and D. Wilson. "Irony and the Use-Mention Distinction." In S. Davis (Ed.) *Pragmatics: A Reader*. (Pp. 550-563). New York: Oxford University Press, 1991.

Turkle, S. *Reclaiming Conversation: The Power of Talk in the Digital Age*. New York: Penguin Books, 2016.

Verghese, A. "Culture Shock—Patient as Icon, Icon as Patient." *New England Journal of Medicine* 359.26 (2008): 2748-2751. http://dx.doi.org/10.1056/NEJMp0807461

Wilson, D. and D. Sperber. *Meaning and Relevance*. Cambridge: Cambridge University Press, 2012.

Woodward, G. C. "Reclaiming Conversation: The Power of Talk in the Digital Age by Sherry Turkle." *Mass Communication and Socie*ty 20.1 (2017): 146-148. http://dx.doi.org/10.1080/15205436.2016.1234165

Wrigley, E. A. "A Simple Model of London's Importance in Changing English Society and Economy, 1650-1730." *Past & Present* 37 (1967): 44-70.