

The Call of the Future

Today we worry about the social effects of the Internet. A century ago, it was the telephone that threatened to reinvent society.

BY TOM VANDERBILT

IN 2009, THE UNITED STATES CROSSED A DIGITAL Rubicon: For the first time, the amount of data sent with mobile devices exceeded the sum of transmitted voice data. The shift was heralded in tech circles with prophetic fury: “The phone call is dead,” pronounced a blogger at the Web site TechCrunch. Writing in *Wired*, journalist Clive Thompson observed, “This generation doesn’t make phone calls, because everyone is in constant, lightweight contact in so many other ways: texting, chatting, and social network messaging.” And the online news network True/Slant declared a paradox: “We’re well on our way to becoming an incredibly disconnected connected society.”

Where the world’s wires once hummed with the electrical impulses of people talking, that conversation, in the digital age, has been subsumed by all the other information we are exchanging. “At this point, voice isn’t even a rounding error in network operators’ calculations,” Stephan Beckert, an analyst with TeleGeography, a telecom research company, recently told me. To underscore the point, he sent me a chart showing “switched voice” as a thin wedge, gradually squeezed to a nearly invisible nothing by the oceanic thrust of “Internet” (and a smaller stratolayer of “private networks”). It looks as if the world has gone quiet.

There is one significant caveat here: Placing a voice

call, compared to streaming *The Hangover 2* on Netflix or uploading a video clip of your friend’s latest freestyle BMX trick to YouTube, consumes virtually *no* bandwidth.

And so the phone call is hardly dead. While it is true that land lines are in sharp decline in every advanced industrial country—the most recent and, presumably, final time land lines saw an increase in use was, ironically, during the adoption of dial-up Internet in the 1990s—in many of those countries the decline has been more than offset by an increase in minute-per-month levels on mobile phones. Even on Skype, the explosively expanding Internet phone and video chat service, some 85 percent of calls still go to the “PSTN” (the public switched telephone network, composed of the infrastructure for land lines and cell phones).

Still, there are signs of an ongoing cultural shift. Even as the number of wireless connections increased from 286 million in 2009 to 303 million in 2010, voice usage on those phones decreased. And our calls are getting shorter. While in 2003 the average local mobile phone call lasted a leisurely three minutes, by 2010 it had been trimmed to a terse one minute and 47 seconds.

What’s going on? Disentangling our communication preferences and habits can be hard, bound tightly as they are, like fiber-optic cable, with myriad strands. Simple economics may be one significant factor; in many European countries, texting is cheaper than making a call. Personal inclination, rooted in psychology, may be

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another; researcher Ruth Rettie, of Kingston University, in London, has found that British mobile phone users often fall into “talker” and “texter” camps, the latter (the “phone averse”) leaving, rather uneconomically, huge numbers of unused voice minutes on their phone plans each month. (Their average mobile call is under 30 seconds.)

Or it may be merely a matter of logistics and convenience. In an increasingly data-rich, time-starved environment, the phone call can seem less a welcome invitation to connect than a disruptive, troublingly analog experience. As Judith Martin, who doles out etiquette advice as “Miss Manners,” told *The New York Times* last year in an article on the disappearing telephone call, “I’ve been hammering away at this for decades. The telephone has a very rude propensity to interrupt people.”

Before probing into the future of voice telephony, and the idea that we find it ever easier to do without it, we need to ask a simpler question, one that turns out to be curiously relevant to current discussions of the impact and role of a communication technology such as the Internet in our lives: What *was* the telephone call?

When it is introduced, a new technology typically sets in motion a now familiar script. At first, the technology is deemed to have little import or to fulfill only

very specific, limited uses. Consider, for example, this casual dismissal by *The New York Times* in 1939: “The problem with television is that people must sit and keep their eyes glued on a screen; the average American family hasn’t time for it.”

Next, as the technology’s true uses come into view, but before it is widely adopted, come the grandiose pronouncements, both pro and con, on how it will reshape society. In *The Last Lone Inventor* (2002), Evan Schwartz noted that television inventor Philo T. Farnsworth thought television would engender world peace: “If we were able to see people in other countries and learn about our differences, why would there be any misunderstandings? War would be a thing of the past.”

And then, as prices come down and the technology continues to improve, people simply buy the thing (which, it turns out, has fulfilled neither the utopian nor apocalyptic scenarios ascribed to it), and like a persistent rainfall refilling a dry desert lakebed, over time it so thoroughly permeates everyday life that we no longer pause to think about its presence, or indeed what might have once lain beneath the shimmering surface.

The telephone fits comfortably into this schema. It arrived on the historical stage in 1876 without invitation or clear mass desire. Yet there it was, a device harboring a radical change: For the first time, people could converse in real time at a distance.

But what to do with it? As sociologist Claude Fischer observed in *America Calling* (1992), businessmen, who relied on letters and the telegraph to transmit important and often complex information, were initially skeptical of the telephone. “For them,” Fischer wrote, “voice transmission, scratchy and often indistinct, could be an adjunct at best.” (Inventor Elisha Gray gave up pursuing the telephone, which he called the “talking telegraph,” to focus on improving telegraphy.) Economics also played a role. William Preece, chief engineer of the British postal service, said America—not Britain—had use for the telephone. “Here we have a superabundance of messengers, errand boys, and things of that kind.”

Then, as Fischer described, the uses took hold, cycling through new audiences and wider purposes, thanks in large part to a vigorous marketing push by the Bell System. (The company boasted in a 1909 ad that it had “from the start *created the need of the telephone and then supplied it.*”) First the phone was used for commercial business, then for household business, then, gradually, for social purposes: visiting with relatives, “fond intimate talks,” getting “in touch.” “Friendship’s path,” a 1937 AT&T ad declared, “often follows the trail of the telephone wire.”

While this progression seems obvious in retrospect, the brief period when the function of the phone was in play should not be overlooked. There was, for example, the “Telephone Herald” (which was launched in Budapest but eventually came to the United States in various forms), described in a 1903 article in *Chambers’s Journal* as a “telephone-receiver” installed in the home that would alert the subscriber to the “sending of news” by an alarm (“a sort of trumpet”). An editor would read bulletins to the service’s subscribers. “The apparatus is so arranged,” explained the *Journal*, “that the subscriber can lie down or follow some other occupation while he hears the news. Should the information not prove delectable to the auditor, he simply places the trumpet upon the hooks fitted to the receiver.”

The telephone as a broadcast medium, a kind of protoradio, is a historical curiosity, but the article included one other observation that still resonates. While the larger press may have seen in the Telephone Herald a threat to printed newspapers, the *Journal* saw quite the opposite: “People cannot afford to spend the whole of the day with their ear at a telephone-receiver or perusing a newspaper from morning till

night. What is the result? The telephone delivers in a terse, incisive manner any special item of news; and, if the subscriber’s curiosity be aroused therein, he promptly seeks the next day’s newspapers for a full report.” Today, we sift through any number of information streams—flagging that tweet so we can later read the full article it links to on the Instapaper app installed on our iPad—and debate questions such as whether the Internet will kill television.

As the phone began to find users and uses, on came the claims for what it was doing to American society. For some, telephones were an “antidote to provincialism,” while others argued that the devices augured the “destruction of community because they encourage far-flung operations and far-flung relationships.” The phone tore down the walls of privacy even as it helped create a “general withdrawal into self-pursuit and privatism.” It brought people together in cities as it scattered them in far suburbs. (The idea that the phone allows us to live at great distance from one another persists today, even though, as MIT architect and engineer Carlo Ratti and a team of other researchers have found, the more people telecommunicate, the more they collocate.)

The sociologist Sidney Aronson, noting in the early 1970s the phone’s capacity to improve the coordination of business activities, observed that the “years from 1875 to 1914, during which telephone use spread rapidly, witnessed the growth of giant corporations and the formation of trusts, despite the passage of the Sherman Anti-Trust Act in 1890.” In the early 1900s, an AT&T engineer argued that without the telephone, the skyscraper would have been impossible: “Suppose there was no telephone and every message had to be carried by a personal messenger. How much room do you think the necessary elevators would leave for offices?”

In fact, the skyscraper owes its existence not to Alexander Graham Bell but to Elisha Otis, inventor of the safety elevator. That the claim on behalf of the telephone “has been repeated for over 80 years without serious examination,” Fischer argued, hints at how little we know about this instrument’s actual effects. As telephones became ubiquitous in America—their number grew from 1.3 million in 1900 to 43 million at the end of the 1950s—they nearly disappeared from the realm of scholarly inquiry. Perhaps, as political scientist Ithiel de Sola Pool noted in the introduction

to a 1977 book, *The Social Impact of the Telephone*, “the telephone’s inherently dual effects are one reason for the paucity of literature on its social impact. Its impacts are puzzling, evasive, and hard to pin down.”

But so too are the impacts of, say, the computer. Witness the intense debate occasioned by the publication a couple of years ago of *The Shallows*, in which technology journalist Nicholas Carr examined whether the Internet was changing the way we think. Yet while there are entire academic journals (e.g., *Computers in Human Behavior*) that parse the social impact of computers, not a single scholarly publication is devoted to the telephone. Even the mobile phone, arguably, is more scrutinized for its computer-like texting functions than its influence on our vocal communication.

Indeed, it is striking how many phenomena attributed to the Internet age have their historical echo in the telephone. Identity theft and Internet predators? The early years of the telephone brought concerns over the unwanted entry—via telephone line—of unsavory characters into the home, and some people called for laws to regulate criminal use of the phone. Or consider the contemporary argument that automated high-frequency Internet trading increases the volatility of financial markets. As Aronson noted, “The widespread use of the telephone probably added to the short-run instability of such markets.” Before unwanted spam e-mails there were unwanted sales calls. The phrase “information superhighway” was preceded by a century in an AT&T ad announcing “a highway of communication.” Computer hacking grew out of the culture of “phone phreaks”—those early-1970s technological obsessives (Steve Jobs among them) who figured out how to manipulate the phone system to place free phone calls. The list of parallels goes on.

Perhaps the telephone, despite its seemingly transformative nature—the annihilation of time and space—didn’t change us much after all. Fischer, in *America Calling*, refuting the technological determinists who see the telephone altering the way we think and behave, quoted historian George Daniels: “Habits seem to grow out of other habits far more directly than they do out of gadgets.” Social historian Daniel Boorstin similarly observed that “the telephone was only a convenience, permitting Americans to do more casually and with less effort what they had already

been doing before.” A good place to examine how much the telephone changed society is the phone call itself.

“This is going to make you self-conscious,” Emanuel Schegloff tells me from the other end of the line in California, “but there will be a point in this conversation when one of us will say ‘so’—or something like that—which will be a signal that I want to close this off. But you don’t have to play along. Maybe you’ll say, ‘There’s something else I want to ask you.’ You have to work up to goodbye.”

There is something deeply metaphysical about conducting a telephone conversation with a linguist who has studied, perhaps more than anyone, how we talk on the telephone. Yet even Schegloff, an emeritus professor at UCLA, is hesitant to assert that there are any vast differences between how we talk on the phone and how we talk face to face. “It is an adaptation to the absence of visual access to one another, but it’s pretty much the same sorts of action in the same sorts of order.”

What made telephone conversation so interesting to one of the main progenitors of “conversational analysis”—a discipline that looks for the deep structures in our everyday talk—was not that it represented some bold break from traditional human communication, but that it is, in essence, *pure* talk, not contaminated by the suggestive glance, the gesture of a hand, a person’s body torque. Sifting through hundreds of hours of actual recorded calls from an array of sources, Schegloff rigorously dissected the dynamics in play when two people who cannot see each other talk: the turn taking, the “forced position repair” (that moment in a conversation when one realizes there has been a misunderstanding—“I thought you meant . . .”—and the participants must go backward in time to “fix” the conversational thread).

Consider, for example, the “conversational beginning.” A “multiplicity of jobs” are done in those first moments, Schegloff says. There’s simple identification—though not often so simple. The answerer speaks first. “Hello?” “It’s me,” says the other. And there it is: The presumption of intimacy, the expectation (or desire) that one will be recognized. Haven’t we all, when playfully (or aggressively) opening a call with the words “It’s me,” felt the sting of being asked, “Who’s me?” That’s hardly the end of the work. There’s the “reconstitution of the relationship” (“It’s been ages since we talked”), as well as

the articulation of the specific reason for the call, which Schegloff says often will be preceded by an utterance such as “um” once the initial pleasantries have been dispensed with. The caller, he says, often will try to ease into this purpose without drawing undue attention to it.

While there are certainly differences between phone conversations and face-to-face communication—on the phone, silences tend to be shorter, and “overlaps” can be more frequent because we can’t see that the other person is preparing to speak—what is most striking is how much of the spirit and function of social interaction survives on the phone, even stripped of humans’ powerful nonverbal cues.

In an early teleconferencing exercise in 1963—set up with the idea of providing a video hot line between the White House and the Kremlin—the Institute for Defense Analyses found that individuals preferred talking on the phone to video interaction. Further studies revealed little difference between the telephone and face-to-face contact in accomplishing a variety of tasks, ranging from comprehension to problem solving. Linguist John Baugh and other researchers have shown that subjects on a phone call generally can determine the other speaker’s race. In short, while we might regard the phone as an impoverished form of communication, it more or less gets the job done.

But the call itself has not been immune to the evolution of technology. The introduction of caller ID dispensed with the recognition problem (though I am still sometimes startled to hear the phone answered with “Hey, Tom”), while mobile phones introduced an entirely new function for openings: establishing location (hence the grating procession of “We just landed” or “I’m in line at the bank”). The advent of e-mail and text messages—one-way, contained, their purpose generally spelled out in advance, presumably less intrusive (save for the ping of the BlackBerry)—made the phone call seem more formal, with yet another function thrown into the opening. As Clive Thompson noted in his *Wired* article: “If I suddenly decide I want to dial you up, I have no way of knowing whether you’re busy, and you have no idea why I’m calling. We have to open Schrödinger’s box every time, having a conversation to figure out whether it’s OK to have a conversation.”

Indeed, there is a sense that young people today, with so many other ways to stay in touch, find the very

structure of the phone call oppressive. “You’ve got to get the whole chit-chat in there,” one texter told Ruth Rettie in the course of her research on mobile phone users. Noting texters’ disaffection with calls, Rettie wrote, “There was a need for small talk, silences were unacceptable, and finishing a call could be difficult. . . . Silences and hesitations are interpreted as meaningful, so that there is little time for the interactants to deliberate.” The structure of the call loomed so large that while there is “no technical reason why phone calls could not be used for minimal messages such as ‘goodnight,’ ” this was deemed roundly unacceptable. It’s as if texters were dodging the telephonic version of what television comedian and writer Larry David calls “the stop and chat,” that encounter on the street where you’d prefer to just say “hello” and keep walking.

Now that telephones are virtually everywhere, observed *The New York Times*, “telephone manners are, quite naturally, becoming equally complicated.” The year was 1986 (when a few people had car phones but the mobile phone was not yet widely distributed). Strikingly, it could have been last week—or it could have been around 1900, when, the German critic and philosopher Walter Benjamin noted, the phone arrived in his Berlin household, with an “alarm signal that menaced not only my parents’ midday nap but the historical era that underwrote and enveloped this siesta.”

In 1986, the latest shift was “call waiting,” which Judith Martin compared to “standing at a cocktail party and not paying attention to the person you’re with, waiting for a more important person.” Now, of course, as we stand at that same cocktail party, fidgeting with our smartphones—which, despite rarely looking like something designed for speaking into, we not only talk on, but to (summoning the iPhone’s electronic concierge, Siri, for directions or the weather)—the interruptions that once occurred on the telephone line now occur in real time and space.

We have been fretting about the phone for years, even as it has moved closer and closer to us—once relegated to the back hallway, “between the dirty linen hamper and the gasometer,” as in Benjamin’s day, now in our back pocket. But it is difficult to say, as it seems to be morphing once more as a cultural form, whether the telephone has profoundly changed us in any way. ■