

HALF THE WORLD IS
RUSHING TOWARD
THE FUTURE AND THE
OTHER TOWARD THE PAST.
BOTH HAVE WEAPONS.

The Ghost Dances

BY PAUL SAFFO

More than half a century ago, economist Joseph Schumpeter described technology's impact as a process of "creative destruction." That understates what is afoot today. Innovations of the past few decades have transformed our world. Familiar landmarks are gone, replaced by an unrelenting stream of novel weirdisms—from off-shoring to phishing to pharming, from life extension to cyborgs, and even glow-in-the-dark genetically-modified bunnies. The result is an age of technological anxiety even as we count on technology's gifts to deliver us to new horizons.

Inventors, themselves, harbor doubts. Sun Microsystems co-founder Bill Joy '79 worried enough to write in 2000 that powerful new technologies emerging from the industries he helped build threatened to make the human species obsolete. Others such as inventor Ray Kurzweil anticipate a breathtakingly utopian world in which technology confers godlike powers on mankind. This divergence between the optimists and pessimists causes some to rush pell-mell toward the past while their opposites race toward the future.

Another of Schumpeter's generation, British physicist and author C. P. Snow, warned against the growing divide between the "Two Cultures" of science and the humanities. If only it were so simple. Two cultures have been replaced by a forest of intellectual stovepipes in which knowledge in one's narrow field is so vast and mastery so time-consuming that experts have little time to comprehend adjacent fields, much less the full sweep of scientific discovery.

If experts are confounded, pity the public. A large percentage globally still consider technology to be magic, in the literal sense. Superstition competes with reason as we struggle to comprehend the vast changes unleashed by our technological mind children. In a strange and ironic twist of history, we inflict on ourselves the same wrenching change visited on other cultures as they came into contact with western culture and its innovations over the past few centuries. And our reaction today is

Death rattle or rebirth?

In 1889 Wovoka, a Paiute mystic, foresaw a world rid of whites if native tribes would perform peaceful rituals. A year later, Sitting Bull was killed and his Sioux followers massacred at Wounded Knee.

little different from how many of those unsuspecting cultures responded. We engage in the "Ghost Dance," a painful and contradictory accommodation that at once reaches back to grasp disappearing cultural

norms while simultaneously rejecting and embracing disruptive alien novelties.

The Ghost Dance has recurred frequently in human history, but the term has its origins close to California. By the late 1800s, a decades-long assault of European values and technology, not to mention forced relocation, poverty, and disease had taken their toll on Native Americans across the west. Many tribes were at or near collapse when on New Year's Day 1889, a Walker River Paiute mystic named Wovoka had a vision. Wovoka foresaw a new age in which the white interlopers would vanish and the natives would reclaim a rejuvenated world and be rejoined by their ancestors. Wovoka preached that this new world would arrive sooner if believers would engage in moral conduct, peaceful behavior, and practice a ritual round-dance that came to be called the Ghost Dance.

Word of Wovoka's prophecies electrified the western tribes. Native delegations visited Wovoka and carried his prophecies back home. But each community interpreted the message in its own way. The long-suffering Sioux concluded that the ritual of the dance would accelerate the imminent destruction of the white man and that wearing special ghost shirts (likely inspired by the ritual garb worn by their Mormon neighbors) would protect the Sioux against white men's bullets. Uncomprehending government agents noted the rise of the Sioux Ghost Dance with alarm. This culminated in the death of Sitting Bull and the 1890 massacre of the Sioux at Wounded Knee, South Dakota. White agents across the West suppressed the Ghost Dance rituals and when Wovoka's prophecies failed to come to pass, the disappointment only accelerated the collapse of native cultures. By 1900, the Native American Ghost Dance was all but forgotten.

This dark history has made the Ghost Dance an anthropological shorthand for any millennial movement preaching a rejection of alien novelties and a return to traditional ways. The Ghost Dance is very much alive today. The global rise of religious fundamentalism is pure Ghost Dance, be it Islamic fundamentalists pinning for a return to the Caliphate, Jewish fundamentalists battling moderate secularism, or Christian fundamentalists preaching an imminent Second Coming. The current opposition to evolutionary theory is an indelible example of the Ghost Dancing phenomenon. From this opposition has arisen "creation science," a deeply contradictory belief system that attempts to use scientific

method to discredit scientific theory to prove the literal truth of the Biblical version of creation.

Embracing coveted portions of what one opposes in the service of returning an old order is a signature of the Ghost Dance. New Guinea is home to many Ghost Dance episodes in the form of 20th century “cargo cults,” movements that rejected the ways of the European strangers but coveted their cargo, the seemingly magical tools and trinkets the white men bore with them. One cult, the Mambu, concluded that the foreign cargo was in fact made for the Mambu by their ancestors in a nearby volcano and stolen by the white interlopers. Attempting to set things right, the Mambu and other New Guinea cargo cults copied European garb, built replicas of airplanes, and imitated European customs, including the quintessentially English ritual of high tea.

Iranian fundamentalists see no conflict in nurturing an aggressive nuclear program even as they rail against the corrosive effects of western ideas and technologies. And since the mid-1990s, fundamentalist Christian ranchers in Texas have been working with Jewish fundamentalists to establish a herd of red heifers as a breeding population in Israel. In their belief, until a red heifer is born in the Holy Land and its ashes used to purify the faithful on the Temple Mount, the Armageddon that Biblical fundamentalists hope for cannot occur. Despite their fundamentalism, they have eagerly embraced the most modern of technologies, including artificial insemination, in the service of their eschatological cause.

These dramatic examples belie the fact that the Ghost Dance isn't danced merely in Madrassahs, or fundamentalist churches, but throughout the Global Village, from American churches to Shanghai malls to halls of power in Washington D.C. and capitals around the world. It was Armageddon-obsessed Christians who helped elect George W. Bush. Prominent Christian pundits as well as some in the Pentagon have cast the Iraqi War as a holy war of biblical prophesy. The “strict constructionism” of American constitutional conservatives is a political Ghost Dance. Elsewhere, political uncertainty leads to other nostalgic looks back. Communism seemed discredited in the '90s, but after a decade of corruption and widening divergence between rich and poor in the former Soviet Republics, a small but vocal minority advocates returning to the old order.

It is not just the past-lovers who embrace the Ghost Dance, for the Ghost Dance often exhibits itself as an utter rejection of the old in favor of leaping into appealing but unknown new worlds. Techno-theoretic “extropians”—believers in an unbounded technological future—argue that technology is not moving fast enough. While some ghost dancers desperately want to put on the brakes, these technological believers are convinced that redemption can be achieved only by stepping on the gas and fleeing into the future.

Some of technology's faithful have already made their flight arrangements. Cryonics enthusiasts arrange to have their bodies chilled in liquid nitrogen at the moment of death to preserve them for resuscitation when future medical technologies can return them to full health. Some opt to have only their heads preserved on the assumption that their consciousness eventually will be uploaded into a successor of today's computers.

In every historical instance of the Ghost Dance, the common animus is uncontrolled and uncontrollable change imposed from

the outside. Our modern Ghost Dance has no outsiders; we wreak the change on ourselves. Our modern wonders overwhelm us not with alien values; but with a vast and unnerving choice of our own creation as we are delivered to a horizon of terrifying freedom. We fear change, but we fear making the wrong choice even more. The temptation is to Ghost Dance the choices away. This is the appeal of religious fundamentalism, a strategy to arbitrarily restrict one's options and outsource the choosing to an infallible higher authority. Young Muslim men are assaulted by a media blizzard of western images in their homes and neighborhoods and markets. Alternately lured and repelled by modernity's siren song, they flee first to their mosques, then to the training camps where they take up the Ghost Dance.

The Ghost Dance has often been equated with the death rattle of a culture. But it can also be its rebirth. Wovoka's vision still quietly survives in many native communities. Others are dancing anew. A short distance from Wovoka's Walker Valley grave is the Black Rock Desert home to “Burning Man,” the annual Ghost Dance of artists and contemplators whose work often incorporates the very technologies creating the changes their art and essays so eloquently speak against.

Iranian fundamentalists see no conflict in nurturing an aggressive nuclear program even as they rail against the corrosive effects of western ideas and technologies.

Burning Man is a California invention, the latest metaphor in a long tradition of cultural innovations inspired by the cycles of creative destruction that have swept this state since the Gold Rush. First we invent our technologies; then we use them to reinvent ourselves. Just as we build and export technologies, California also exports its share of cultural responses to technology's challenges. Remember the Summer of Love? It started here and went global the same summer we put a man on the moon.

As a theater of both condemnation and approbation, Burning Man is pure Ghost Dance. It is a collective act of diplomacy to reconcile the future with the past. But, viewed only as an isolated annual event, it is still only theater, providing inspiration but not salvation. In other forms, the Ghost Dance occurs everywhere on the planet at the same time.

We are now locked in a race against the Manichaeian Ghost Dancers bent on unwinding modern society. An alternative Ghost Dance is key to the globe's survival. The world needs another California export now. It must overcome our technological anxieties to bridge hope and despair. Whether it is a dance of life or a dance to stave off annihilation doesn't matter; we must join in a new Ghost Dance now.

Paul Saffo is a director at the Institute for the Future in Palo Alto. His essays have appeared in *Fortune*, *The Harvard Business Review*, *The New York Times*, *Newsweek* and *Wired*. He comes from a den of Golden Bears that includes his mother and an aunt.

Although I am emphatically not a Bush-Cheney fan, I can agree that the present administration shows "no hint of being in a moral dilemma." When I was a kid during the sixties, terms like "mutually assured destruction" and "nuclear disarmament" were very common. We felt that the world was forever balanced on the brink of a thermonuclear holocaust, but that the basic human need for survival would prevent either side from launching an attack. September 11 really did change that assumption. We now live with an ever more unexciting reality—what is called "asymmetric" warfare or terrorism that involves only one part of the attacker. This seems to me to be something new in the history of warfare. The kamikaze of World War II was a last-ditch, desperate action of a falling military power. I think the insurgents who are attacking the World Trade Center have introduced a new element into the equation.



The relationship between the two is not the main theme of the opera. Teller is one of the characters, but he is not sharing the same uncertainty about the bomb as the other characters. I imagine that most people who have seen my opera will feel the same way. I think the main theme of the opera is the tension between them and the times they lived in that drive the story.

Elaborate on your feelings for Oppenheimer and Teller. Or is there a tension between them and the times they lived in that drive the story?

The relationship between the two is not the main theme of the opera. Teller is one of the characters, but he is not sharing the same uncertainty about the bomb as the other characters. I imagine that most people who have seen my opera will feel the same way. I think the main theme of the opera is the tension between them and the times they lived in that drive the story.

Elaborate on your feelings for Oppenheimer and Teller. Or is there a tension between them and the times they lived in that drive the story?

The relationship between the two is not the main theme of the opera. Teller is one of the characters, but he is not sharing the same uncertainty about the bomb as the other characters. I imagine that most people who have seen my opera will feel the same way. I think the main theme of the opera is the tension between them and the times they lived in that drive the story.