

## COMMENTARY

# Synthesizing Humane Futures: Taylor, Ellul, and the Critique of Technique

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## Abstract

This commentary examines the pervasive influence of Frederick Winslow Taylor's scientific management and Jacques Ellul's critique of "technique" on contemporary technological culture. Taylor's legacy of efficiency as the ultimate measure has shaped modern approaches to big data, globalization, and management consulting. Drawing on Ellul's warnings about the dehumanizing effects of technical absolutism, the argument calls for a reimagining of future innovation that prioritizes human expertise and local context over quantification and metrics. Engaging with cultural and historical perspectives, it challenges deterministic visions of technological progress and proposes a multivalent approach to future societal development. The need to reconcile technological advancement with the preservation of artisanal knowledge, dialectical expertise, and humanistic values is underscored throughout.

Synthesizing humane futures is a necessary reminder for those who look to demonstrate the big picture via the pursuit of big data. This paper is an argument for an inclusive futures narrative that expands on the narrative foresight of Milojević and Inayatullah<sup>[1]</sup>, which is an effective counter to futures *technique*. Over a century ago, Frederick Winslow Taylor established himself as the prophet of the cult of efficiency. Over half a century ago, Jacques Ellul identified "technique" as the insistence that there was one perfect way to do something, just as a machine would. It is the apotheosis of the ends justifying the means, but in the context of Hannah Arendt's sense of banality. Efficiency is measure of all things. To Ellul it is a new demon, he writes, "*la technique est devenue le milieu de vie de l'homme*" ("Technique has become the milieu of human life")<sup>[2]</sup>.

He saw this as a terrible thing; he was criticizing Taylor's "one best way" law of labor. Taylor declared, "In the past the man has been first. In the future the System will be first"<sup>[3]</sup>. Who can deny the accuracy of this? We live in the world Taylor made. Irrespective of the cultural and economic impact of Taylor and his disciples on the past century, must we continue to quantify human endeavors, if not our entire existence? Can we persist with this idea of an overarching singularity of method? Analyzing big data is number crunching by another name. Can we allow "the bottom line" to define the future? Contrary to Taylor's certainty that there is one best way to do something, we should consider varied approaches. We ought to recoil from the "flat earth" paladins of globalization as we recognize that our futures are multivalent.

We have no less an authority than Taylor himself to do so. In one of his final public lectures given only days before his death in 1915, declared

*Scientific management at every step has been an evolution, not a theory. In all cases the practice has preceded the theory, not succeeded it. In every case, one measure after another has been tried out until the proper remedy has been found. Every new element has had to fight its way against the elements that preceded it, and prove itself better. All the men that I know of who are connected with scientific management are ready to abandon any scheme, any theory, in favor of anything else that can be found that is better. There is nothing in scientific management that is fixed.*<sup>[4]</sup>

Anyone who knows about Taylor's career should not be surprised by this passage from the chameleon's enchiridion. The man who made his fortune mocking "the rule of thumb," here seems to be flying in the face of scientific endeavor by insisting, "Nothing in scientific management is fixed." Playing fast and loose with language has been the stock-in-trade of the business guru ever since. Taylor is not only the father of scientific management; he is the godfather of management consulting.

Midway through the 20th century, Jean-Paul Sartre stated, "Statistics can never be dialectics" (qtd by Jacques Ellul, p. 206). In response to this, Sartre's countryman and spiritual antagonist, Ellul offered

*The technical phenomenon is the main preoccupation of our time; in every field [people] seek to find the most efficient method. It is no longer the best relative means which counts, as compared to other means also in use. The choice is less and less a subjective one among means which are potentially applicable. It is really a question of finding the best means in the absolute sense, on the basis of numerical calculation*<sup>[5]</sup>.

Ellul argues that the technical traduces the artisanal model, and paradoxically disparages expertise acquired through experience in the service of quantification. Dialectics develop over decades, honed by study and debate within particular fields of knowledge. Attaining such knowledge requires a vigneron's labor. The fruit of which is expertise. Digging for data excises expertise from analysis<sup>[6]</sup>. Thus, easily explicable numbers and percentages are proffered with pride by misnamed quality controllers. Numbers may lie, but statistics can be made into anybody's game.

One cannot help but be reminded of Edmund Burke's famous description of Europe in light of the abuses inflicted upon Marie Antoinette during the French Revolution: "the age of sophisters, economists, and calculators has succeeded, and the glory of Europe is extinguished forever"<sup>[7]</sup>.

Calculating sophisters are bean counters by another name. There are other ways of assessing value. Would human civilization be better off if we knew what the gross domestic product of Periclean Athens was? or how Haroun al-Rashid scored on his evaluations? Such notions are laughable, but just these sorts of sophistic calculations determine the careers of artisanal professionals every day. Education and creative work are steeped in contexts that defy metrics. To attempt to quantify them should be abhorrent. The arrogance of the external analyst who presumes to weigh in on the

“product” of artisanal effort. “The assessments of artistic contributions rely on dialectics created for the task, often unique to not only the discipline but even the genre within the discipline. Notice that unlike Taylorism this model recognizes artistic communities as the best source of evaluation and analysis”<sup>[6]</sup>. I am not arguing for coterie culture that only applauds itself, but for a reconsideration of the correlation between direct experience and earned expertise. Taylorism impels the imposition of a global metric upon a local situation. Conversely, consider Ellul’s popularizing the phrase, “think globally, act locally”<sup>[8]</sup>. A significant obstacle to considering the future in this way is the popular perception of the future that it will be the “technopoly” envisioned by Neil Postman. We despair that it is inevitable; so, we should just give in to the technocrats. Technopoly is a totalitarian state not based on politics, but the “submission of all forms of cultural life to the sovereignty of technique and technology”<sup>[9]</sup>. Postman had many critics, who now sound like cheerleaders dismayed someone doubted that their team was winning the big game<sup>[10]</sup>. To be fair, in the late 20th and even into the early 21 century, no one could have grasped what we must contend with daily, that the technology of the smart phone enables the perversion of social media and social discourse.

Even so, there is a fundamental error in the popular presumption of future dystopia based on imminent technopoly. The technopoly Postman warned against had already come onto existence by the time of his death in 2003. This is not admonitory hindsight. It is recognition that we are all technopolitans now and have been for some time. Consider the statement, “I’m going off the grid.” A typical response might be, “Okay, Luddite. Don’t forget your tin-foil hat.” Nevertheless, let us not wax nostalgic for a tech-free Eden.

What one must be aware of is that the liberal, tolerant, and multivalent society that ostensibly advanced from the century of progress, conventionally dated from the Congress of Vienna to the outbreak of World War I, was a delusion. In this regard, a best-selling popular history from the late 20th century, *A Nervous Splendor: Vienna, 1888–1889* (Little Brown, 1979), marks the death of the liberal dream as occurring before the final decade of the 19th century, juxtaposing it with the suicide of the progressive Archduke Rudolf. A bit farther north and a few months earlier, the death of the earnestly liberal German Kaiser Friedrich was a palpable disaster for this dream. He was succeeded by his erratic, war-mongering son, Wilhelm II. We know how that turned out. Morton emphasizes the disillusion that was engulfing liberals at that time. Granted that Morton’s historiographic emplotting is not without its critics, Arens likens it to “docudrama” or a “historical travelogue”—while averring to its “historical accuracy”<sup>[11]</sup>. On the book’s last page, we learn of the birth of Adolf Hitler.

Of course this is not to say that liberalism died out completely, or even idealism, but it is clear that the bourgeois ideal of liberal harmony achieved through reform not revolution, hit a wall. It would have flare-ups, most notably after World War II with the creation of the United Nations, but a couple of decades later, the *soixante-huitards* showed how the left had lost faith in that sort the idealism of mere reform. It also seems to have been something of a knell for a decline of humanism. This perception may stem from the tendency of designers to leave human beings out of their projections. If you google images of “cities of the future” it takes scrolling through several screens before a recognizable human form appears. To one’s dismay, though not surprise perhaps, the human that appears is Jeff Bezos, enthroned against the backdrop of “Amazon’s City of the Future.”

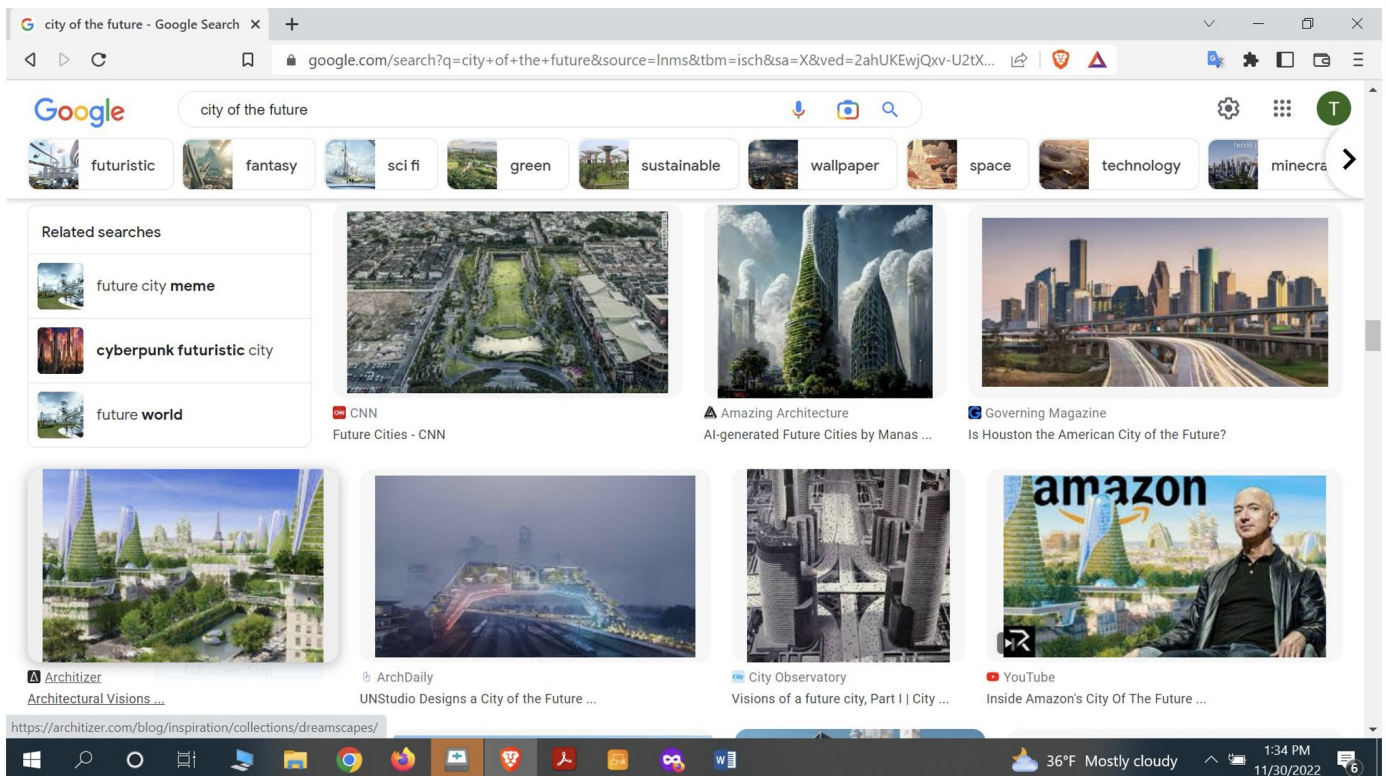


Figure 1. Source: [https://www.google.com/search?client=firefox-b-d&q=cities+of+the+future&tbm=isch&sa=X&ved=2ahUKEwi3pp-Une37AhXoGVkFHR\\_WBqQQ0pQJegQIERAB&biw=1280&bih=595&dpr=1.5](https://www.google.com/search?client=firefox-b-d&q=cities+of+the+future&tbm=isch&sa=X&ved=2ahUKEwi3pp-Une37AhXoGVkFHR_WBqQQ0pQJegQIERAB&biw=1280&bih=595&dpr=1.5)

So much for the average billionaire's perspective the person on the street. There is historical precedence for this. Recent utopian visions of the future in literature and film are relatively rare, even as they seem to abound in corporate vision statements. Is it that the more optimistic visions happened before the technological onslaught? One should be wary of such sweeping pronouncements.

Ogburn's famous cultural lag hypothesis has been criticized for regarding technology as a thing unto itself, or even dismissed as determinist, even as he allowed that culture could affect technology and vice versa. Cultural lag "occurs when one of two parts of culture which are correlated changes before or in greater degree than the other part does, thereby causing less adjustment between the two parts than existed previously"<sup>[12]</sup>.

Nevertheless, Ogburn's theory has survived for exactly 100 years. Imagine the world whence it came, in 1922, Ogburn was advised to come up with a different name for his hypothesis because "the cultural lag" sounded too much like a dance step<sup>[12]</sup>. The problem of technological determinism is still with us; McLuhan refuses to die. However, is determinism, that bête noire of sophisticates, really a "problem"? Today we may be experiencing a cultural lag in interpretation. By focusing so heavily on technology as the means of identifying what needs to be done to accommodate the future, we may lose sight of the complexity of human reactions. The current dismay over the rise of populism may be a political manifestation of this. It may be described as cultural backtracking. The conventional lag described by Ogburn may now be more like a chasm, which the technocrats of Silicon Valley will not be able to bridge with hubris alone. At the close of the 20th century, Postman, clearly drawing on Ellul, argued that we should build a bridge back to the Age of Enlightenment, "to

provide a humane direction for the future: inductive science, religious and political freedom, popular education, rational commerce, the nation-state, progress, and happiness”<sup>[13]</sup>.

The eclipse of humanism is seen in the privileging of numeracy over literacy is a *donnée* today. If one should refer to game theory in the company of calculators, it would probably be taken more seriously than say a reference to Shakespeare. Consider this though, how many people in the world will recognize “to be or not to be” as a quotation from *Hamlet*—even if they have never seen the play, whereas how many people would think that “game theory” has something to do with chess or football? Recall that in their book *The Theory of Games and Economic Behavior* (1944), von Neumann and Morgenstern assert that the mathematics developed for the physical sciences, which describes the workings of a disinterested nature, was a poor model for economics. A compelling connection between *Hamlet* and game theory was been made by the playwright Tom Stoppard. In his 1966 variation on Shakespeare, *Rosencrantz and Guildenstern are Dead*; Stoppard begins the play with the title characters tossing a coin. Rosencrantz defies all odds by flipping heads ninety-two times in a row.

Recently, I overheard a portion of a podcast by two game theorists, and being a devout literary and historical humanist, I was particularly struck by their referring to Philip Sidney’s *The Defense of Poesy*. They were enthralled with Sidney’s idea that poetry is not “enclosed within the narrow warrant of her gifts.” This was another heartening example of the humanities and the sciences in harmony. Edmund Burke’s “economists” assume omniscience, but in a post-Marxist world, where behavioral economics challenges the foundations of formulaic forecasting, their certitude is being severely tested.

The dissatisfaction, to put it mildly, with public punditry should not be surprising to anyone who pays attention to history. To offer an example, Thomas Friedman, of the New York Times, had no idea how accurately the title of his book, *The World is Flat* reflected his obscurantism. Friedman has survived three decades of always being wrong, but remains secure in his own brilliance<sup>[14]</sup>. Friedman’s career demonstrates how journalism is a mug’s game--not in theory-- and why futurists do well to reject prediction.

In spite of earlier signaling the Enlightenment, my argument is not in thrall to the past. Consider two utopian speculators, Louis-Sébastien Mercier from 18th century France and William Morris from 19th century England envision a rosy future. Mercier’s *L’An 2440: Rêve s’il en fut jamais* (“The Year 2440: A Dream if There Ever was One”) in particular amplifies “the cliché-ridden Utopian novel of his day by using the genre as a means of investigating the future.”<sup>[15]</sup> He is the precursor of Morris, Huxley, Orwell, and others. Ludlow praises Mercier for “his prophecy of the events of 1789,” even as he records Mercier’s idealized vision of a peaceful revolution wrought by a philosopher king in the 25th century<sup>[15]</sup>. Mercier and Morris are commenting more on political futures than technological ones. William Morris’s *News From Nowhere* (1889) does react to the industrial revolution, whose effects he is famous for trying to mitigate, with his the arts and crafts movement. Morris’s novel takes place in the year 2102, after a civil war has destroyed the class system. Indeed, it has eliminated all the systems that had corrupted humanity to the point that “humanity” had been lost. Morris questions social differences, the novel’s narrator asserts, “Political strife [is] a necessary result of human nature.” Old Hammond, scoffs, “What human nature? The human nature of paupers, of slaves, of slave-holders or the human nature of wealthy freemen?” (Morris 1893)<sup>[16]</sup>. Morris describes a socialist utopia in which all work at jobs that they find satisfying and all

inspiration comes only from nature—even education draws on the natural world not schools and humankind is redeemed. The more one tries to determine determinism, the more indeterminate it becomes. Ellul was accused of determinism, yet claimed to despise it. He writes, “Each of us, in our own life must seek ways of resisting and transcending technological determinants. Reality is a combination of determinisms, and freedom consists in overcoming and resisting these determinisms<sup>[5]</sup>. Yet, later he declares, “We are today at the stage of historical evolution where everything that is not technique is being eliminated” (84).

Which brings us to The Polak Problem, or has *The Journal of Futures Studies* calls it “the Polak Game”<sup>[17]</sup>. Frederik Polak has a problem: he does not take mood into account or immediate emotional circumstances Polak’s optimism/pessimism dichotomy is used as a runway for modeling. Polak brings us back to the dragon that refuses to be slain, determinism. His dichotomy is worth quoting in full to grasp his confidence in his conviction,

*It will be helpful to make distinctions between optimism and pessimism along the lines of the concepts of **Seinmüssen**, “what must be,” and **Seinsollen** “what ought to be.” It would then be possible to speak of **Seinoptimismus** or **Seinpessimismus**, which we will refer as essence-optimism or essence-pessimism, and **Willenoptimismus** or **Willenspessimismus**, which we shall refer to as influence-optimism or influence-pessimism. The essence categories refer to an unchangeable course of events; the influence categories refer to the supposed or rejected possibility of human intervention. The first point of view sees history as a book that has already been written; the second sees history as a process than man can or cannot manipulate.<sup>[18]</sup> The image of the future (translated and abridged by Elise Boulding. San Francisco: Jossey-Bass / Amsterdam: Elsevier, p. 17).<sup>[18]</sup>*

Polak is even more than deterministic; he is essentialist. What is a futurist to do? I would argue that communicating via narrative, rather than through models or graphic projections, offers a more humane way of presenting ideas about the future. Instead of scatter plots use poetic plots. Rather than flights of formulaic fancy, try to describe in human terms another human condition, as we slouch toward who knows where.

Finally, I will offer some graphic evidence that will lead to a narrative conclusion for futures study. Here is Claude Shannon’s model for his communication theory.

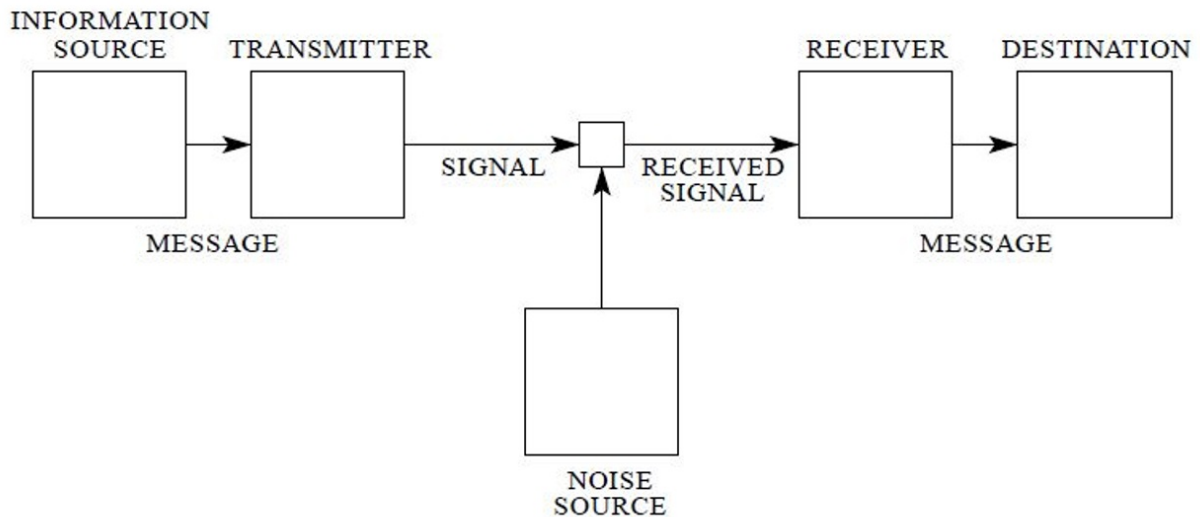
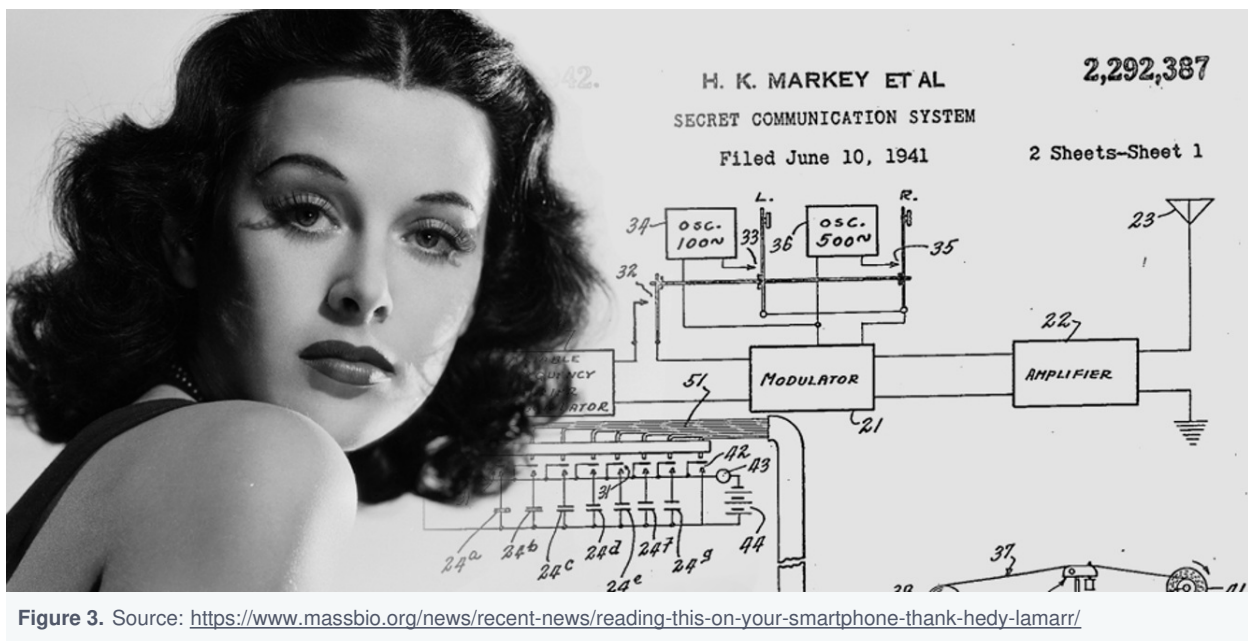


Fig. 1—Schematic diagram of a general communication system.

**Figure 2.** Source: Shannon C. E. (1948) "A Mathematical Theory of Communication." Reprinted from *The Bell System Technical Journal*, Vol. 27: 379–423, 623–656. <https://people.math.harvard.edu/~ctm/home/text/others/shannon/entropy/entropy.pdf>. p. 2).

This is Shannon's communication theory model. For the purposes of illustration, the "information source" past may be considered as the past; the "destination" is the future. The "noise" is the present, and the Internet is cacophony. I just want to point out noise that is always present, always getting in the middle of the message. Consider this image:



**Figure 3.** Source: <https://www.massbio.org/news/recent-news/reading-this-on-your-smartphone-thank-hedy-lamarr/>

The woman is Hedy Lamarr, the MGM movie star. In the 1930s and 40s, she was hailed as "the most beautiful woman in the world." However, she had one of the most amazing minds in the world. She grew up in Vienna<sup>[19]</sup>, the daughter of an engineer. As a toddler, fascinated by a music box, she took it apart and put it back together again. Thenceforth her father

spoke to her as a colleague. She married a munitions magnate and Nazi sympathizer and played dumb while his guests discussed the latest technical innovations, nevertheless keeping those details in the back of her mind. The story of how she fled her tyrannical husband would daunt any moviemaker. As would her wily ascent to stardom. When World War II came, she wanted to do something for the Allies. One night she watched her friend the avant-garde composer George Antheil tinkering with a player piano. As he mechanically changed its keys, she made a connection between that and radio frequencies. She devised a method that enabled “frequency hopping” among radio waves, with both transmitter and receiver hopping to new frequencies concurrently. A torpedo could strike its target undetected. She used her married name. “Markey,” on the patent.



Aug. 11, 1942.

H. K. MARKEY ET AL  
SECRET COMMUNICATION SYSTEM

2,292,367

Filed June 10, 1941

2 Sheets-Sheet 1

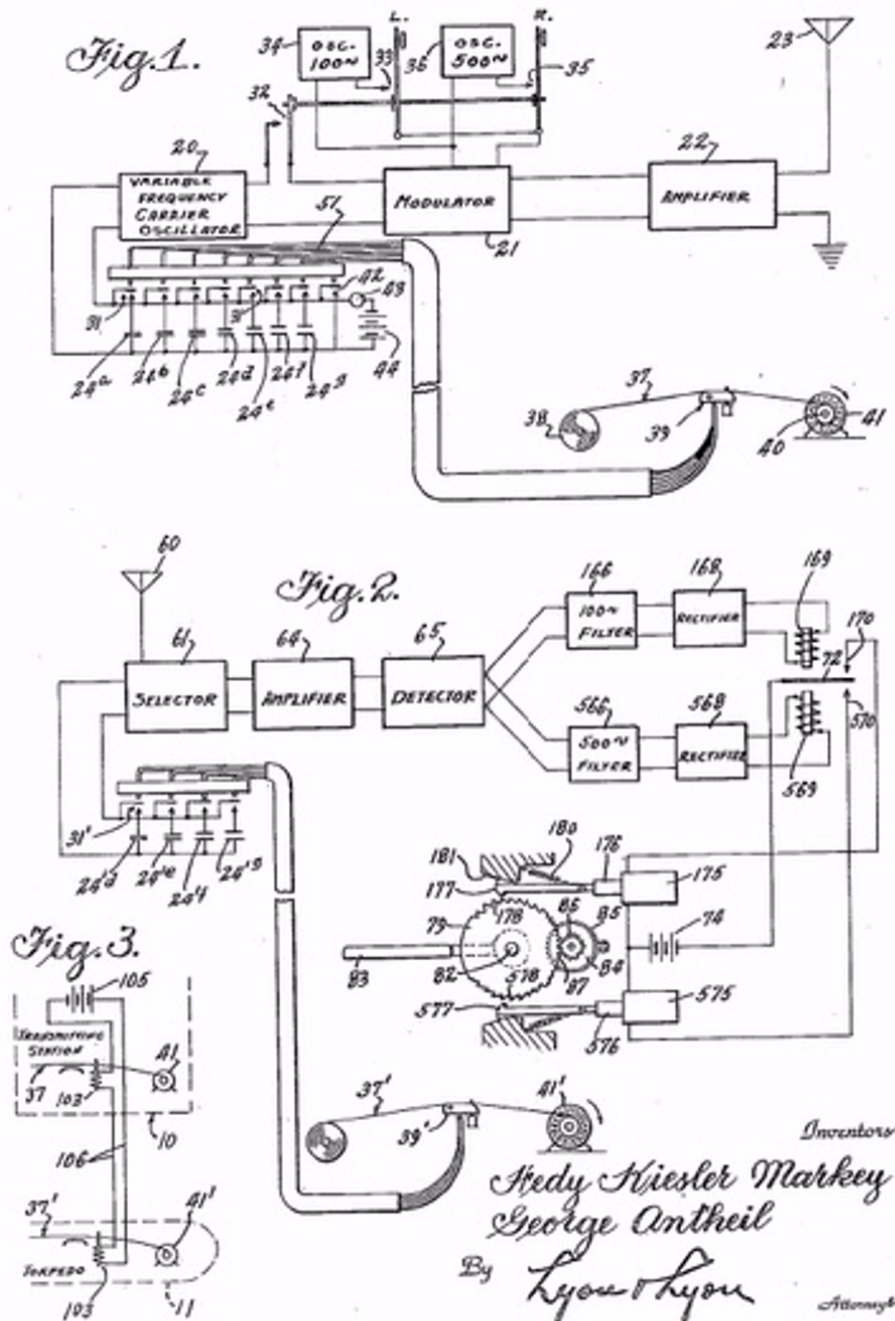


Figure 4. Source: "Hedy Lamarr's Patent." <https://airandspace.si.edu/multimedia-gallery/4790640jpg>

Her idea was too technologically advanced for the World War II navy, but in the 1950s it began to catch on and ultimately led to Wi-Fi, GPS, Bluetooth, and so much more. Now, for a narrative of futures thinking: if you saw a little girl playing with a music box would it occur to you that it would lead to a fundamental change in the human condition? Remember Hedy

Lamarr's story for the future.

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