

Who Invented Television?

A trenchant comparison of real life with Aaron Sorkin's Broadway play, "The Farnsworth Invention."

By Greg Vitiello

Who invented television? In his new play titled "The Farnsworth Invention," Aaron Sorkin leaves no doubt that the achievement belongs to the eponymous Philo T. Farnsworth, a boy genius who intuited the medium's workings while still a high-school student in Rigby, Idaho. Clearly, Sorkin might have chosen another title, leaving the theatergoers in suspense whether the true inventor was Vladimir Zworykin, who filed an earlier patent than Farnsworth, or RCA magnate David Sarnoff, Zworykin's employer and the ultimate winner of the protracted struggle to rule television's commercial development.

Not that Sorkin ignores the issue. We learn much about the science underlying Farnsworth's and Zworykin's decades-long efforts to transmit a picture, and get an abbreviated version of the legal battles between RCA and Farnsworth. And yet Sorkin's dramatic aim is larger than a saga of warring claims. It is

the story of television (hence, "The Farnsworth Invention") in the context of commercial, economic and political events underlying its creation.

As the creator of *The West Wing*, television's incisive look at the American presidency, Sorkin has the credentials and insight to explore a major institution and its impact on a nation's citizens. He is also the author of a successful court-martial drama, "A Few Good Men," which appeared on Broadway in 1989 when Sorkin was 28 years old. "The Farnsworth Invention" represents his long-awaited return to the stage.

Unfortunately, Sorkin tries to pack too much into the two-hour drama that opened in December 2007 at New York City's Music Box Theater. He opts for speed and breadth rather than depth. His cleverly written, often witty, well-staged work leaves us emotionally distanced, wishing we learned as much about Farnsworth and Sarnoff as we do about cathode tubes. One of Sorkin's most



"The Farnsworth Invention" onstage: (l-r) Jimmi Simpson as Philo T. Farnsworth and Hank Azaria as David Sarnoff.

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ingenious devices moves the story along but contributes to the chill: He relies on Sarnoff (played by Hank Azaria) to tell Farnsworth's story and Farnsworth (Jimmi Simpson) to recount Sarnoff's tale, though occasionally they jump into each other's narratives and contest its version of the facts.

In truth, they never met, though the play depicts an encounter in which Sarnoff offers Farnsworth a job. But as Sarnoff quickly admits, the meeting exists merely in his imagination. The fantasy suggests a soupcon of guilt for his dismissal of Farnsworth's legitimate claims as the inventor of television, and for his description of the inventor as a "hayseed savant."

And though one character attacks Sarnoff's behavior as "corporate espionage," Sorkin lets the RCA magnate off quite lightly. Certainly we see Sarnoff's capacity for guile, not least when he dispatches Zworykin to Farnsworth's San Francisco laboratory to gather intelligence about the young inventor's technological edge. Still, in "The Farnsworth Invention," Sarnoff comes off as a likable, though ruthless businessman who's merely pressing his financial advantage by outspending Farnsworth in the battle for the right to control television.

In Sarnoff's world, there is no room for compromise or capitulation. During his lifetime, he frequently boasted that he never paid royalties. Instead, he hired legal staffs to defend RCA's patents, however they were acquired.

In "The Farnsworth Invention," the only indictment of Sarnoff's behavior comes from his wife Lizette who confronts him, saying: "I think you just stole television." She is equally contemptuous of the medium, calling it a "toy for rich people." Sarnoff counters



Philo T. Farnsworth and Mable Bernstein inspect one of the first portable TV cameras, built in 1934.

Farnsworth Papers, Arizona State University

her, promising television will "end war...and cure illiteracy." Members of the audience laugh, knowing television's limits as well as its strengths.

If the play is not an indictment of corporate espionage, what is its author's perspective? In an interview with *The New York Times*, Sorkin calls the play "an optimistic story about the spirit of exploration." Thus, Sarnoff becomes a fellow explorer, eager to

develop the new medium, rather than an exploiter of Farnsworth's invention. Sorkin even notes that when he read up on the two men, "I began, suddenly, to identify with Sarnoff. It's pure

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coincidence, but he happens to come from the same shtetl [in Russia] as my grandparents."

In one of the play's brief tableaux,

we see Cossacks burning the Sarnoff's Russian home when the boy is just ten years old. How does the experience mark him? Apparently it fills him with determination to leave Russia and its bigotry behind him. Instead, he embraces his new life in America, quickly teaching himself to speak accent-free English and rising through the ranks of American Marconi Company while still in his teens. The sinking of the *Titanic* becomes his "exclusive," as he wires minute-by-minute news of the ship's survivors to an anxious nation.

Sarnoff's youthful feats are more than matched by Farnsworth's, as depicted in Sorkin's play. One scene shows the young Farnsworth requesting that he skip basic science and take the advanced chemistry course. When his teacher, Justin Tolman, turns down his request, he appears the next day with a pile of completed homework assignments for the entire year. Soon, Farnsworth is using the class blackboard to draw his sketch of a device that can produce a television image by manipulating electrons. Decades later, Tolman will produce one of Farnsworth's early drawings in court as evidence that the boy was the true inventor of television.

Occasionally theatergoers may feel overloaded by the play's scientific information. Even before the curtain rises on "The Farnsworth Invention," the scrim displays a set of intricate diagrams showing the workings of a television set. And during the next two hours, we will learn far more about the technical minutiae that would enable inventors to develop the television medium.

But to Sorkin's credit, his explanations are clear, informative, and often even witty. After all, the scientific details are essential to understanding the differences between Farnsworth's image

dissector and Zworykin's iconoscope, and the role of a cathode ray tube with a perfectly flat end, created by Farnsworth's brother-in-law, an amateur glass-blower, in advancing Farnsworth's work.

Sorkin is not the first playwright to require theatergoers to brush up on their science. In recent years, New York audiences have lauded Tom Stoppard's "Arcadia," Michael Frayn's "Copenhagen" and David Auburn's "Proof," all of which involve arcane knowledge of physics and mathematics. Are we congratulating ourselves that we "get it"? I don't think that's the point. Rather, skilled playwrights are embedding crucial information about these subjects in their heady – and entertaining – plays.

Where Sorkin shortchanges his audience is in his failure to flesh out his two competing characters. At best, we get glimpses of Sarnoff's overpowering blend of slickness and drive. And we see Farnsworth as an overwrought genius, bending under the pressure of trying to produce moving images before his seed money runs out. When his young son dies, Farnsworth turns to drink. As Sarnoff will later say of his rival, "He died drunk and a joke and in obscurity." This cheap shot undermines Farnsworth's battle against huge financial odds to commercialize his discovery.

Sorkin compresses the court battles, which actually consumed almost a decade, into several minutes. We see Tolman being grilled by RCA's lawyers and Farnsworth losing his rightful patent claim (though Sarnoff, recalling the events years later, says he doesn't remember precisely who won which of the various trials). In reality, the court battles ended in 1939 with Farnsworth being awarded "priority

of invention.” At that time, Sarnoff reluctantly paid Farnsworth \$1 million plus licensing fees for his invention. But even then, the RCA juggernaut would move forward relentlessly, developing the sales potential of television. Even bolstered by the settlement money, Farnsworth’s own venture would be unable to compete.

The issue here isn’t simply what happened in and out of court, but what makes compelling theater. We might have benefited from a more complete depiction of Farnsworth fighting through years of frustration before he achieved his first television picture. Similarly, seeing him more clearly endure the succession of court battles might have helped us understand how he succumbed to depression and alcoholism. Sarnoff is also deprived of some of his complexity, blurring his ascent to the pinnacle of television broadcasting.

Instead, we get a long scene on the floor of the New York Stock Exchange on the day of the 1929 market crash. Its relevance? The play indicates that money will become difficult to come by, thus increasing the odds that Farnsworth will ever realize his vision. In fact, Farnsworth did press on and in 1934 managed to present the world’s first public demonstration of a fully electronic television system. The play includes other key historical moments, such as the first moon shot and landing. In a lighter vein, Sorkin offers a flatly written scene in which Mary Pickford, Douglas Fairbanks and other motion-picture luminaries visit Farnsworth’s lab, only to have the scientist mistake Fairbanks for Charlie Chaplin. The scenes place television in a historic context, but add little to the story’s emotional arc.

It may be noteworthy that Sorkin originally set out to write a film based on the memoir of Farnsworth’s wife Pem. And indeed the play’s short takes have a cinematic quality to them. Equally, the two acts might have formed the pilot for a new television series. Is this why the author adhered to a two-hour time span when he had a more expansive story to tell?

I don’t mean to carp or impose my own vision for a play based on these two intriguing figures, because “The Farnsworth Invention” offers an entertaining, informative view of a pivotal time in the history of television. The play also provides interesting glimpses of the two men’s visions for television. They imagine that the medium will be a conduit for great speeches, great music and the telling moments of history. But Sarnoff’s early belief that television will be a public service fades when he realizes the lucrative possibilities of selling advertising space.

What is Sorkin’s vision for the medium? As a writer for *The West Wing*, he knows that television can both entertain and inform, treating political issues with complexity. He chooses to end “The Farnsworth Invention” with a flashback to Farnsworth in a bar watching the moon landing – one of television’s finest moments but cold comfort for its inventor.

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