

A Real-Life Case: Vox on Technology Adoption

Launched to great fanfare in 2014, the news, politics, and culture website Vox promised to transform the world of online journalism. Funded by millions of dollars from major investors, and boasting a large pool of talented, well-known journalists, the site's hook was simple: it would explain the news in digestible, easy-to-understand stories for those who were not already news junkies. Headed by blogging stars Ezra Klein and Matthew Yglesias, the site attracted considerable attention.

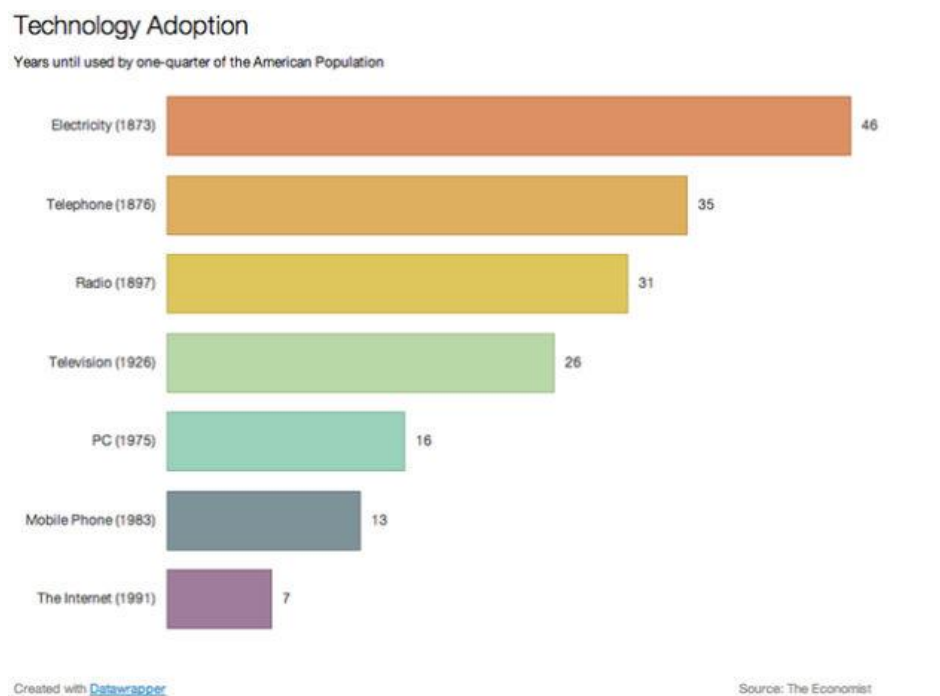
However, Vox's first year has also demonstrated the difficulty of digesting the news into bite-sized chunks without causing distortion and simplification. Vox was repeatedly accused of "dumbing down" the phenomena it was reporting on, leaving out complexity and ambiguity in favor of easy slogans and sound-bites. These criticisms echoed earlier, similar criticisms of cable TV news stations, which have perennially been accused of preferring simplistic headlines over accuracy. Additionally, some argued that Vox's methods required its writers to perform "aggregation" which resulted in adding little to others' work and approached plagiarism.

Kelsey McKinney's Piece on Technology Adoption Rates

One early controversy for Vox concerned a piece by Kelsey McKinney. McKinney argued that the rate at which society adopted new technologies was consistently and significantly increasing over time. Critics argued that McKinney's piece was misleading and filled with distortions based on manipulated or poorly-discussed data. In particular, Matt Novak of Paleofuture argued that McKinney's piece violated several cardinal sins of how to write about data and technology.

Cardinal Sin: Trusting Data that Looks Too Good to be True

The original post from Vox featured the following chart, purporting to show the length of time that it took one quarter of the American population to adopt a given technology:



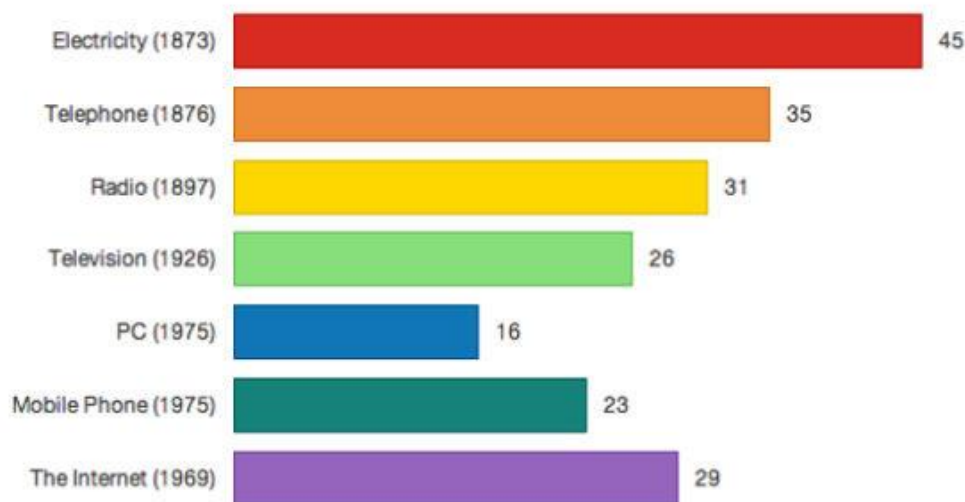
Note that this chart is arranged by date, from oldest to newest, suggesting that the rate of technology adoption shrank in remarkably consistent intervals.

Even before going into specifics, this chart should give us considerable pause. This data seems to fit McKinney's argument very well – in fact, *too* well. Data in the real world is almost never this clean! It would be remarkable if a naturally-occurring trend was as consistent and steady as this one. Novak argued that this was the result of arbitrary, shifting definitions of when a technology is invented—that is, that McKinney had gathered the data in a way designed to arrive at a particular outcome.

When he corrected the dates of invention, using a more consistent and valid definition of invention dates, he got this chart:

Technology Adoption

Years until used by one-quarter of the American population



Created with [Datawrapper](#)

[Get the data](#)

Clearly, this portrays a much less regular, much less easily-interpreted picture than McKinney's chart. Here we see the importance of consistent definitions for terms like "invention"; without a specific and clear method for determining fuzzy concepts like invention, we are always at the mercy of misleading data.

Cardinal Sin: Arbitrary Units of Measure

Novak demonstrates in his piece that the standard of 25% adoption rate that McKinney examines is an arbitrary one, and that by looking at different standards, such as time to 5% or 50% adoption, the trend looks very different. This suggests not that 5% or 50% is a preferable standard but that units such as these can often mislead, like looking at a graph with an arbitrary scale. It's necessary to look at such phenomenon from several different scales in order to be responsible.

Cardinal Sin: Covering Up Mistakes

Critiques like Novak's prompted a quick response from Vox, with the original piece changing dramatically from its original version, including changing its title and making significant and multiple changes to its text. Unfortunately, many of these changes occurred without notation or admission of error, leaving readers to guess what had changed, how, and why. Only after this omission was pointed out by many in the media did Vox append a correction that explained some of these changes. This has been another common complaint about Vox: very often, pieces on the website are altered without specific notation of which problems were fixed and why, instead often only being marked "Updated." This leaves readers unable to correctly ascertain what the original problems were and how they were fixed.

Discussion Questions

1. Read Vox's altered post. What problems do you think have been addressed in updates? Do any obvious problems still remain?
2. Consider the question of changing rates of technology adoption. What would be a more responsible, consistent way to research this question? Is there any "correct" way to do so?
3. Read Matt Novak's piece. Does Novak fall into any fallacies himself? Are there reasonable responses to any of his critiques?
4. Consider Vox's tendency to correct posts without notation. What would be a better corrections policy? How can a corrections policy be crafted that allows for the flexibility needed for web publishing that still empowers readers to understand what mistakes were made and how they were corrected?