Small Typos With Huge Consequences

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Stories of Small Errors That Resulted in Enormous Problems

When a newspaper publishes a typo it can be a source of tremendous embarrassment. When NASA programmers commit a typo, the consequences can be catastrophic! Read about this and similar major incidents—alternatingly comical and tragic—caused by seemingly minor typos. These include gaffes that make virtually every driver in New York guilty of DUI, a $225 million faux pas, a death row convict saved by a missing word, an entire food industry propelled into prominence by a misplaced decimal... and more.

Try as they may, all print publications suffer typos from time to time. Even the largest and most prestigious newspapers have been known to commit them.

When a news behemoth like *The New York Times* goes to press with a typo it can be a source of great embarrassment. Usually, though, the consequences are not very severe. Other typos can be downright catastrophic.

Here are some of the most startling print errors of recent memory—some comical and some tragic.

Most Expensive Hyphen in History

When the United States announced in 1955 that it would send satellites into space, its nemesis, the Soviet Union, quickly announced that it would do so as well. Two years later, on October 4, 1957, the Soviets successfully launched Sputnik (Russian for "traveler"), the first man-made object to be placed into the Earth's orbit.

America panicked. In 1958, Congress created NASA to beat the Soviets to space at any cost. The "Space Race" was on.

Mariner 1 lifts off on its historic voyage.

NASA officials present a model of the Mariner to President Kennedy.

Mariner 2 on its mission to Venus, the first successful planetary encounter. It was an exact copy of Mariner 1 built as a backup and was launched five weeks after the failed Mariner 1 attempt. Right: Russia's Sputnik that triggered so much paranoia in the West.

It was a race as much about propaganda as it was about the military benefits of a space-capable rocket. The US and USSR represented conflicting ideologies, each vying to convince the rest of the world (and their own people) of its superiority. Space was the "final frontier," and the unspoken assumption was that the first to conquer and dominate it possessed the greater ideology and system.

Over the next four years, NASA made history on several occasions, such as launching the first weather satellite in 1960. Nevertheless, the Soviets pulled off the ultimate propaganda coup in April 1961, when it put the first man, Yuri Gagarin, in space, who was hailed worldwide as a hero. (Ironically, the Soviets did not announce the flight until after it had been successfully completed, showing it feared failure and the international embarrassment that would have ensued.)

Refusing to be outdone, President John F. Kennedy promptly and boldly promised to land a man on the moon before the end of the decade. He earmarked a generous sum—$554 million—for NASA toward that ambitious goal. One of the projects was the Mariner program. Mariner 1 was to be the first spacecraft to make a flyby of a neighboring celestial body (the planet Venus).

On July 22, 1962, at 9:21 in the morning, Mariner 1 was launched amid great pomp and fanfare. Shortly after takeoff, though, something went seriously wrong. NASA realized it had lost control of the $80 million spacecraft, which was now little more than a massive, unguided missile capable of crashing anywhere, including in a populated area. The Range Safety Officer in charge was forced to abort the mission less than five minutes after launch, causing the expensive spacecraft to self-destruct.

During those first few days of desperate scrambling to identify the cause of the problem, many theories flew around. During an early congressional hearing, a top NASA official stated only that a computer error resulted in loss of control on the spaceship. However, five days after the accident, *The New York Times* published a bombastic headline: "Venus Rocket Lost Due To Missing Hyphen." The problem could be traced back to one tiny hyphen that was accidentally left out of the computerized guidance program. That's right—one small missing hyphen was responsible for the entire debacle!

A NASA programmer had missed the symbol while entering critical data into the rocket's computerized guidance system. Richard Morrison, a NASA official, testified before Congress that the hyphen "gives a cue for the spacecraft to ignore the data the computer feeds it until radar contact is once again restored. When that hyphen is left out, false information is fed into the spacecraft control systems. In this case, the computer fed the rocket in hard left, nose down and the vehicle obeyed and crashed."

The story received wider coverage in a book published in 1968, that described the missing line as "the most expensive hyphen in history." Bear in mind that in today's terms, the Mariner 1's cost equals $630 million, or around 7% of NASA's $1.2 billion budget for 1962!

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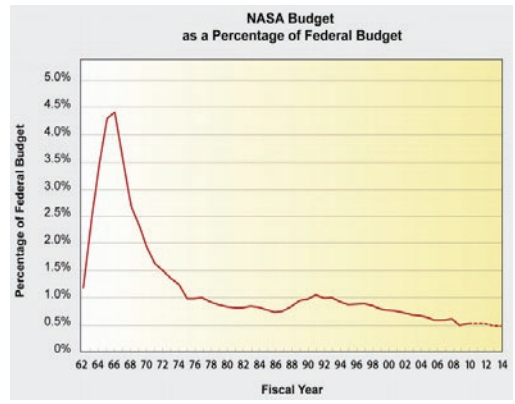
The Mariner 1 incident may have been the first, but it was not the last time NASA suffered such a costly accident due to a seemingly minor error. In 1999, the Mars Climate Orbiter went out of control on its descent to Mars and crashed. The reason? Engineers forgot to convert programming information from American to metric measurements.

During construction of the spacecraft, Lockheed-Martin Corporation programmed the equipment using inches, feet and pounds. The NASA staff that sent up the orbiter, however, programmed their calculations in meters and millimeters. Because of this confusion, wrong information was fed to the spacecraft's navigation systems and it sealed its fate.



America earmarked fantastic sums for NASA in order to beat the Soviets in the "Space Race."