

PONG: A Game For Everyone

Impactful new technologies are often the product of collaboration between several great minds contributing ideas over time; however, occasionally, contributions from a single individual changes an entire industry and the rest of us view from afar in awe. Much like Claude Shannon's contributions to information theory or Walt Disney's contributions to the animation industry, Nolan Bushnell influenced the direction of the electronic games industry. One of Bushnell's most successful business endeavors, Atari, created PONG: the first commercially successful video game. PONG was rare in that it influenced the direction of the games industry, was enjoyed by all who played, and even disrupted the way in which local bars, both in California and abroad, attempted to earn money from their customers.¹ Unfortunately for Atari, knockoff versions of their prized game became popular and minimized PONG's earning potential because the name PONG was not trademark protected in time.^{1,2} With that said, Atari still enjoyed much success from their work, and the world still acknowledges Atari as the founder of the universally loved game.

The early 1970's was a busy time for Nolan Bushnell. After quitting Ampex in 1971, Bushnell started Syzygy with his former coworker, Ted Dabney, to focus on developing their first joint endeavor, Computer Space.¹ Computer space was quite successful in its own regard, as it brought in over three million dollars. The game, however, was still considered to be a commercial failure due to its complicated instruction set. After originally partnering with a company called Nutting Associates (a traditional pinball company), Bushnell and Dabney

¹ Sito, Tom. (2015). Moving Innovation: A History of Computer Animation. Cambridge, MA: The MIT Press.

decided to break their ties with the company in order to create a new look for themselves and to start a new game.¹

In the summer of 1972, Bushnell, Dabney, and their new business partner, Larry Bryan, started Atari in Sunnyvale, California – a major startup area in Silicon Valley. The unique environment at their new startup company proved to be largely influential in the type of work they created. One of their first major projects, PONG, was largely kept a secret from the employee that worked on it. Bushnell saw the potential in such a game after discussing the idea with a friend, and wanted his newly hired engineer, Alan Alcorn, to work on the game without knowing its importance to the company. This was because the project was so simple that Bushnell didn't want his new hire to lose faith in his creative ability. It was also because he wanted Alcorn to prove himself worthy to take on some of the more challenging work Bushnell kept to himself.¹ Alcorn took about a month to finish the task, and by late September of the same year, Bushnell introduced Alcorn's prototype to a local bar in Sunnyvale. Incredibly, the game that was propped up by wine barrel was a huge success. PONG's prototype was bringing in around three-hundred dollars a week, which was six times more than the bar was earning from their pinball machine.¹ The plug and play machine contained a coin box that became jammed with quarters, since it was played so much. Even though the machine was bringing in a lot of money, the owner of the bar became incredibly annoyed with the machine that was drawing customers away from the actual bar to buy drinks. PONG changed the direction of the electronics game industry, which had only recently come into the public's eye.

PONG is a very simple game to play. The idea comes from the game of tennis, where the player controls a paddle and simply bats a ball back and forth across a line. The user could play against another user or against the computer itself; however, the former tended to happen more

often due to the high demand of the machine.² When the ball passes the user's end of the court, that player loses. The instructions for the game were so simple, the entire instruction set fit on the front side of the game box, "Avoid missing ball for high score." The game was entirely black and white and could be understood after just a single game, which was unprecedented at the time.

The initial seven-hundred and fifty dollar investment turned into two billion dollars in just a few years. One of the reasons for PONG's quick success was the way in which it was played. PONG was the first electronic game that didn't include complicated command-line instructions requiring extensive knowledge of computer systems in order to play; its simplicity afforded its quick adoption by a primarily non-technical customer base. Its initial location proved to be important in its adoption as well. Since the game required just one hand to play, customers could drink beer while playing the game. PONG was a social game, and this was reflected in the way in which people played it.

A significant, yet often overlooked, reason for its quick, wide-spread adoption was due largely to its universality. The game didn't rely on the understanding of cultural customs or any particular language, which made it globally understood. PONG was truly the game for everyone. For a period of time, it was even played in Japan – all the way across the Pacific Ocean from where it began. PONG knockoffs began to pop up across the United States and abroad, which was a testament to its universal nature. Another reason for PONG's success was the environment it was created in. The environment that Bushnell created at Atari from the very beginning was one that was conducive to creative thinking. Both the experienced founders of Atari and the

² The Centre for Computing History. Atari PONG. Retrieved April 8, 2017, from <http://www.computinghistory.org.uk/det/4007/Atari-PONG/>

newly hired employees dressed casually to work, and the social hierarchy that normally exists between bosses and their employees was virtually non-existent at Atari. The employees of Atari were even described as “a bunch of Led Zeppelin-loving, herb smoking hippies” by their visitors.

Among the computer graphics community, PONG is largely considered to be one of the great early works in motion graphics. Prior to PONG, most electronic games were text-based and required an extensive knowledge of the underlying computer system upon which they were run. PONG changed this model in 1972 when it was the first game that could be played by simply watching the movement of real-time graphical images on the screen. The environment at which it was created and this stark difference in the way it was played from traditional systems, played the largest role in its universal adoption; however, it must be noted that the game was universal in nature from the beginning. Anyone around the world could play the game without understanding the culture or language from where it originated. PONG was a game that promoted socializing, and many who played the game did so with their friends. PONG’s social universality and influence on the electronic games industry is why we still remember it forty five years later. Derivative versions of the game emerged in Europe during the mid-seventies, but PONG’s origin in Sunnyvale, California was never forgotten.³ PONG reaches beyond the time and cultural boundaries that prevent most technologies from reaching its level of regard due to its exceptional ability to attract people from various backgrounds together to play.

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

³ Winter, D. (2013). Pong-Story : Main Page. Retrieved April 9, 2017, from <http://www.pong-story.com/intro.htm>