



People love pong.

They do. But why?

Really. What's to love? There isn't much to the game: a pair of paddles move two blunt white lines on either side of a black screen, a blocky excuse for a ball bounces between them, and if you miss the ball, your opponent scores a point. The first player to score fifteen points wins. Big deal. Yet despite its almost primitive simplicity, Pong creates meaningful play.

In video game years, Pong is ancient. Originally designed by Ralph Baer for the Magnavox Odyssey home video game system, in 1972 Pong was engineered into an arcade machine and a home console by Nolan Bushnell and Atari. It is no exaggeration to say that Pong was an overnight sensation. The first prototype was released to the public in a bar called Andy Capp's, in Sunnyvale, California, near the Atari headquarters. According to computer game historians, the first night that the glowing TV monitor and cabinet were installed in a corner of the bar, patrons were intrigued but confused. The instructions read only, *Avoid missing ball for high score*. Someone familiar with quarter-operated pinball machines eventually plunked in a coin and watched the ball shoot from side to side as the scores racked up. One of the players finally nudged a paddle, and the ball bounced off with a satisfying "pong" sound. That was enough to tell them what to do, and they began to play. By the end of the first game, both players had learned to volley. By the end of the first night, everyone in the bar had tried a game or two. The next morning, a line had formed outside Andy Capp's: people couldn't wait to play more Pong.¹

Pong is still alive and well today. You can play Pong via emulators and in Internet banner ads. Clever homages to Pong such as Battle Pong and Text Pong thrive on the web. Pong features prominently in classic gaming flea markets and fan conventions. The game publisher Infogrames released a souped-up, 3D version of Pong a few years ago. Most importantly, the original is still fun to play. When the Super Pong Games IV at gameLab is hooked up to the TV, it never fails to gather a crowd.

All of which brings us back to the question: Why? Why do people love Pong?

Although this is not a book about Pong, or about computer and video games, it is a book about game design. It is crucial for game designers to understand why people play games and why some games are so well-loved. Why do people play Pong? We can think of many reasons:

PREFACE

It is simple to play. The one-line instructions and intuitive knob interface makes Pong approachable and easy to understand. There are no hidden features to unlock or special moves to learn.

Every game is unique. Because the ball can travel anywhere on the screen, Pong is an open-ended game with endless possibilities. Pong rewards dedicated play: it is easy to learn, but difficult to master.

It is an elegant representation. Pong is, after all, a depiction of another game: Table Tennis. The abstracted nature of Pong, where your avatar is reduced to a single white line, creates an immediately satisfying physical and perceptual relationship to the game.

It is social. It takes two to play Pong. Through playing the game, you interact with another human being. Pong's social circle also extends beyond two players: it makes a great spectator sport.

It is fun. Simple though it may seem, it is genuinely fun to interact with Pong. Players derive pleasure from the game for many different reasons, from the pleasure of competition and winning to the satisfyingly tactile manipulation of the knob.

It is cool. As a cultural artifact, Pong is a poster child for the hip, low-fi graphics of classic arcade gaming. It evokes nostalgia for afternoons spent in the living-room with friends, huddled around the TV playing video games, eating Cheetos and swigging Mountain Dew.

People love Pong for all of these reasons and more. The interactive, representational, social, and cultural aspects of Pong simultaneously contribute to the experience of play. Games are as complex as any other form of designed culture; fully to appreciate them means understanding them from multiple perspectives.

Pong and the games of its time did something revolutionary. They turned the one-way interactivity of the television on its head, transforming viewers into players, permitting them not just to watch a media image, but to *play* with it. This two-way electronic communication engaged players in hours of meaningful interaction, achieved through the design of a white ball bouncing back and forth on a simple black screen. Although Pong was the product of technical innovation and a unique economic vision, it was also an act of *game design*.

As game designers, have we fully taken into account the implications of this revolutionary act? Do we really understand the medium in which we work or the field of design to which we belong? Can we articulate what it is that generates meaningful play in any game, whether a video game, a board game, a crossword puzzle, or an athletic contest?

The truth? Not yet. Compare game design to other forms of design, such as architecture or graphic design. Because of its status as an emerging discipline, game design hasn't yet crystallized as a field of inquiry. It doesn't have its own section in the library or bookstore. You can't (with a few exceptions) get a degree in it. The culture at large does not yet see games as a noble, or even particularly useful, endeavor. Games are one of the most ancient forms of designed human interactivity, yet from a design perspective, we still don't really know what games are.

Our hope is that this book will inform and inspire those interested in designing games. Its purpose is to help game designers create their own games, their own concepts, their own design strategies and methodologies. The ideas and examples we offer represent one way of looking closely at games, with room for more to come. Pong is just the beginning.

This is why we were compelled to write this book: not to define, once and for all, what game design is, but to provide critical tools for understanding games. Not to claim and colonize the unexplored terrain of game design, but to scout out some of its features so that other game designers can embark on their own expeditions. We hope that this book will be a catalyst, a facilitator, a kick in the ass. Take these concepts and run with them, quickly, meaningfully, with the same kind of joy that the very first players of Pong must have felt.

We're all in this together. Are you ready to play?

Katie Salen and Eric Zimmerman
New York City, May 2003

Notes

1. Scott Cohen, *Zap: The Rise and Fall of Atari* (New York: McGraw-Hill, 1984), p. 17.