5 Return to Player Space: The Success of Mimetic Interface Games

We don't play *Parcheesi/Sorry!* with the kids, because it is too complicated for them—they are only three and a half years old. With the Wii, on the other hand, the way that you do something and see a reaction on the screen, the way you tilt the controller and see something on the screen—that is something different. You cannot give them PlayStation controllers; those are a little too advanced with too many buttons. With the Wii, we can see on the kids that it just works for them, they can use that immediately.

We play the Wii with friends, at social events. We have also played it with the in-laws who are both around sixty. They play it eagerly, and they ask if we shouldn't play the game one more time.

—Interview with a Wii-playing family[1]

Here is the formula for the success of the Nintendo Wii and games like *Guitar Hero* and *Rock Band* shown in figures 5.1–5.4: they have physical interfaces that mimic the action in the games. The *Wii Sports* tennis player must swing his or her arm in order to swing the racket in the game; the *Guitar Hero* player must "strum" the plastic guitar; the *Wii Fit*[2] player must actually strike a yoga pose.

This makes mimetic interface games easier to learn than traditional video games, and it adds new types of fun—easier, because players can use their preconceptions of tennis, singing, or playing guitar in order to play the game; fun in new ways, because players can learn from watching each other, because failure becomes an enjoyable spectacle, and because the games thereby become more immediately social than those played with standard game controllers.

Where traditional hardcore games focus on creating worlds, on *3-D space*, and downloadable casual games focus on the experience of manipulating tangible objects on *screen space*, mimetic interface games emphasize the events in *player space*. Mimetic interface games encourage us to

Figure 5.1
Wii Sports bowling player (Noel Vasquez/Getty Images)

Figure 5.2
Guitar Hero World Tour players (AP/Wide World Photos/Damian Dovarganes)

Figure 5.3
Guitar Hero player (image by Michael McElroy)

Figure 5.4
Game designer Shigeru Miyamoto plays *Wii Fit* (AP/Wide World Photos/Tine Fineberg)

Console Standards

Tandy
1 Stick
1 Button

Atari 2600
1 Stick
1 Button

ColecoVision
1 Stick
2 Buttons
1 Number Pad

Atari 5200
1 Stick
4 Buttons
3 Options
1 Number Pad

NES
1 D-Pad
2 Buttons
2 Options

Sega Master System
1 D-Pad
2 Buttons

Genesis
1 D-Pad
3 Buttons
1 Option

SNES
1 D-Pad
4 Buttons
2 Shoulders
2 Options

Sega CD
1 D-Pad
6 Buttons
2 Options

N64
1 D-Pad
1 Stick
6 Buttons
3 Shoulders
1 Option

Dreamcast
1 D-Pad
1 Stick
4 Buttons
2 Shoulders
1 Option

Playstation 2
1 D-Pad
2 Sticks
4 Buttons
4 Shoulders
3 Options

Gamecube
1 D-Pad
2 Sticks
4 Buttons
3 Shoulders
1 Option

X-Box Old
1 D-Pad
2 Sticks
6 Buttons
2 Shoulders
2 Options

X-Box New
1 D-Pad
2 Sticks
6 Buttons
2 Shoulders
2 Options

X-Box 360
1 D-Pad
2 Sticks
6 Buttons
2 Shoulders
2 Options
1 Stick
2 Shoulders
Motion sensitive
Aimed

Wii Mote
1 D-Pad
3 Buttons
1 Shoulder
4 Options
Motion sensitive
Aimed

Wii Arcade
1 D-Pad
2 Sticks
4 Buttons
4 Shoulders
3 Options

Specialty Controllers

Atari Tennis
1 Knob
1 Button

ColecoVision
1 Stick
4 Buttons
1 Number Pad

NES
Light Gun
1 Button
Aimed

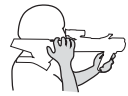
NES
Power Glove
1 D-Pad
2 Buttons
15 Options
Motion Sensitive
Aimed

Dreamcast
Fission
1 Stick
4 Buttons
1 Reel
Motion Sensitive

- Game Controller
- Game Controller Screen
- Hand
- Input Device of Controller

D-Pad -	Up, Down, Left, Right
Stick -	360° Control
Button -	A, B, X, Y
Option -	Start, Select, Mode, Pause
Shoulder -	L, R
Number Pad -	1-9, #, *Motion Sensitive
Aimed	
Touch Screen	

Keyboard and Mouse
110 Buttons
2 Number Pads
2 Buttons
1 Scroll Wheel
Motion Sensitive



SNES
Super Scope
1 Button
2 Options
Aimed

PS2 Guitar
5 Buttons
2 Options
1 Strum
1 Wammy
Motion Sensitive

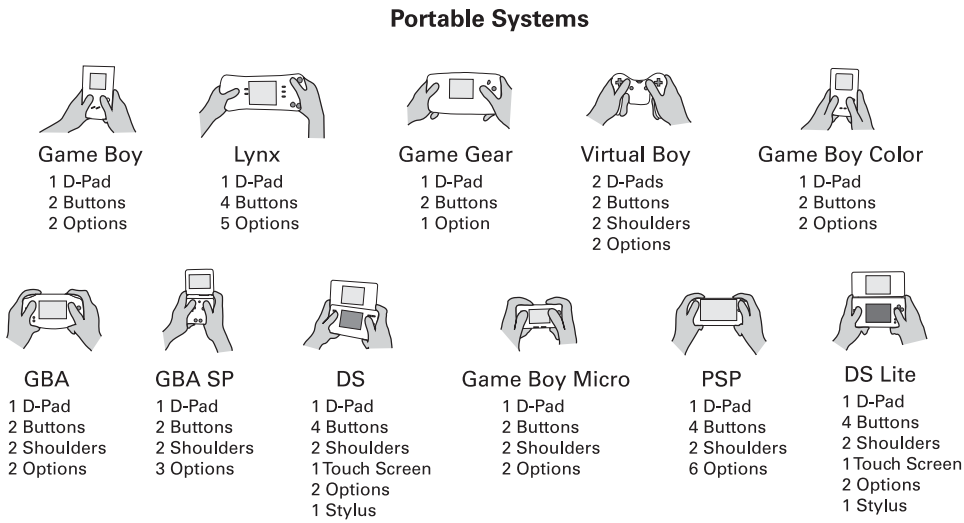


Figure 5.5
A history of game controllers (image courtesy of Damien Lopez)

imagine that the game guitar is an actual guitar that we play on, and the Wii controller is an actual tennis racquet we swing to hit the ball. Where more traditional three-dimensional games force players to imagine a bodily presence *in* the game world, mimetic interface games allow players to play from the perspective of their physical presence in the real world. While many of the popular mimetic interface games *do* have three-dimensional worlds, those worlds can often be ignored during game play, as in the case of *Guitar Hero*. In the case of the *Wii Sports* games, the controllers support the illusion that the player space is continuous with the 3-D space of the game, that the two types of space are one.

In a historical perspective, mimetic interfaces, like casual games as such, are partially a return to the early days of video games. Early arcade games had no standardized set of controls, so individual games often had custom mimetic interfaces. For example, the 1975 *Destruction Derby*[3] featured steering wheels, and the 1977 submarine game *Sea Wolf*[4] had a periscope. The mimetic interface all but disappeared with the standardization of the game controller from the mid-1970s onward, as illustrated in figure 5.5. The illustration also shows how controllers historically have become increasingly complex, adding ever more buttons, sticks, and directional pads. This is a common gripe with video game controllers: one

Figure 5.6
Virtua Tennis 3 (Sumo Digital 2007)

player complains that "these systems look like Mission Control for NASA, so I never play with them. I can't. There are too many buttons."[5] Mimetic interfaces are a backlash against these complex and counter-intuitive game controllers. Finally, figure 5.5 also shows how home consoles *have* had specialized mimetic interface controllers like light guns and fishing reels, but that the Wii controller is the first *generalized* mimetic interface: it can be used for a variety of games.[6]

How Mimetic Interface Games Work

The difference between traditional video game interfaces and mimetic interface games can be simply illustrated with the manuals from two tennis games, *Virtua Tennis 3*[7] and *Wii Sports* tennis shown in figures 5.6–5.9. Where *Virtua Tennis 3* textually describes the role of each individual button on the controller, *Wii Sports* can illustrate the physical movements of the *body* of the player. In *Virtua Tennis 3*, there is an arbitrary relation

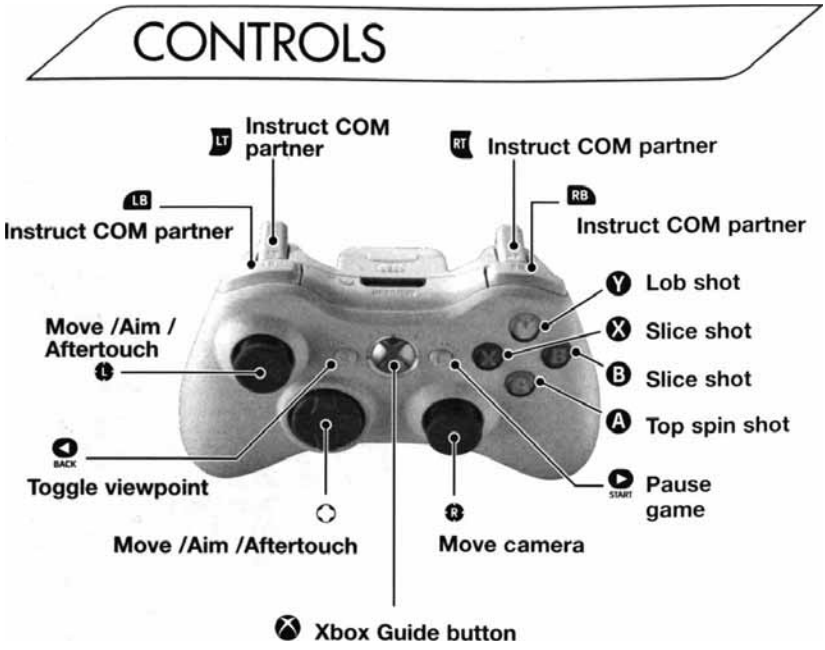


Figure 5.7
Controller instructions for *Virtua Tennis 3* (Sumo Digital 2007)

Figure 5.8
Wii Sports tennis (Nintendo 2006)

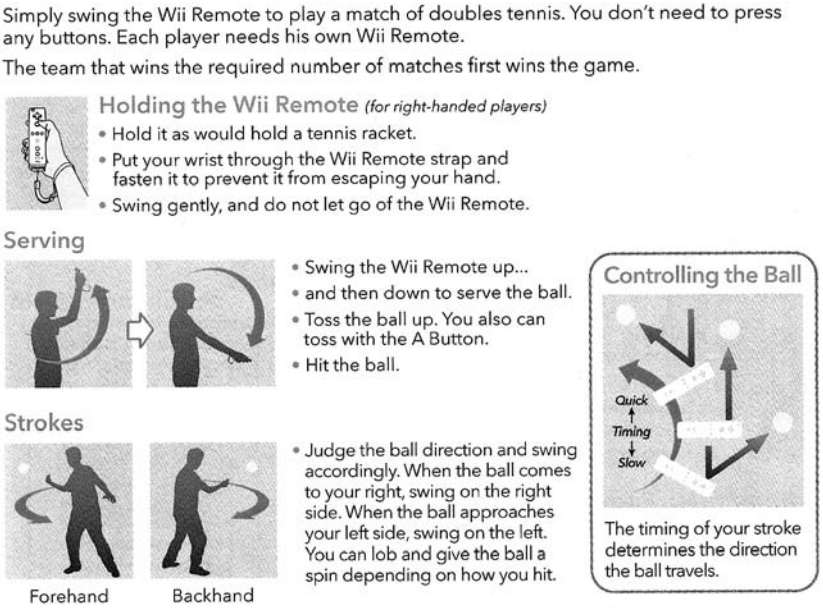


Figure 5.9
Controller instructions for *Wii Sports* tennis (Nintendo 2006)

between the buttons pressed to hit the ball and the action in the game. In *Wii Sports*, there is a basic similarity between the movements of the player and those of the player's character in the game.

In chapter 2 I introduced Michel Beaudouin-Lafon's terms to describe how a game lets a player operate on domain objects by way of some interaction instruments.[8] In the case of *Wii Sports* tennis, a player uses the Wii remote, the interaction instrument, to control a domain object, the character in the game. *Virtua Tennis 3* has the same type of domain object, but the interaction instrument is the standard Xbox 360 controller. In Beaudouin-Lafon's terms, the Wii game has high compatibility because the movements of the player and the movement of the player-character are quite similar, but the interface of *Virtua Tennis 3* has low compatibility.

The high degree of compatibility of mimetic interface games has several implications for how these games can be used. Consider the *Guitar Hero III*[9] box shown in figure 5.10. A player does not need to have played guitar to understand this game, but will have been exposed to the general posture of a guitar playing through media or elsewhere. The player knows that the left hand generally moves up and down the fret board, while the

Figure 5.10
Guitar Hero III guitar and packaging (image courtesy of Activision)

Figure 5.11
Guitar Hero III screenshot (image courtesy of Activision)

Figure 5.12
Buzz!: Quiz TV (Relentless Software Ltd. 2008), image courtesy of Sony Computer Entertainment Europe

right hand generally strums near the saddle of the guitar. Furthermore, the game also draws on common cultural representations of guitar playing in rock music (figure 5.11). Presented with a physical guitar controller, a player thereby starts with not only a good idea of the general physical activity in the game, but is also presented with an activity that is commonly culturally represented as positive.

Take *Buzz!*, a series of quiz games especially popular in the European market (figure 5.12). The game comes not only with a game disc, but also with four custom quiz game controllers with colored buttons (figure 5.13). To anyone who has ever watched a game show on TV (i.e., most people), the combination of the game show host on the packaging and the controllers openly signals that this is a quiz game in which players are supposed to press the buttons to answer questions. In fact, the developer of the game, Relentless Software, put special effort into making sure the game was packaged in a *transparent* box. This makes it obvious for potential buyers what the game is about if they see it on display in a supermarket or a game store.[10]

Magic Crayons

"I'm not great at it," guitar player Slash said. "And a lot of that has to do with the fact that it's hard for me to get rid of 30 years—whatever it is—

Figure 5.13
Buzz! The Mega Quiz box (Relentless Software Ltd. 2007)

20-some-odd years of playing in a certain way and then all of the sudden become accustomed to pressing some buttons and stuff. I have these little things that I'm so used to doing that when I'm playing 'Guitar Hero' it sort of screws me up."[11]

Guitarist Slash of Guns N' Roses fame confesses that although he features on the cover of *Guitar Hero III* (figure 5.10), his real guitar skills hamper his *Guitar Hero III* playing. This is the other side of mimetic interface games: *Guitar Hero* is different from playing guitar; playing *Wii Sports* tennis is not exactly the same as playing physical tennis. Having played Wii tennis for more than a few minutes, most players realize that many movements that look like the swinging of a racquet do not actually move the racquet as you'd expect. Much energy can be saved by replacing the large arm movements of real tennis with small flicks of the wrist. The controls of Wii tennis do have a higher degree of compatibility than *Virtua Tennis 3*, while at the same time *Virtua Tennis 3* allows for greater control over the character in the game. In that way, while mimetic interface games on the surface seem quite similar to the activity they represent, they also offer barriers to expert guitarists, tennis players, and so on. Game designer Chaim Gingold has coined the term *magic crayon*[12] to describe how taking away possibilities from the player can make it more likely that the player will produce something pleasing. Mimetic interface games are generally such magic crayons: they make it easy for players to experience competence—to play tennis well, to complete a rock song, to perform a choreographed dance.

Taking possibilities away from players is not a problem because most video game players, of any age, are neither expert guitarists nor top tennis players. One senior center in Medford, Massachusetts, advertised its new Wii system like this:

> *Stay cool: Come to the Senior Center!*
> Wii games, while not as strenuous as the real thing, do promote some physical activity: players need to use their arms and legs, and while doing so receive a moderate workout! The virtual game[s] are very realistic, and you don't have to worry about lugging around a bowling ball or golf clubs.
>
> Come and play on our large screen and get that old rush from playing your favorite sport![13]

Here, the Wii is described as attractive due both to its similiarity to the real sports ("get that old rush"), and to its difference ("not as strenuous

as the real thing''). This duality of similarity and difference is common to *all* nonabstract games—all such games have a level of abstraction or simplification of what they represent:[14] you may play a racing game in which cars can never run out of gas, a sports game where you can never be injured, or even a guitar game in which the guitar never needs tuning and the strings never break. *Wii Sports* tennis will infuriate a top tennis player with the simplicity of its controls, but it gives a non-player of tennis the experience of being skilled. While swinging my arm to swing a tennis racquet has a high degree of compatibility, the characters in *Wii Sports* tennis move by themselves, without my input; where regular tennis allows me to control ball direction by turning my body, rotating the tennis racquet, and so on, this has been reduced to a question of timing in *Wii Sports* tennis. *Guitar Hero* is similar in this respect: while the general pose of the player (left hand on frets, right hand strumming) has a high degree of compatibility with the actual playing of guitar, the left hand must press the five colored individual buttons rather than press the six strings of a guitar at the various fret positions. A trained guitar player will experience the lack of fine-grained control over the music as severely limiting, but the majority of players will experience the same limitation as extremely empowering, allowing them to perform a well-known tune that they would be unable to play on a real guitar. Mimetic games are magic crayons, taking possibilities from players in order to give a feeling of competence.

This magic crayon quality leads to the obvious objection against *Guitar Hero* and *Rock Band*, which is that as a player you are not *really* playing guitar, but only pretending. On some level it is true that these are not real instruments, but what makes them not real? The basic experience of playing these games is that if you do not press the buttons correctly there is no music, but if you press the buttons correctly, music appears—it feels as if you *are* making music. Interestingly, this is quite similar to learning to play an instrument: playing sheet music on the piano at first feels exactly like playing *Guitar Hero*: you follow a notation telling you what to do. If you press the right keys on the piano, music appears. If you press the wrong keys, music does not appear. It is only through practice that you begin to feel a direct connection between the piano keys and the notes that come out of the piano. Subjectively, playing *Guitar Hero* isn't any less real than playing a piano is when you first begin to learn to play, and this is probably why you *do* feel as if you are playing music, playing *Guitar Hero*.

At the same time, music games show big differences between instruments: singing or drumming in *Rock Band* or playing the congas and maracas games of *Donkey Konga*[15] and *Samba de Amigo*[16] does prepare you for "actual" singing and drumming; being able to sing and drum does make it easier to sing and drum in the games. The simple reason behind this may be that guitars are more complicated and have steeper initial learning curves than drumming or singing. A guitar game therefore needs to be more of a magic crayon in order to reach non-guitar players.

The Space of Mimetic Interface Games

When you wave the Wii remotes into the air as if you were boxing, then the whole party laughs, even though only two people are playing.
—Interview with a Wii-playing family[17]

Q: Is there a game design art to maximizing the value of existing social relations between players?
A: For a while in our prototyping of *Rock Band* there was this feeling that when you were playing, everybody was playing their individual part. Even if you were four people standing next to each other, the amount of interaction you had with the other players was almost nil. We did a lot of subtle things from prototype to prototype to make it so you actually did feel a visceral connection to the other people in the room, so you weren't just playing your part; you were also playing with other people in the room. That wasn't something that was immediately apparent. That took a lot of work. One thing was the way in which you save your band mates, one is the overall design of the user interface, to focus it so you knew what other people were doing as well.
—Interview with Harmonix, developer of *Rock Band*[18]

Mimetic interface games are easy to learn because they draw upon familiar conventions from outside video games, but the large-scale physical movements that players perform also make it easier to learn to play *by looking at other players*. It is much simpler to learn by watching large physical movements than by watching someone using a traditional video game controller, and this factor increases the social value of these games. The Wii-playing family previously quoted explains how simply looking at other players is enjoyable, and Nicole Lazzaro has noted how mistakes are considered comic when a game is played in a group.[19] Chapter 6 shows how mimetic interface games are also a return to the social dynamics of

traditional board and card games, in part because the space of mimetic interface games is similar to such traditional games.

I claim that mimetic interface games shift focus from the three-dimensional space created by the game graphics, to the concrete player space. This may sound surprising given that many of the games discussed, such as *Rock Band* and *Guitar Hero* (figure 5.11) actually do present a 3-D space. The screenshots show an elaborate world, and a camera pans and zooms following conventions from rock videos. Yet *all the gameplay-relevant information stands still* and is not influenced by the panning of the camera—even though much effort has been put into presenting in-game characters of a band playing. All information that is directly relevant for game-playing is anchored to the screen space rather than to the 3-D space. Subjectively, I find that I *do not see* the band while playing *Rock Band*, since the images of the band and the crowd are not immediately relevant to my playing. Their primary function is to add mood, to add a spectacle for those not playing, and to add juiciness: positive feedback when the player does well. This also means that even though the game presents a three-dimensional space, players do not have to imagine a bodily presence in that space.

The interest in player space versus 3-D space can be gauged via the popular photo-sharing service Flickr.com: of the top twenty pictures named "Wii tennis," seventeen show people playing the game; of the top twenty pictures named "Gears of War," only *one* shows a person playing the game.[20] For mimetic interface games, players are much more likely to upload photos of *players* than of games—the events in player space are what players find interesting and memorable in these games. In fact, the advertising for the Nintendo Wii console promoted the spectacle of player space very openly by showing pictures of happy game players across age and gender rather than of the games themselves.[21]

The Rise of the Minigame

Some of the most popular Nintendo Wii titles, such as *Wii Sports* and *Wii Play*[22] are not single games, but collections of a number of short so-called *minigames*. While *Rayman Raving Rabbids*[23] does have a single overarching game that you can complete, one of the motivations for playing that game is that it makes available for play various zany multiplayer games such as cow-throwing (figure 5.14). In the introduction I told the story of

Figure 5.14
Rayman Raving Rabbids cow-throwing minigame (Ubisoft Montpellier 2006)

how many people in late 2006 were surprised to see their friends and family suddenly take an interest in playing video games—the games they were playing were mostly minigames like these.

The *Guitar Hero* and *Rock Band* series have the same duality as *Rayman Raving Rabbids*. For example, *Rock Band 2* lets the player complete the game in a *world tour* mode by playing songs in a number of cities around the world, but players are also free to simply play one of the available songs instead. The rise of the minigame and the short-session multiplayer game brings another layer of flexibility in game design, another way of letting players use a game as they wish.

The Success of Mimetic Interfaces

To summarize, mimetic interface games reach a broad audience by engaging players in culturally well-known and valued activities, such as tennis or guitar playing, via interfaces that mimic the physical actions of

these activities, allowing players to more quickly exhibit skill in the video game version of the acitivity.[24] I do not mean to say that mimetic interfaces are the *best* way to create games, but they work well for creating social games that are easy to learn. Mimetic interface games return to the type of social interaction found in traditional board games, card games, and party games, giving players a face-to-face experience, even with a video game.

The success of mimetic interface games, then, is about four key qualities:

- Improved usability because the mimetic interface makes it easy for players to use their preexisting knowledge of the real-life activity to play the game;
- Ease of use, since mimetic interface games generally are easier to play than the activity they represent;
- Shift of focus to the player space in which the game is played; and
- Shift of focus to the existing social relations in that space.

Mimetic interface games have revolutionized video games by borrowing liberally from outside video games, and by reaching back to early, non-digital game forms.