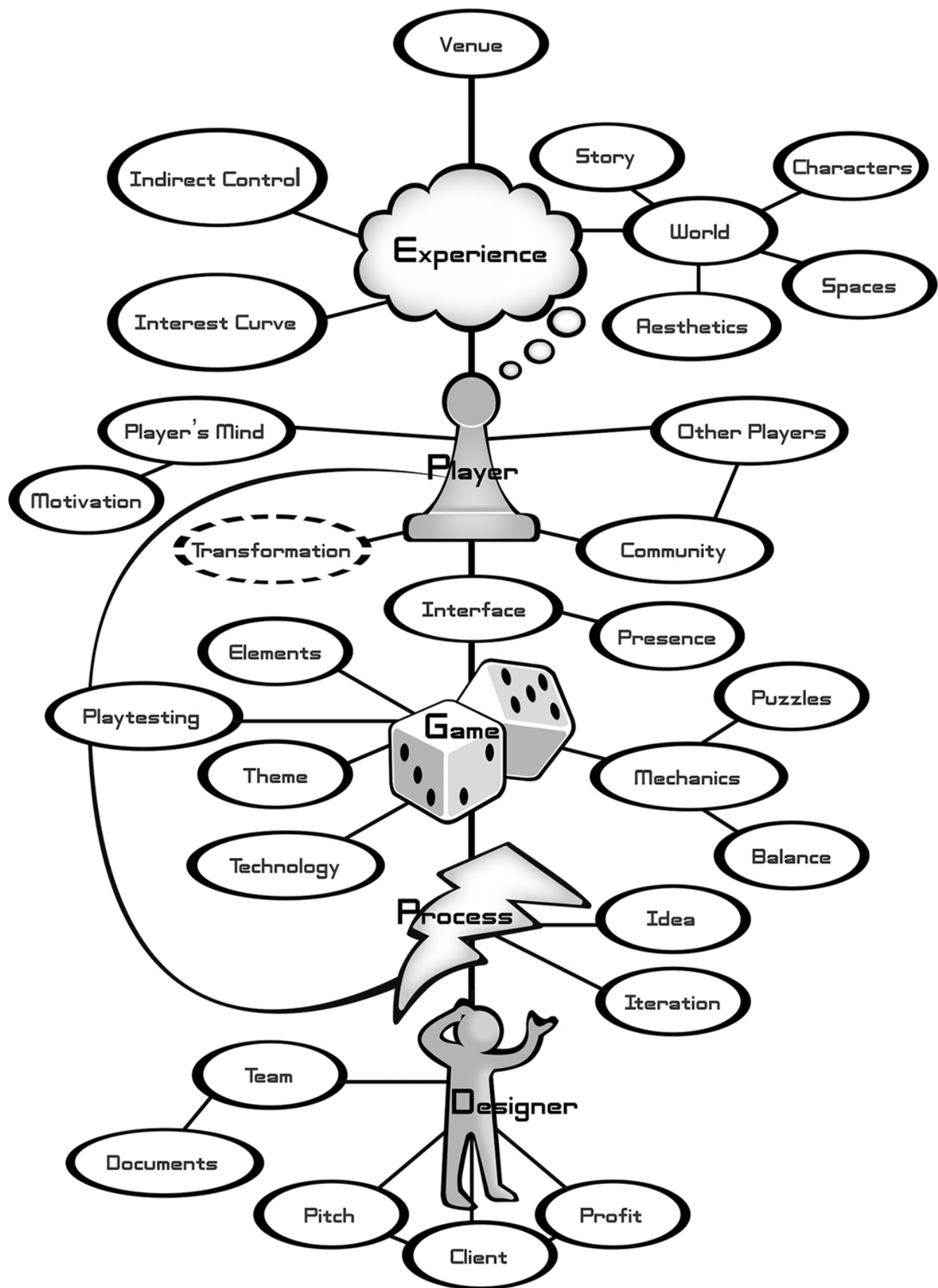


CHAPTER THIRTY-THREE

Games *Transform* Their Players

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FIGURE
33.1



How Do Games Change Us?

There is much debate about the long-term effect of games on the mind. Some believe that they have no lasting effect and that they just serve as a momentary distraction. Others believe that gameplay can be dangerous, inciting players to violence or ruining their lives through addiction. Still others believe that games are so good for us that they will become the cornerstone of twenty-first-century education.

How games change us is not a trivial question, for the answer to it is transforming society as we speak—either for the better or for the worse.

Can Games Be Good for You?

Games come so naturally to humans and afford so much pleasure that only someone of a very extreme philosophical orientation would maintain that all gameplay is harmful. Several positive effects are often attributed to games.

Emotional Maintenance

Games are one of many activities that people engage in to try to maintain and control their mood and emotional state. People play games to try to

- **Vent anger and frustration:** Games, particularly sports involving a lot of physical activity (football, basketball) or videogames involving a lot of fast action and battles, can be a cathartic way to “take out your feelings” on someone else in the safe world of the game.
- **Cheer up:** When a person is depressed, whimsical games with funny situations (*Cranium*, *Mario Party*) can be a way to take your mind off your troubles and remember that you can still have fun.
- **Gain perspective:** There are times when our troubles loom large on us and little things seem like they are the end of the world. Playing games gives us some distance from our real-world problems, so when we return, we more easily see them for what they are.
- **Build confidence:** After a few real-life failures, it is easy to start to feel like you aren’t good at anything, which can lead to a feeling that everything in your life is beyond your control. Playing a game where your choices and actions can lead to a successful outcome can give a feeling of mastery that helps remind you that you can succeed and that you have some control over your destiny.
- **Relax:** Sometimes we are simply unable to let go of our worries, because of either their size or their sheer number. Games force our brains to engage with something completely unconnected to our worries, letting us escape them for a while and giving us a much needed “emotional rest.”

And while it is true that efforts to play games for these reasons sometimes backfire—if the game proves just as frustrating as real life, for example—in general, games serve the aforementioned tasks fairly well, acting as tools that help maintain our emotional health.

Connecting

Connecting socially with others is not always an easy thing to do. We are each caught up in our own problems and worries that others might not understand or care about. Games can act as a “social bridge,” giving us reasons to interact with each other, letting us see how others respond to a variety of situations, introducing topics of conversation, showing us what we have in common, and creating shared memories. This combination of factors makes games a great tool to help build and maintain relationships with the important people in our lives.

Exercise

Games, particularly sports, give us reason and motivation to perform healthy physical exercise. Recent

studies have shown the health benefits of mental exercise, particularly for the elderly. The problem-solving nature of games makes them flexible tools to provide both physical and mental exercises in many forms. As digital technology becomes smaller and more portable, new gateways for how to use it to enhance physical exercise will continue to appear.

Education

I have always had a fancy that learning might be made a play and recreation to children.

—John Locke, 1692

Some hold the position that education is serious, but games are not; therefore, games have no place in education. But an examination of our educational system shows that it is a game! Students (players) are given a series of assignments (goals) that must be handed in (accomplished) by certain due dates (time limits). They receive grades (scores) as feedback repeatedly as assignments (challenges) get harder and harder, until the end of the course when they are faced with a final exam (boss monster), which they can only pass (defeat) if they have mastered all the skills in the course (game). Students (players) who perform particularly well are listed on the honor roll (leaderboard).

So, why doesn't education feel more like a game? The lenses in this book make it pretty clear. Traditional educational methods often feature a real lack of surprises, a lack of projection, a lack of pleasures, a lack of community, and a bad interest curve. When Marshall McLuhan said, "Anyone who thinks education and entertainment are different doesn't know much about either," this is what he was talking about. It's not that learning isn't fun, but it is just that many educational experiences are poorly designed.

So why haven't educational videogames found more of a home in the classroom? There seem to be several reasons:

- **Time constraints:** Playing games can take a long time and a variable amount of time—many meaningful, educational games are just too long of an experience for a classroom setting.
- **Variable pacing:** One thing games are good at is letting players proceed at their own pace. In a school setting, the instructor usually has to keep everyone moving along at a single pace.
- **1965:** People born before 1965 did not grow up playing videogames; therefore, games do not come naturally to them and seem kind of foreign. Up until recently, the educational system was primarily run by people born before 1965 (the average high school principal is 49 years old).
- **Good educational games are hard to make:** To create something that delivers a complete, verifiable, assessable lesson, while still engaging students, is very hard. And an average semester class contains two or three dozen different lessons that must be covered.

Despite these challenges, games can be excellent tools for education, but they work best as tools and not complete educational systems. A wise educator uses the right tool for the right job—what are the right educational jobs for games? Let's consider some of the areas where games seem to have some advantage.

Giving the Brain What It Wants

Part of what makes education difficult is that it can be boring. Games, by their nature, are masterful at keeping the brain fully engaged—and this is because they give the brain what it wants. Here are examples:

- **Visible progress:** As we discussed in [Chapter 14: Puzzles](#), visible progress is a tremendous human motivator. So, naturally, good education must let the student experience visible progress. Game structures like leveling up and completing quests are one way to make progress clear and visible.
- **Make the abstract concrete:** The human brain is challenged by abstract concepts. It has much more facility with that which is concrete. This is why good teachers use concrete examples to shed light on abstract principles. Games are naturally manipulable and can be good at making the abstract concrete.

This is why war games and simulations are such an important part of military education—the abstract principles of military strategy are meaningless without the concrete realities of the battlefield.

- **Full engagement:** When the brain has nothing to do, it gets “itchy,” and we get a kind of restless feeling. We also get this feeling when one part of the brain is engaged (say, listening to a lecture) but another part, such as the musical, social, or kinesthetic part, is not. This is why students in class often find themselves humming, whispering to neighbors, or tapping their fingers—those parts of the brain are eager for activity. Games excel at full engagement, occupying the eyes, ears, hands, and mind, often full of music and social activities. When every part of the mind is at a comfortable level of activity, there can be no level of distracting restlessness, and education can take place more easily.
- **Lots of little goals:** The brain loves clear and interesting goals, and good games are long chains of concrete, achievable, rewarding goals.

Once the mind is fully engaged, though, what will it learn?

Facts

One of the first areas that people naturally think of using videogames for is to convey facts and to drill those facts. This works mainly because learning facts (state capitals, times tables, names of infectious diseases, etc.) is dull and repetitive. It is an easy thing to integrate them into game systems that give auxiliary rewards as you make progress learning information that is not inherently interesting. Videogames, in particular, can make use of visuals and meaningful context that can help players learn and remember these facts.

Problem Solving

Combinatory play seems to be the essential feature in productive thought.

—Albert Einstein

Remember our definition of game? A problem-solving activity approached with a playful attitude. Naturally, when it comes to practicing problem solving, games have a chance to shine, particularly in cases where students need an opportunity to show that they can use a variety of different skills and techniques in an integrated way. For this reason, it may be the case that gamelike simulations may start to serve as final exams in areas where multiple techniques need to be combined in a realistic setting, such as police and rescue work, geology, architecture, and management.

Classroom work aside, it is interesting to note that an entire generation is being raised playing very complex videogames that require a great deal of planning, strategy, and patience if the player is to succeed. Some theorize that this will lead to a generation that is far better at problem solving than any previous generation—whether this is true remains to be seen.

Systems of Relationships

The thing that games arguably are best at teaching is illustrated by an ancient Zen koan:

Hyakujo wished to send a monk to open a new monastery. He told his pupils that whoever answered a question most ably would be appointed. Placing a water vase on the ground, he asked: “Who can say what this is without calling its name?”

The chief monk said: “No one can call it a wooden shoe.”

Isan, the cooking monk, tipped over the vase with his foot and went out.

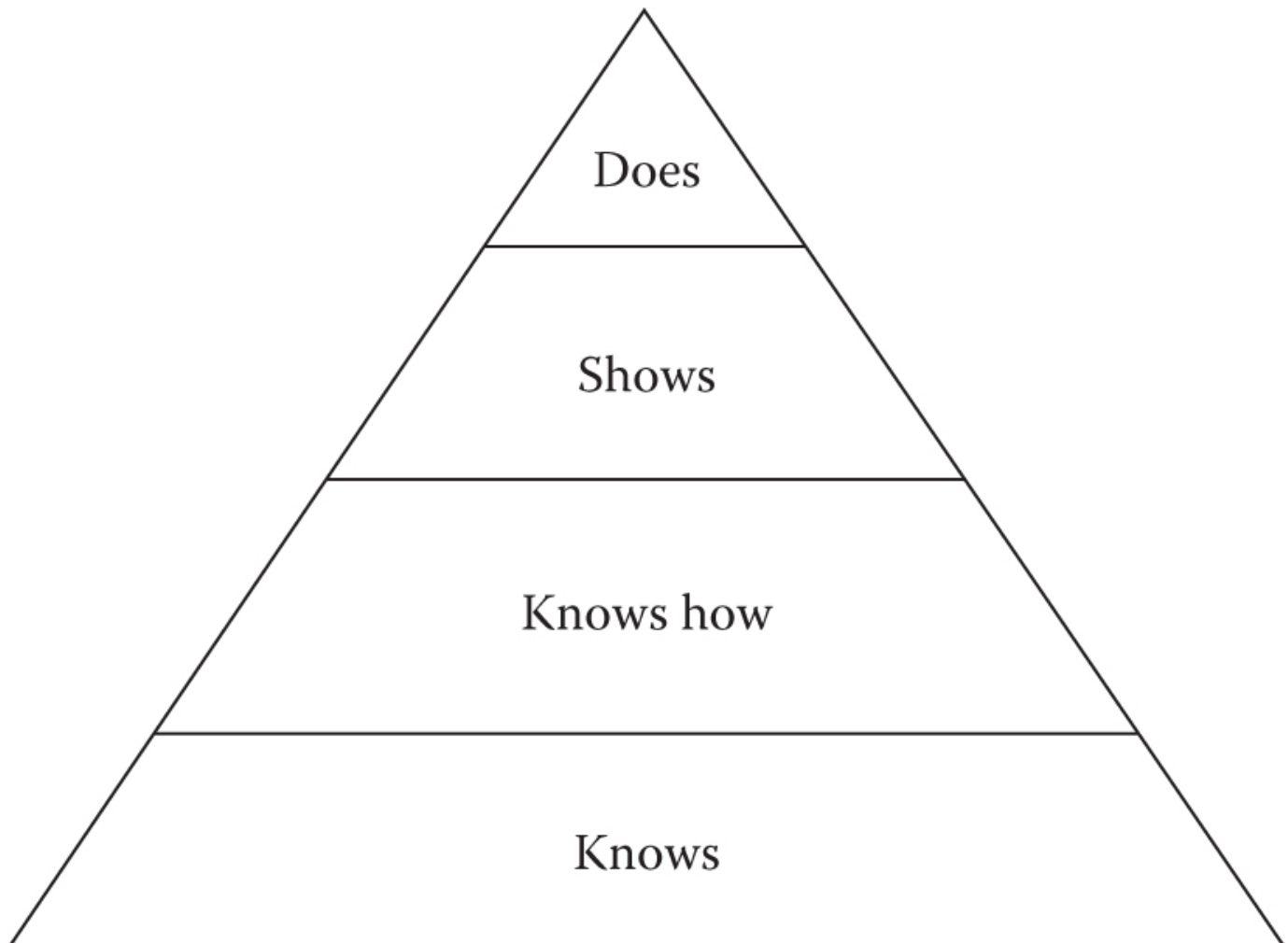
Hyakujo smiled and said: “The chief monk loses.” And Isan became the master of the new monastery.

The chief monk knew his words could not tell the truth of what a water vase really is like, so he slyly tried

to say what it was not. But Isan, whose training was in the most practical of arts, cooking, knew well that some things cannot be understood with words—they must be demonstrated to be understood.

And interactive demonstration is one place that games and simulations excel. Education researchers frequently refer to Miller's pyramid of learning:

FIGURE
33.2



In this model, being able to do something is the pinnacle of knowledge, and game-based learning is almost entirely focused on doing.

Lectures, readings, and videos all have the weakness of being linear, and a linear medium is a very difficult way to convey a complex system of relationships. The only way to understand a complex system of relationships is to play with it and to get a holistic sense of how everything is connected.

Some systems of relationships best understood via simulation include:

- The human circulatory system
- Traffic patterns in a major city
- A nuclear reactor
- The workings of a cell
- The ecology of endangered species
- Heating and cooling in the earth's atmosphere

There is a tremendous difference in understanding between people who have merely read about these things and people who have played with simulations of them, because the players have not just read about the systems of relationships but also experienced them. And one of the most powerful ways they experience them is by testing their limits, pushing the simulation until it breaks. How much traffic does it

take to make the commute time longer than the workday? How much water can the reactor lose before it melts down? What will irreversibly melt the polar ice caps? Simulations give the player permission to fail, which (aside from being fun) is incredibly educational—because the learner not only sees the failures but sees why they happened, which leads to significant insight about the workings of the whole system.

One of the most striking instances of this I have ever seen is in the game *Peacemaker* from Impact Games. *Peacemaker* is a simulation of the Israeli/Palestinian conflict, where players have the choice of playing the role of either the Israeli prime minister or the Palestinian president, with a goal of trying to make peace between the two nations. When playtesting the game with natives of these countries, the natives would often enter the game with a belief that if the other side would do a few simple things, the conflict would be over. As they would attempt to play the opposing side, however, they would quickly see it wasn't as simple as they thought; complex pressures on both sides make it very difficult to reduce the conflict. Players then quickly succumb to curiosity. First, they try to see what it takes to bring these nations to all-out war, and when they have that out of their systems, they try to solve the big challenge: are there any techniques that will successfully work to make peace between these nations?

Objections are often raised about simulating such serious topics. It seems unlikely that these simulations can be perfect. What if someone who plays with a simulation learns a technique that is only valid in the simulation but would be disastrous in the real world? For this reason, simulations often work much better with a live instructor who is able to point out the discrepancies and use them as teaching moments. It is worth noting, though, that people do not expect simulations to be completely accurate, and often, the simulation loopholes can be very instructive—they cause players to wonder “why doesn't this happen in the real world?” That question alone can lead to deep insights about how the real world actually works. In other words, in some cases, a flawed simulation can be more instructive than a perfect one!

New Insights

In the movie *Groundhog Day*, Bill Murray plays a selfish, arrogant character who gets caught in a time loop that forces him to relive the same day over and over until he gets it right. Over the many repeats of that day, he experiments with how to interact with people around him, gradually understanding them better and better. This understanding gives him insights that cause him to alter his behavior, until finally he has become the kind of person that willfully does the right thing, and when he finally escapes February 2, he is a changed man.

The important part of simulations of systems of relationships is the new insights that are given to the players—they are able to see these systems in ways they couldn't before. And creating the change in perspective that leads to new insights is something games are very good at, since games create whole new realities, with new sets of rules, where you aren't you anymore and you play the role of someone else entirely. This is a power of games that is just beginning to be tapped for the purposes of improving people's lives. It is often said that children who grow up in low-income neighborhoods tend to aim lower in career aspirations because they simply can't imagine they could succeed at a high-paying career. What if games could be used to help them imagine success and make it seem more achievable to them? What if games could help people understand how to escape an abusive relationship, break an addiction, or simply be a better volunteer? Perhaps we have just begun to scratch the surface of how life-changing games can be.

Curiosity

The cure for boredom is curiosity. There is no cure for curiosity.

—Dorothy Parker

It has always been true that students who are curious have an advantage over their classmates who are not, because curious students are more likely to learn things on their own and they are more likely to retain what they learn, since they learn it because they want to. In a sense, curiosity makes you “own” your

learning, and the learning you own is the learning you keep. But the recent proliferation of Internet access has increased this advantage a thousand times. A curious student can now learn as much as they want about any subject—all the information about every topic known to humankind is only a click away or will be soon. It seems very likely that a noticeable “curiosity gap” will begin to appear, since curious people will quickly grow to become experts at whatever topics interest them, while the incurious will be left far behind. It is possible that, in the coming decades, a curious mind may be the most valuable asset a person can have.

Surprisingly, though, we know very little about curiosity. Is it something we are born with, or is it something that can be taught? If it can be taught, nurtured, or strengthened, shouldn't that become a top educational priority? Now recall from [Chapter 4: *Game*](#), our definition of play: “manipulation that indulges curiosity.” Could it be that shifting our educational systems toward more play-based models might be the best possible way to prepare children to thrive in the twenty-first century?

Creating Teachable Moments

Knowledge cannot simply be poured into a mind, like pouring coffee into a cup. The mind must be put into a state of readiness, a state where certain kinds of knowledge are suddenly useful and important and the mind hungrily reaches out to grab the knowledge, to absorb it, to use it immediately, and to save it for later. Good teachers focus on painting scenarios and posing problems that put the minds of the students into this state. Games, with their concrete situations and their problems to be solved, can be an excellent tool for helping an instructor create these moments.

Transformational Games

Educational games are one kind of helpful game, but, as we've seen earlier, not the only kind. Games that help us exercise, connect with others, or change our habits are also meaningfully helpful. To encompass this broader agenda, some have started to use the phrase serious games to separate them from games that are only for entertainment. I find this phrase dissatisfactory, for not only is it an insult to entertainment (which is a serious endeavor, indeed), but also it suggests that seriousness is the primary goal of the games and that players are discouraged from having fun while playing them. I much prefer the phrase transformational games, because not only does it encompass a wide array of helpful games, but also it speaks to the primary purpose of these games—to change the player. In recent years, I have made a great study of transformational games and have worked to develop several of them. In doing so, I have picked up a few tips and tricks for doing them well, which I'm glad to share here.

Transformational Tip #1: Define Your Transformation

Possibly the most important reason to use the phrase “transformational games” is because it helps everyone remember the goal of creating the game: to transform the player. But if that is our goal, how exactly will we transform them? All too often, designers state their goal as “my game teaches math” or “my game gets people to exercise.” But those are just vague statements. They say nothing about what kind of change takes place in the player or how that change is to come about. Consider how much clearer it is when you say “my game changes players by introducing them to the concept of factoring and builds their familiarity with factors by giving them practice at breaking down composite numbers into their base factors” or “my game helps players develop a daily habit of exercise by giving them small, achievable challenges each day.” To create successful and meaningful transformations, you must clearly state the change you want to take place and also the specifics of how and why your game will foster that change. Really, this is our old friend, [Lens #14: *Problem Statement*](#). Of course, to create a successful transformational game, you must come up with a solid solution to how you enable the transformation, but you can't possibly do that until you have clearly stated what transformation needs to take place.

Transformational Tip #2: Find Great Subject Matter Experts

You might think, “I can't make a great game about teaching firefighters how to deal with chemical

spills—I don’t know anything about that!” Of course you don’t. Sure, you could learn a little, by reading a few articles or books, but there are people out there who have devoted their lives to knowing every detail about a topic like that and how to best teach it to others. Find these people. They are usually thrilled to be able to take their expertise into a new dimension and eager to make sure you have every detail right. It is important to realize that there are two kinds of experts—ones that have all the facts and others that know the best ways to teach those facts. If you can align yourself with both kinds of experts and you can learn to listen to them about what is and isn’t important, you will be taking great strides toward making a truly great transformational game.

Transformational Tip #3: What Does the Instructor Need?

So often, designers of transformational and educational games set out to create an experience that replaces the need for a skilled instructor. There is a time and place for that kind of application, certainly, when instructors are in short supply, for example. But often, the reality of transformational games is that they are used by an instructor to help transform someone—and if that is the case, why try to replace them? Trying to do so only will insult the instructor, and be honest, how can your little game replace that instructor’s lifetime of experience? Much better is to figure out how to make your game a tool for the instructor. But of course, to do that, you will need to talk to instructors, to see what problems they have (problem statement, again!) and how perhaps your game can help. Often, as we discussed earlier, the instructor is looking for better ways to create teachable moments. Instead of trying to replace the instructor, why not think about making the instructor a kind of “dungeon master” who can be in charge of a scenario that challenges students with difficult problems? Then you get the benefit of the instructor’s wisdom and experience, not to mention their gratitude because you created a tool that magnifies their abilities and helps them achieve your shared goal of transforming students for the better. I believe that one of the greatest changes we will see to the effectiveness of transformational games is when every student and teacher has a standardized networked tablet. Once that happens, experiences where a teacher can guide students through multiplayer game simulations will suddenly become feasible, and I expect they will have a striking effect on education.

Transformational Tip #4: Don’t Do Too Much

It is tempting to set a goal of replacing an entire curriculum with your amazing do-everything transformational game. And usually, when you do this, you end up with something that does everything poorly. It is much better to pick one key transformation and do that especially well. If it works and everyone likes it, they will ask for more, and then you can think about what the next steps should be. Most of the really effective transformational games (such as *Peacemaker*, *Dragon Box Plus*, *Zombie Division*, and *Papers Please*) strive for only one type of transformation and focus on doing that as well as possible.

Transformational Tip #5: Assess Transformation Appropriately

One of the most challenging things about creating transformational games is knowing whether the intended transformation actually took place. The truth is that most transformational games are experimental, and until the games are finished, it can be hard to know if they are really making the intended changes in the player. I have found there are generally five levels of assessment, which I list in ascending order of rigor:

1. **Feels like it:** This is the lowest possible level of assessment. This is when the designers and players agree that it “feels like” some transformation is taking place. While this is arguably better than “feels like it’s not working,” it still isn’t much.
2. **Anecdotes:** This is when you have some stories about situations where people played your game and it clearly caused some kind of useful transformation. Anecdotes can be very inspiring and sound good in a pitch, but they aren’t much proof of effectiveness.
3. **Subject matter expert (SME) approval:** If you have high-quality SMEs, their stamp of approval that the game is an effective tool for transformation is very meaningful. Again, it isn’t really proof that it is working, but it is certainly a strong indicator that you are on the right track.
4. **Informal surveys and assessment:** Tests either during your game or after the fact demonstrating a

change in the player are an even better way to prove that your game is doing its job.

5. **Scientific testing and assessment:** Formalized testing, organized by scientists who are knowledgeable about the subject matter and who know enough about statistics to conduct meaningful scientific analysis of your players, is certainly the ideal way to prove to yourself that your game is causing the desired transformation.

Of course, meaningful scientific testing is time consuming and expensive. Different situations call for different methods. It's important, going into a transformational games project, that the whole team be on the same page about how much rigor is necessary to feel good about what you are doing.

Transformational Tip #6: Choose the Right Venue

Remember [Chapter 3: Venue](#)? It isn't enough to just make a game—you need to think hard about where your players will be when they play it and how that will affect the transformation. Will they play in the classroom? On the go? In a comfortable reading nook? In a workbench situation? Will they be alone or with others? Will they have unlimited time or a limited time window? Will anyone be there to help them, or are they on their own? The context of where, how, and with whom your game is played will make a tremendous difference in whether you meet your transformational goals.

Transformational Tip #7: Accept the Realities of the Market

I constantly talk to people who have all kinds of beautiful dreams about using games for all manner of transformational purpose. The truth is, though, it can be very challenging to find a way to turn great transformational games into a sustainable business model. Wishful thinking won't get you there—what will is a clear understanding of what people will and will not pay for and why. Your amazing transformational games won't change anyone if you can't afford to get them made and can't find a way to get them to the people who need them. For that reason, business savvy can be just as important as excellent game design in making a difference in the world.

Can Games Be Bad for You?

Some people are afraid of anything new. This is not unreasonable: many new things are dangerous. Games and gameplay are not new, of course; they have been around since the dawn of man. And traditional games have their dangers: sports can cause physical injury, gambling can lead to financial ruin, and obsession with any pastime can lead to a life out of balance.

But these dangers are not new. They are well known, and society has methods of handling them. What makes people nervous, especially parents, are the potential dangers of new types of games that have suddenly appeared in popular culture. Parents are always nervous when their children become immersed in something that the parents did not grow up with. As a parent, it is an uncomfortable feeling, because you have no idea how to properly guide your children and no idea how to properly keep them safe. The two areas that cause the most concern are violence and addiction.

Violence

As we've discussed, games and stories frequently feature violent themes, because games and stories are often about conflict and violent action is a simple, dramatic way to settle a conflict. But no one worries much about the abstract violence that takes place in chess, Go, or *Pac-Man*. The game of chess does not seem to inspire the capture of real-world bishops and queens. Worries come about violence that is visually graphic. One focus group I witnessed was trying to determine where the average mom drew the line about what videogames were "too violent" for their kids. "*Virtua Fighter* was okay," said the moms, "*Mortal Kombat* was not." The difference? Blood. It wasn't the actions that were involved in the games that bothered them (both games are mostly about kicking your opponent in the face), but rather the graphic bloodshed in *Mortal Kombat* that is completely absent in *Virtua Fighter*. They seemed to feel that without bloodshed, it was just a game—just imaginary. But the blood made the game creepily real, and to the

moms in the interviews, a game that rewarded bloodshed felt perverse and dangerous. *Fortnite* is a more recent example of a game full of horrifically violent actions that pass “the mom test” by being blood free.

But there have been many games without any visible blood that have raised concern. The 1974 game *Death Race*, based on the movie *Death Race 2000*, was a racing game that rewarded players for running down little animated pedestrians. When angry parents began to protest this game appearing in local arcades, the publisher tried to make the case that the animated pedestrians weren’t people, but “goblins” that you were supposed to run down with your car. No one believed that because the dangers of reckless driving are too real.

When we did the very first test of *Pirates of the Caribbean: Battle for the Buccaneer Gold* for DisneyQuest, we were terrified. We were bringing families into play the game, and their reaction was going to determine the future of the game. Everyone on the team was very uncomfortable because the Columbine high school shootings had happened less than a week before, and here we were showing a game where you pulled the trigger on a cannon, over and over, blasting everything in sight.

To our surprise, no one even made the connection, and all the families had great fun. No one expressed any concerns at all about the game being too violent, even though we expressly asked about this in our interviews. Pirate cannons shooting down cartoon ships were so far removed from the real world that it didn’t cause the slightest concern.

What accounts for these differences and inconsistencies? A simple fear: playing games with realistic violent content might make people desensitized to real-world violence or, worse, make them feel that real-world violence is fun and pleasurable.

How valid is this concern? It is hard to say for sure. We know it is possible to become desensitized to blood and gore: doctors and nurses must do this to function and make rational decisions during surgery. Soldiers and police officers must take it a step further and become desensitized to wounding and killing others, so they can think clearly in situations where they must commit violent acts. But this kind of desensitization isn’t what parents are worried about—after all, if playing videogames made people grow into better doctors and law enforcement officials, there wouldn’t be much cause for concern. No, the worry about game violence is about the apparent similarity between the videogame player and the murderous psychopath—after all, both kill for fun.

But do violent games bring about this kind of psychopathic desensitization, or is something different happening? As we’ve discussed, the more someone plays a game, the more they see through the aesthetics of the game (for graphic violence is just an aesthetic choice) and put their minds in the pure problem-solving world of game mechanics. Even though the avatar may be going on a killing rampage, the player generally does not have thoughts of rage or murder, but thoughts of perfecting skills, solving puzzles, and accomplishing goals. Despite the millions of people who play games with violent themes, it is rare to hear a story about someone who felt drawn to act out a violent game in real life. It would seem that the average person is very good at distinguishing the difference between the fantasy world and real world. With the exception of those who already have violent psychotic tendencies, most of us seem to be able to compartmentalize: we know that a game is just a game.

But the concern that most have is not about adults—it is about children and teenagers who are still forming their views of the world. Are they able to safely compartmentalize violent play? We know they can with some kinds of play. Gerard Jones, in his book *Killing Monsters*, in fact makes the case that some level of violent play is not only natural, but necessary for healthy psychological development. But surely, there are limits. There are some images and ideas that children are not yet ready to deal with, and this is why rating systems for videogames are absolutely necessary so that parents can make informed choices about what their children can play with.

So, do violent videogames change us for the worse? Psychology is too imperfect a science to give a definitive answer, especially with something so new. So far, they don’t seem to have damaged our collective psyche, but as designers, we must be on guard. New advances in technology will continue to make possible more and more extreme types of violent play, and perhaps we will, without warning, find ourselves crossing some invisible line into gameplay that really does change people for the worse. This seems unlikely to me personally, but to say that it is impossible would be arrogant and irresponsible.

Addiction

The second greatest fear people have about the dangers of gaming is that of addiction, that is, playing so much that it is interfering with or damaging more important things in life, such as school, work, health, and personal relationships. This is not just a concern about too much gaming, because after all, too much of anything (exercise, broccoli, vitamin C, oxygen) can be detrimental. No, this is a fear about compulsive behavior that a person is unable to give up, even though it is clearly having harmful consequences.

It is true that designers do continuously seek to create games that capture and engage the mind—games that make you want to keep playing. When someone is excited about a new game, it isn't unusual for them to compliment it by saying, "I love it! It's so addictive!" But by this, they rarely mean that the game is damaging their lives, but rather that they feel some kind of pull to keep returning to it.

But there are people who play games so much that their lives suffer for it. Modern massively multiplayer games, with their huge worlds, social obligations, and multiyear play goals, definitely draw certain people into self-destructive patterns of play.

It is worth pointing out that self-destructive gaming is nothing new. Gambling is one form that has been around for ages, but it is a special case, since it is the exogenous, not endogenous rewards that are so addictive. Even without monetary rewards, though, there have long been cases of people playing games more than they should. The most common cases are college students. My grandparents used to talk about classmates who had to drop out of school from spending too much time playing bridge. Stephen King's novel *Hearts in Atlantis* is a story (based on true events) about college students who fail out of school due to their addiction to the card game of Hearts and end up drafted into the Vietnam war as a result. In the 1970s, overplay of *Dungeons & Dragons* led to poor academic performance, and today League of Legends serves as an uncontrollable temptation for many students.

Nicholas Yee performed a very thoughtful study of the factors involved in "problematic usage" of games, where he shows that the reasons for self-destructive gameplay are different for different types of people or as he says:

The issue of MMORPG addiction is complex because different players are attracted to different aspects of the game, to different degrees, and may or may not be motivated by external factors that are using the game as an outlet. Sometimes the game is pulling the player in; sometimes a real-life problem is pushing the player in. Oftentimes, it is a combination of both. There is no one way to treat MMORPG addiction because there are many reasons why people become obsessed with or addicted to MMORPGs. If you consider yourself addicted to MMORPGs and your playing habits are causing you real life problems, or if someone close to you has playing habits which are obsessive and unhealthy, consider seeking the help of a professional counselor or therapist who is trained in addiction problems.

There is no denying that for some people, this can be a real problem. The question is, "What can game designers do about it?" Some have suggested that if the designers wouldn't build in such attractive qualities, the problem would go away. But to suggest that it is irresponsible for designers to create games that are "too engaging" is like saying that overeating is the fault of irresponsible bakers who insist on making cake taste "too delicious." It is incumbent upon game designers, who are responsible for the play experiences they create, to find ways to make game structures fit into a well-balanced life. We cannot forget this or pretend it is someone else's problem. It should be on all our minds, just as it is on the mind of designer Shigeru Miyamoto, who often signs his autograph for children with the following note: "On a sunny day, play outside."

Experiences

So, do games change people? We have discussed at length the fact that we aren't really designing games, we are designing experiences. And experiences are the only things that can change people—sometimes in unexpected ways. When creating *Toontown Online*, we created a chat system where players could communicate quickly by picking phrases off a menu. Polite interactions between players seemed to us an important part of the *Toontown* aesthetic, and we felt it helped encourage cooperative play, so most of the phrases are supportive and encouraging ("Thanks!" "Good job!" etc.). This was in sharp contrast to

standard MMO culture, which involves a lot of trash-talking—insulting the people you play with, as rudely as possible. During beta testing, we were surprised to get an e-mail from a player who was upset with us. He explained that normally he played *Dark Ages of Camelot* and started playing *Toontown* on the side. Gradually, though, he found himself playing *Toontown* more and *Dark Ages* less. The reason he was upset with us was that *Toontown* had changed his habits—he found that he tended not to trash-talk anymore and was inclined to thank everyone who helped. He was embarrassed (but also grudgingly grateful) that a simple game for children had manipulated his thought patterns so easily.

You might think that changing someone's communication pattern is not that big a deal—but returning to the question of violence, consider, for a moment, what violence really is. Not the violence of stories or games, but real-world violence. In the real world, violence is seldom a means toward an end; instead, it is a form of communication—one that people resort to when all else fails. It is a desperate way of saying "I'm going to show you how much you are hurting me!"

We are just starting to understand how games can change us. It is imperative that we learn more about how they do, because the more we learn, the more we can use them not just as an amusement, but as a valuable tool for improving the human condition. Take this lens to help you remember this important idea.

#110 The Lens of Transformation

Games create experiences, and experiences change people. To make sure only the best changes happen to your players, ask yourself these questions:

- How can my game change players for the better?
- How can my game change players for the worse?



Illustration by Nathan Mazur

Is it really your business, though, to worry about how your game changes players? This is the subject of

our next chapter.

Other Reading to Consider

***The Transformational Framework: A Process Tool for the Development of Transformational Games* by Sabrina Haskell Culyba.** A thorough and accessible guide to best practices for creating excellent and effective transformational games. Free download available through ETC Press.

***Reality Is Broken* by Jane McGonigal.** This book brims with inspiration about how games might change the world.

***What Videogames Have to Teach Us About Learning and Literacy* by James Paul Gee.** A serious look at the cognitive power of videogames.

***New Traditional Games for Learning: A Case Book* by Alex Moseley and Nicola Whitton.** A great collection of case studies from educators who have used nondigital games in educational contexts.

***Ten Steps to Complex Learning* by Jeroen J.G. van Merriënboer and Paul A. Kirschner.** A systematic and practical introduction to creating effective learning materials.

***Digital Games and Learning: Research and Theory* by Nicola Whitton.** An excellent bridge between learning research and the practical realities of transformational games.

CHAPTER THIRTY-FOUR

Designers Have Certain *Responsibilities*

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