

Character and . . .

Play

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The faculty essays presented here emerge from a semester-long process of reading and writing together in an environment of critique and review. Nevertheless, this invited journal of essays represents the authors' views and not necessarily the views of the Wendt Center for Character Education or the University of Dubuque.

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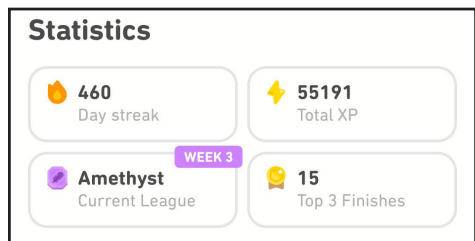
Gameplay and Human Flourishing

Mary K. Bryant

Abstract

Flourishing as communities and individuals requires well-being in a variety of areas so that we thrive and grow toward our human potential. Playing games can contribute significantly to our flourishing. If we engage with games in responsible and thoughtful ways, gameplay can help us engage with the world, steward ourselves, and enhance our learning.

When I launched into the engaging mobile app, Duolingo, which turns language learning into a game, I eagerly anticipated my imminent fluency in Mandarin Chinese. While I already enjoy learning languages, I struggle to get very far studying new languages outside of the classroom. Using the app lit a fire that kept me coming back. Unfortunately, the fire was not a metaphor for my internal motivation—it was literally the image of a flame on the screen that tracks how many days in a row I practiced. By the 411th day of my streak, I was at 53,448 experience points, with 1,008 gems available for unlocking future challenges.



Duolingo's stat block for tracking progress

You might think that stats like these mean I am really developing my skills in Mandarin. No such luck. I can recognize some Mandarin characters and am able to say a few basic sentences, but it is not the progress I had hoped for. Worse, while I started out enjoying the app, it now feels monotonous, pointless. I often get annoyed with the inflexible, repetitive questions (how many times do I have to spit out the *exact* phrase, “He doesn’t play sports, he only likes to sleep”? I honestly can’t tell if the app designers are trying

to be funny) as I attempt to hurry through my daily lessons so I can earn enough points to stay in the Diamond league and see my “Day streak” increase by one. The desire to beat out the competition and earn bragging rights has overshadowed my original interest in the Mandarin language. This isn’t the experience I had hoped for, but I can’t stop. I made it this far without interruption—not because I have made a habit of learning Mandarin, but because I am compelled to continue my streak!

Nearly every area of life has an app aimed at making mundane tasks more enjoyable. So much so that in 2010 Apple trademarked the phrase, “there’s an app for that.” I love gameplay in general and try to fit in a game when my free time allows it—especially puzzle games, board games, and roleplaying games—so gamification sounded great to me.

But as a descendent of the “Pious” Danes,¹ a group of Danish immigrants who formed a strict Christian sect that did not allow “entertainments,” including dancing and games,² every now and then I get a nagging feeling that gameplay is not the productive activity I should be spending my time on.³ It must run in the family—my mother, who remembers hiding her family’s deck of cards behind the curtains when her grandparents came to visit, still hesitates to sit down to play a game rather than do something “useful.” A gamified app that teaches me a new language is bound to fall into the productive side of gameplay, I reasoned. But once the joy of learning Mandarin with Duolingo morphed into an unrelenting desire to dominate, I realized I hadn’t made much progress even when it *was* fun and the nagging feeling returned. And I began to wonder whether all this gameplay is truly that good for me—or anyone, for that matter. That is, does it contribute to flourishing?



Every now and then I get a nagging feeling that gameplay is not the productive activity I should be spending my time on.

Human Flourishing

I think of flourishing as thriving and growing, externally and internally, usually due to the presence of optimal conditions. The image comes to my mind of four pumpkin plants I grew last summer. The leaves, as wide as my torso, stood four feet tall. The thick vines climbed a nearby tree to benefit more fully from the sun’s rays. The resulting eight pumpkins were huge and beautiful. Their rinds were thick and tough, full of large seeds.

The combination of soil make-up, drainage, rain, and placement for the best sunlight allowed my pumpkins to flourish together as they pursued all their pumpkin potential.



My small but flourishing pumpkin patch

Human flourishing is similar, with perhaps a few more dimensions to consider. While the concept of human flourishing has its roots in the philosophy of Aristotle, a variety of contemporary philosophers, positive psychologists, and social scientists have proposed ways to think about what it means to flourish as a human.⁴ My favorite synthesis of the idea comes from Tyler J. VanderWeele, director of Harvard’s Human Flourishing Program, who suggests that human flourishing is overall well-being in regard to six domains: happiness and life satisfaction, physical and mental health, meaning and purpose, character and virtue, social relationships, and material and financial stability.⁵ The key here is *overall* well-being. Everyone’s situation is different. While it may not be possible to reach full thriving due to barriers to well-being beyond our control, the *pursuit* of well-being in these areas ideally gets us closer to flourishing as a community as well as individually.

Surely gameplay must contribute to well-being in some of those categories! With this in mind, let’s consider whether and how gameplay can help us flourish,⁶ beyond the temporary good feeling we experience during play. Free, imaginative play as well as physical sports admittedly apply to much of this discussion, but to keep the scope of my exploration manageable, I will focus on video games, tabletop games, and gamified apps.⁷

Engagement with the World through Games

Although games often lead players to think about imaginary situations or turn their focus away from immediate needs of regular life, in many ways social gameplay and roleplay provide rich environments that allow for deep engagement with the world and society.

Social Engagement

Social games, or games that involve interacting with others (think Monopoly, Charades, trivia contests), offer opportunities to work with

others and develop relationships, and help to improve social skills and virtues, community-mindedness, and bonding. Evidence of the spread of games around the ancient Middle East indicate that people played games during times when different cultural groups interacted for trade purposes. Archaeologist Walter Crist and his colleagues drew the conclusion that board games served as “social lubricants” and “allowed individuals from distant regions to interact across real and imagined boundaries.”⁸ Games made room for growing empathy and community among strangers.

Similarly, today many game stores, libraries, and even restaurants have instituted game nights that invite and encourage a variety of people, often strangers to each other, to play games together, not to mention huge annual gaming conventions that see gamers of all varieties coming together for play. Massively multiplayer online video games (MMOs) offer opportunities for players to virtually play with friends as well as form new friendships with strangers. Playing with others has served to help people form connections throughout history.

While I have played my share of games at conventions and game stores, my favorite gameplay happens when I visit the friends I found in college. Still today—some twenty-odd years later—when we get together, it is safe to assume that we’ll play at least one game. Spouses, children, and new friends have joined us in our play over the years, forming the foundations of a close-knit game-playing community.



Forming and maintaining community through gameplay

Whether collaborative or competitive, in person or virtual, playing games together gives us the chance to learn about and practice being good sports and to deepen our friendships.⁹ We learn the value of letting others suggest the game for the evening, practice collaborative problem solving, and develop strategies for helping others have fun even when the gameplay is not going well for them or for being civil and patient when we are very irritated.

This is not to say that everything always goes smoothly. Sometimes I think I am on the same page as my fellow game players, only to realize that one person is not having fun because of how another player is playing. Years ago, I played a game designed to start out collaboratively until one player is

supposed to secretly become a traitor to the other players. But the betrayal never happened. The player who drew the betrayal card didn't want to cause strife among us, and simply kept playing as an ally. I was confused and a little disappointed, as I love the intrigue of trying to figure out who is behind the double-crossings and deceit. After the game, we talked about what had happened, laughed over it, and reflected on the fact that we had not picked the right game for everyone in the group.

Playing with others has served to help people form connections throughout history.

Sometimes problems arise from a difference in how seriously the players are taking the game. It can certainly be hard to get in the flow, and stay in it, when another player keeps disrupting the play with off-topic conversation; it can be equally frustrating for the person who joined the game for the social element to not be allowed to chat and enjoy everyone's company. Another common difficulty is a difference in competitiveness among players. Too much competitive zeal on the part of one player can suck the joy out of the game for someone who just wants to relax, and vice versa. Sometimes we don't play well together and have to patch things up, but that's part of living in community and learning from our mistakes—in fact, it is part of growing and developing into better people—kind, humble, patient people—who flourish together.

None of this means that I think all collaborative gameplay is bound to lead to good outcomes. There are certainly roleplaying groups who have engaged in and enjoyed misogyny, racism, and destructive stories together.¹⁰ The anonymity made possible by playing MMOs can more easily lead to abuse and harassment with low risk of meaningful consequences.¹¹ This sort of reinforcement of damaging worldviews is likely the source of much of the vitriol some gamers displayed with Gamergate, a culture war that erupted within the video game world against an infusion of diversity, played out mostly in the form of harassment of marginalized groups and prominent women in video game culture.¹² Even when we are playing, it is important to evaluate whether we are in echo chambers that dismiss (or worse, degrade, suppress, or harm) others and, when necessary, change course.

Changing Perspectives

Just as our social groups and gaming activities can reinforce our current worldview, they can also challenge our worldview. Games that encourage players to think about other viewpoints allow for experimenting with

and discovery of new perspectives on the world. Roleplaying games in particular—video or board—make it possible for us to broach subjects and explore together possibilities that we do not normally have easy access to, or that we may be ignorant of. I am heartened by the publication of social action video games and board games that address serious issues for reflection, such as the environmental crisis, mental health, and the desperate decisions made in war time.¹³

In *Playing as Others: Theological and Ethical Responsibility in Video Games*, Benjamin J. Chicka calls for theologians to enter the video game sphere to shape it, post-Gamergate, into a more inclusive, welcoming place to all. As Chicka says, “God is brought forth in meeting the other and realizing one’s ethical responsibility to them in the cultural form of video games.”¹⁴ The opportunity to encounter or even play as the wholly unfamiliar Other may make it easier to interact with the Other outside of gameplay. Research has found that immersive games in which players actively play roles with perspectives different from their own have the power to impact player biases and grow their empathy.¹⁵ Stepping into the shoes of Michael Sterling, a Black character in the virtual reality game *1,000 Cut Journey*, I witnessed realistic injustices that he faced,¹⁶ which led me to reflect on how I can expand my own efforts to combat racial inequality. When our empathy translates into positive action,¹⁷ it leads to better community-mindedness and promotes flourishing at a societal level.

We can also explore ethical decision-making in play. According to some recent research, not all immoral decisions made during gameplay represent players’ morality outside of play. A player engaged in a first-person shooter video game does not necessarily feel inclined toward war or want



When our empathy translates into positive action, it leads to better community-mindedness and promotes flourishing at a societal level.

to harm others in regular life. Some evidence suggests that this sort of behavior may represent exploration of possibilities or it may be cathartic, satisfying urges rather than allowing them to come out in immoral behaviors outside of the game.¹⁸ Perhaps pretending violence goes beyond satisfying urges and allows for exploration of responses to bad behavior and its consequences.

Roleplay in science fiction and fantasy games offers a safe and separate realm of possibility and hope where the players can encounter the wonders

and horrors of reality, address, analyze, and ascribe meaning. Science fiction and fantasy literature have long been genres that allow for reflection, examination, and analysis of truths such as human frailty and meaning, but at a distance. In *Dangerous Games: What the Moral Panic Over Role-Play Games Says About Play, Religion, and Imagined Worlds*, Joseph Laycock writes, “Human beings need play and fantasy to be psychologically well. Play provides a mental space through which we can order our world.”¹⁹ Play makes the unapproachable approachable.

Through roleplaying games, I, too, have reflected on reality. The characters I play tend to have much harder lives than I do. They lose loved ones, fight long odds, and struggle to make the best choice in an impossible situation—*do I save the townspeople dangling precariously over the fiery pit or go after the ogre who is running away with an ancient artifact that could lead to the destruction of the world?* Of course, it’s all pretend, but it does lead me to think about possibilities and choices, mortality, the Other, and assumptions we all regularly make.²⁰



Taking on fictional roles to explore possibilities

With social games, we can develop a variety of moral virtues such as civility, compassion, patience, and humility. Games that offer the opportunity to take on new roles help us learn to value the Other, to look at new perspectives with open minds, and to reflect on important questions about life and meaning, which brings us closer to living in community, seeing the humanity in each other.

Stewardship of Our Selves through Gameplay

Outside the framework of community and worldview, gameplay impacts our selves—our health and satisfaction, for instance. Integrity demands that we steward our selves well—that we care for ourselves—through discerning what is good for us and acting on that determination.²¹

Health Impacts

Gameplay affects our physical and mental health. Adults who play board games are less likely to develop dementia²² and more likely to stave off cognitive decline.²³ Board gameplay even helps us fight depression and heart

disease, through its capacity to lower stress levels.²⁴ When we find ourselves laughing during our gameplay (a common occurrence in my experience, though I admit that not every game turns hilarious), we may also benefit from laughter's many positive psychological and physiological effects.²⁵ Take note, however, that those who consider leisure activities a waste of time tend not only to enjoy them significantly less than they would otherwise, but they also miss out on many of the mental health benefits of leisure.²⁶ Unfortunately, there is concern that *video* gameplay may actually be linked to increased risk of cardiovascular disease, due to the longer amounts of time video gamers tend to spend sitting, as well as higher incidence of eye strain, problems with tendons in the hand and wrist, and back and neck pain.²⁷ Video game players can still benefit from other aspects of play if they take care to be aware of those risks and act to mitigate them by shortening the duration of play and learning healthy play postures, for example.



Challenging play

Cerebral puzzles and the challenges posed by games open our minds and we discover new ways of finding solutions. My favorite puzzle is *The New York Times* daily crossword. I love unraveling the wordplay and gimmicks hidden in many of them. Sometimes the struggle proves too much and I do not manage to complete the puzzle that day, but I feel

so good when I figure out a particularly hard clue, discover the day's hidden theme, or in fact solve the entire puzzle. As Bernard Suits succinctly summed it up: "Playing a game is the voluntary attempt to overcome unnecessary obstacles."²⁸ The relaxed, pleasant experience of getting into "the zone" is a focused state called "flow." Flow can be easy to enter when playing a game, likely because the best games satisfy the conditions necessary to enter it: the goals of an activity are clear, there is sufficient feedback, it is not too hard nor too simple. It is essential that our play have some level of challenge in order to draw and engage our focus.²⁹ Otherwise we get bored and find something else to do.

When we enjoy ourselves with these fun challenges, we are strengthening our brains.³⁰ The play doesn't necessarily increase our chances of solving other puzzles or add to our knowledge banks. But it is *practice* at considering problems and figuring out ways to address them within a relatively safe context, which helps us prepare for real problems that arise when we are not playing.³¹ The practice I have had with the crossword and

other puzzles, taking my time to consider different ways to interpret clues, has even helped me think more creatively when faced with more difficult passages of text in my work as a literary translator.

Distraction and Coping

Gameplay provides distraction and relief from pain and hardship. The pleasure we feel when we are having fun or receiving rewards comes from the release of endogenous (naturally produced) opioids, such as endorphins, which, among other functions, also lower stress and block pain receptors.³² These chemicals can trigger a simultaneous release of dopamine, which drives our desire for more rewards, motivating us to absorb ourselves in the activity, distracting us until further regulatory mechanisms inhibit the process and lead us to naturally transition out of that activity.³³ But beyond distracting us, researchers have found that playing games can actually decrease the level of pain, anxiety, or stress felt by the player.³⁴ Our endorphins dull our suffering in addition to pleurably distracting us.

Humanity's use of games to distract ourselves and cope with hardship goes back thousands of years. Archaeologists have pieced together evidence that some ancient peoples played games while they waited for better work conditions, such as during the cold months between growing seasons. In one case, ancient Mesoamericans likely played games while they waited in their temporary harvesting site for the tide to go out so they could continue collecting shellfish.³⁵

The Ancient Greek historian Herodotus wrote in *The Histories* of a famine that had happened hundreds of years previous in Lydia. The ruler of Lydia decreed that, in order for the kingdom to survive the famine, people must only eat food every other day. On the fasting days, they were to play games to distract themselves from their hunger.³⁶ Perhaps it was the enjoyment that was a respite from hardship, or the endorphins dulling the gnawing hunger, or it's possible that they found the flow and it made the time between meals pass quickly. Either way, the story illustrates the potential for play to help us persevere through hard times.

I can't help but see a connection to the increased interest in games and puzzles during the COVID-19 pandemic. Not only were people looking for activities at home to replace the activities they had previously pursued in public or in social groups, but perhaps the play element in particular made it easier to bear the heightened level of discomfort that many of us were feeling (whether it was due to anxiety, mourning, loneliness, or frustration).

When I had COVID, I was sick enough during my isolation period that I spent most of the days in bed and didn't have the stamina to do much remote work. I couldn't even manage to sit up on my couch long enough to play a solo board game at the coffee table. But I had *The New York Times* online crosswords to distract me. I lay in bed with my phone next to me, alternately napping and puzzling through the clues, and the time passed more comfortably.

Limitations of Coping

There are limits to how much play can help us cope, however. The mechanisms in our brain that allow us to feel pleasure, seek rewards, and transition out of the pleasure and reward cycle should work together smoothly but they can fall out of sync with one another. The problem of addiction arises when reward-seeking behavior runs unchecked, even in the absence of pleasurable outcomes.³⁷ When we fill all possible time with gameplay, seeking out the rewards of play at the expense of our responsibilities to ourselves and our community, it is no longer healthy coping.³⁸ Relationships suffer, we skip meals and showers, and subsequently our health might decline. If we neglect our work, we could take a financial hit as well.



There are limits to how much play can help us cope.

Neurological mechanisms should naturally limit how much play we want at a time. However, addiction is a real concern in video and online games because digital game designers have used what scientists have discovered about neurobiology to take direct aim at the mechanisms hidden behind our pleasure-seeking natures.³⁹ Adam Alter, author of *Irresistible: The Rise of Addictive Technology and the Business of Keeping Us Hooked*, identifies a number of elements of behavior addiction that video games and online apps use to keep our interest and attention, keeping high our desire and hope for imminent pleasure:

compelling goals that are just beyond reach; irresistible and unpredictable positive feedback; a sense of incremental progress and improvement; tasks that become slowly more difficult over time; unresolved tensions that demand resolution; and strong social connections.⁴⁰

While the digital technology industry may defend itself, claiming that designers do not want to encourage addiction because doing so would

cause them to eventually lose customers who stop playing to treat their addiction,⁴¹ I am skeptical. The digital game industry is huge (the global video game market took in \$184.9 billion (USD) in 2021),⁴² and it would take massive numbers of players to recognize a problem and quit playing entirely to make a financial impact. An estimated 1.96% of the world's population suffers from video game addiction,⁴³ now recognized by the World Health Organization as an illness called "gaming disorder."⁴⁴ Too many people are suffering, but I wonder if even that is enough to motivate the less morally conscious designers to consider their digital users' health and well-being.⁴⁵

To play games with integrity, in ways that lead to flourishing, we must remember to watch out for and avoid the ways games can lead to problems. Thoughtfully limiting time on video games and digital devices may help us avoid neglecting other areas of our lives, such as relationships and commitments. Being careful not to spend too long sitting without a break while playing video games or long tabletop board game sessions will help maintain good physical health—something to keep in mind with other activities, too, such as sitting all day at work and driving long distances. In addition, as noted earlier, immoral actions within a roleplaying game do not necessarily indicate that the players themselves lack moral character. However, we should still be cautious with gratuitous violence in our games, based on recent studies that suggest violent video games may have the capacity to increase aggression among those players already predisposed to aggressive behavior.⁴⁶

Using games to strengthen the mind, learn to cope, and improve our health are all acts of integrity, as we practice good stewardship of ourselves. Certainly gameplay is just one of the strategies we have available to care for these aspects of our well-being, but it is a good one to consider implementing, especially in view of the variety of other benefits of playing games.

Learning through Gameplay

In many ways, caring for oneself includes pursuing knowledge and developing skills, as we work to improve our careers, financial situations, even satisfaction. And it turns out that the neurochemical activity behind the good, engaged feeling we often get when we play primes us for learning.⁴⁷ Play stimulates neural growth in areas of the brain that process emotions and executive decisions.⁴⁸

Educational impacts of play are wide ranging, and not just on children. Play enhances creativity and innovation and leads to better problem-solving and motivation to stay with a task. It is also linked to learning to be less aggressive and developing life skills and risk management.⁴⁹

Animals tend to stop playing once they have matured and developed the skills and knowledge they need to survive and reproduce. Among the notable exceptions to this pattern are humans and their domesticated dogs and cats.⁵⁰ It turns out that retaining the ability to play into adulthood allows us to continue to learn new things and adapt to new situations. According to play expert Stuart Brown, “Life-long play is central to our continued well-being, adaptation, and social cohesiveness.”⁵¹ So it makes sense to allow ourselves to incorporate gameplay in the learning and growth we do beyond early childhood.



Playing to learn about the dangers posed by newspaper rolls and the like

Research shows that games can be useful tools for teaching some topics and skills. While the evidence is not definitive, the findings are certainly promising.⁵² Teachers have been using games more and more in secondary school and college curricula to teach a variety of topics. Students engage in simulations and play historical games to encounter information in spheres separate from reality. They play trivia games to prepare for upcoming tests. I remember a high school typing class that used timed challenges to help us practice. I could keep up but it challenged me enough to keep me focused on it. I found myself getting into the zone as my fingers flew across the keyboard. It was indeed fun, and I came out of it a proficient typist.

Digital developers have introduced many “games” for learning. There are thousands of apps in the Play Store promising to turn the slog of everyday life and lessons into a fun game. This is widely known as gamification, the use of superficial game mechanics to add competition to something not normally considered a game. Examples of such mechanics are badges, points for actions, countdowns, streak counts, leaderboards, daily “quests.” Duolingo (the app I tried out for language learning), Habitica (for personal productivity), EpicWin (for getting chores done), Plant Nanny (for remembering to drink water) are a few of the gamified apps available. Even

the Red Cross and Audible have gamified apps that assign badges based on the user's activity in the app.

Some people call gamified apps “exploitationware” or “gamblified” apps, as numerous in-app purchases and pitches to subscribe reveal the monetary priorities of their creators. The companies behind gamified apps want you “to do something you otherwise wouldn't do,” says YouTuber Chris Franklin. He identifies their strategies to exploit our instinctual urges to hoard and compete in a hierarchy, such as awarding badges, jewels, and experience points, and provide ways to level up that creates the illusion of productivity. When we do something that they profit from, they give us rewards.⁵³ They use the same strategies discussed above to take advantage of our innate neurobiology and get us hooked.

While gamification in theory strives to create a useful vehicle for motivating people to accomplish otherwise unattractive tasks, in practice there are often problems. Gamification via digital devices provides instant gratification, which cultivates impatience⁵⁴ and cuts out the reflection step of habit-building⁵⁵ that would help us directly accomplish our goals of our own accord, rather than through the app.⁵⁶ In gamification, the reward provided by the shell of game mechanics often supersedes the satisfaction of completing whatever everyday task that gamification was supposed to make fun (sometimes we're playing for the rewarding “ding” instead of the correct answer),⁵⁷ which complicates things. The never-ending challenges that keep us hoping for a reward, along with the lack of resolution baked into many gamified apps, are prime ground for behavioral addiction.



Instant gratification via digital devices, prime ground for behavioral addiction

When we encounter gamified lessons in school, teachers supervise our engagement. They make sure the content is of an appropriate level and direct students' attention to new activities when it is time to move on. Many gamified apps do not have that sort of oversight. The apps are designed to keep us coming back to them for more, not (or at least not usually) to help us take the next step to turn it into a habit free from digital control.

But maybe there is nothing to be concerned about. After all, doomsayers predicted the demise of society when crosswords took off in the early

1900s. They feared that puzzle players, addicted to the new diversions, would end up harming themselves and others.⁵⁸ The same things happened with novels in the 1700s and 1800s. In this case the fears were that women who read such escapist literature would become so lost in their imaginations or disillusioned with reality that they would not be able (or want) to continue in their usual tasks and responsibilities.⁵⁹ There is a difference with gamification, though. To my knowledge, novelists and crossword puzzle designers weren't taking advantage of behavioral science to manipulate us and override our self-control.

Perhaps we will find a way to overcome gamification's weaknesses and they will eventually help us develop personal motivation, so we can consistently accomplish our goals without artificial prompting. Maybe, as game designer Jane McGonigal hopes, games will eventually be used to reinvent the human experience and solve so many of the terrible problems in the world today.⁶⁰ But since it is unlikely that games and players will solve the world's problems immediately, we are left to consider how best to grow as people through gameplay.

Gameplay primes us for learning. We more easily learn useful skills and grow in creativity through games, which may lead to greater satisfaction, purposeful work, and stability. Gamified apps that aim to help us get over the hump of learning a good new habit can be just what we need if we can't motivate ourselves otherwise. But again, we need to practice awareness and discernment, to be thoughtful about any potentially detrimental effects of our gamified activities.

Conclusion

After researching gameplay and gamification, I finally quit playing Duolingo. It took me a few months of joyless, fruitless, rote "play" before I managed to quit, as I was unwilling to break my precious streak, which represented a commitment, a lot of time—something to brag about. I was afraid that if I broke the streak, I wouldn't have the pride-stroking, impressive number to motivate me to continue. But the feeling that the app was more in control than I was—that perhaps I had even formed an addiction—finally won out. At 460 days, I quit, cold turkey. I got out my old college books and signed up for another online learning program available through the library—this one much more like traditional lessons—and made it a personal goal to continue my habit of studying Mandarin, but at my own prompting.

And I have kept it up so far! I was shocked to learn that, indeed, through Duolingo I had been successful in establishing the habit of studying Mandarin. The fire has been re-lit inside me, rather than on my phone’s screen. My study has now gone from gameplay to work, but it is fun work that challenges me to puzzle through and retain new information, not to race through it all in order to trounce the other players.

Using Duolingo to help me over the hump of initiating this language learning and establish a good habit was the right thing for me at the beginning. I would not have gotten to the point when I was ready to work on my own if not for Duolingo. Though there was some struggle and discomfort as I transitioned from play to work (and I confess it’s no longer on a strict daily schedule), I flourished through the experience—I exercised my brain,



Fun work

developed discipline and willpower, and practiced discernment and integrity.

My experience with Duolingo highlighted for me the necessity of determining whether an activity is truly beneficial, and acting upon that discernment—keeping in mind that an activity may be beneficial at one time and unhelpful in another. Though I love to play (even competitively), I don’t actually *want* to play every moment of my life. I might use another gamified app someday to help me form a good habit, but on the whole, it turns out that I prefer gameplay that benefits me in less concrete or obvious ways.

Play does not have to produce a measurable outcome to be meaningful and helpful. We should not feel ashamed of leisure activities that do not satisfy society’s idea of “productive,” or we risk missing out on the benefits that play offers. We all have the opportunity, on some level, to pursue the well-being, the flourishing that we can achieve together through gameplay, whether it is engaging with the world to grow our community and relationships, stewarding ourselves to improve our health and cope with pain, or enhancing our learning to develop our minds and abilities.

TODAY’S PUZZLE: Unscramble the following anagram.

M E A L Y G A P

CLUE: A strategy for flourishing?

ANSWER:

G A M E P L A Y

Mary K. Bryant is Director of Media and Programming for the Wendt Center for Character Education at the University of Dubuque. She is delighted to serve students and tackle creative projects such as editing this journal and producing videos, animations, and podcasts for the Center. With a BA in Biology, Theatre Arts, and German, along with an MFA in Comparative Literature—Translation from the University of Iowa, she pursues a variety of interests, including music, crafting, gardening, and, of course, playing games.

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Notes

1. Also referred to as “Holy Danes” and “Sad Danes” (as opposed to the “Happy Danes”—no, I’m not kidding. You see, the Happy Danes allowed games. Maybe that’s why they were happy!).

2. Spiegel, “The ‘Happy Danes’ vs. the ‘Sad Danes’”; Nebbe, “Happy Danes and Holy Danes.”

3. For discussion on the culture of productivity and the need for play in the world of science, see Adam J. Kleinschmit’s article in this issue.

4. For further readings on human flourishing, see Stuhr, ed., *Philosophy and Human Flourishing*; English and Love, eds., *Literary Studies and Human Flourishing*. For readings in the realms of psychology and sociology, see works by Deborah Carr, William C. Compton, Barbara L. Fredrickson, Corey L. M. Keyes, Martin E. P. Seligman.

5. VanderWeele, “On the Promotion of Human Flourishing,” 8149, 8153–54.

6. I recognize that some people have such challenges with financial and material stability that leisure time is fleeting, but I hope that everyone can find space in their lives for a little gameplay, for the reasons laid out in this article.

7. Despite the limits I have imposed, a broad variety of games come under this umbrella, as there are many styles and genres within the realms of video games (online, console-based, virtual reality, roleplaying games, first-person shooter, sandbox, simulations, etc.) and tabletop game (board games, card games, dice games, tabletop roleplaying games, puzzle games, etc.).

8. Crist, Voogt, and Dunn-Vaturi, "Facilitating Interaction," 191.
9. I was very interested to learn from a music therapist friend of mine about a new tool for therapists, *Critical Core*, a game system very similar to *Dungeons & Dragons*, structured to provide a safe space for clients to practice skills such as self-regulation and collaboration with others.
 10. Laycock, *Dangerous Games*, 191–92.
 11. Suler, "The Online Disinhibition Effect," 322.
 12. Chicka, *Playing as Others*, 2–5, 139.
 13. A few social action games I find particularly compelling are *Gone Home*, a video game with themes around mental health and LGBTQ+ identity, *Daybreak*, a boardgame with a focus on fighting climate change, and *1000 Cut Journey*, a virtual reality roleplay promoting racial equality.
 14. Chicka, *Playing as Others*, 152.
 15. Fuist, "Agentic Imagination," 120–22; Schrier, "Reducing Bias Through Gaming"; Gutierrez et al., "'Fair Play'"; Stephan and Finlay, "The Role of Empathy in Improving Intergroup Relations," 736.
 16. Cogburn et al., "1,000 Cut Journey."
 17. Though empathy does not invariably lead to compassionate action or willingness to approach the Other, it can be a powerful tool in improving intergroup relations. See Warren, "The Utility of Empathy"; Eisenberg, "Empathy-Related Responding"; Stephan and Finlay, "The Role of Empathy."
 18. Laycock, *Dangerous Games*, 190–94.
 19. Laycock, 243.
 20. I recently complained about the discomfort I feel when considering the Trolley Problem (a philosophical exercise that calls for us to choose who lives and who dies in a hypothetical trolley accident) and how awful it feels to weigh and compare human lives. While that discomfort has its place (see articles by Adam Benjamin Smith, Beth Lindquist McCaw, and Annalee R. Ward in *Character and . . . Discomfort*), at its worst it can also be distracting from the moral work at hand (see Hoffman, *Empathy and Moral Development*, 13, 203-206; Paciello et al., "High Cost Helping Scenario"). Setting moral struggles in a fantasy land, one layer further from reality, may be helpful for those of us distracted by the horror of practicing making life-and-death decisions.
 21. Carter, *Integrity*, 10–11.
 22. Dartigues et al., "Playing Board Games."
 23. Nakao, "Special Series on 'Effects of Board Games.'"
 24. Nakao; Brown, *Play*, 71; Osborne et al., "Disentangling the Links."
 25. Louie, Brook, and Frates, "The Laughter Prescription."
 26. Tonietto et al., "Viewing Leisure as Wasteful," 2, 6–7.
 27. Gwinup, Haw, and Elias, "Cardiovascular Changes in Video-Game Players"; Lam et al., "Health Risks and Musculoskeletal Problems of Elite Mobile Esports Players."
 28. Suits, *The Grasshopper*, 43.
 29. Csikszentmihalyi, *Finding Flow*.
 30. Huberman, "Using Play to Rewire and Improve Your Brain."
 31. Bateson and Martin, *Play, Playfulness, Creativity and Innovation*, 43–45,

75–76.

32. Chen, “Please Stop Calling Dopamine the ‘Pleasure Chemical’”; Pillozzi, Carro, and Huang, “Roles of β -Endorphin in Stress, Behavior, Neuroinflammation, and Brain Energy Metabolism.”

33. Chen, “Please Stop Calling Dopamine the ‘Pleasure Chemical.’” “Endorphin - an Overview”; Froehlich, “Opioid Peptides”; Kringelbach and Berridge, “New Pleasure Circuit”; Barrot et al., “Braking Dopamine Systems,” 14094.

34. Mortensen et al., “Women with Fibromyalgia’s Experience”; Ünver, Güray, and Aral, “The Effects of Game Intervention”; Koushali et al., “The Effect of a Multi-Dimensional Play Program”; Inan and Inal, “The Impact of 3 Different Distraction Techniques”; Colwell, “Needs Met through Computer Game Play among Adolescents,” 2072; American Pain Society, “Video Games and Virtual Reality.”

35. Voorhies, *Prehistoric Games of North American Indians*, 6–7.

36. McGonigal, *Reality Is Broken*, 5–6. If you liked this tidbit of Lydian history, Jane McGonigal tells the full story of the Lydians who faced down famine through gameplay in *Reality is Broken*. The conclusion of the story is surprising, so make sure to read all the way to the end of the book to learn what we know today about what happened next!

37. Kringelbach and Berridge, “New Pleasure Circuit”; Robinson et al., “Roles of ‘Wanting’ and ‘Liking.’”

38. “Internet Gaming.”

39. Song, *Restless Devices*, 54–57.

40. Alter, *Irresistible*, 9.

41. McGonigal, *Reality Is Broken*, 43.

42. “Video Games - Worldwide.”

43. Stevens et al., “Global Prevalence of Gaming Disorder”; Jovanovic, “Gamer Demographics.”

44. Kamenetz, “Is ‘Gaming Disorder’ An Illness?”; “Gaming Disorder.”

45. For more on the moral responsibilities of game designers and consumers, see Rafic Sinno’s article, “Navigating a Pokémon Go World.”

46. In fact, the research on aggression and violent video games has led to ambiguous results over the years, with many studies finding no link between the two. Coyne et al., “Who Is Most at Risk for Developing Physical Aggression After Playing Violent Video Games?”; Ferguson, Bowman, and Kowert, “Is the Link Between Games and Aggression More About the Player, Less About the Game?”; Yao et al., “Violent Video Games Exposure and Aggression”; Kühn et al., “Does Playing Violent Video Games Cause Aggression?”; Przybylski and Weinstein, “Violent Video Game Engagement.”

47. Wang and Aamodt, “Play, Stress, and the Learning Brain,” 5–6; Ranjbar-Slamloo and Fazlali, “Dopamine and Noradrenaline in the Brain.”

48. Gordon et al., “Socially-Induced Brain ‘Fertilization,’” 1; Brown, Play, 33.

49. Bateson and Martin, *Play, Playfulness, Creativity and Innovation*, 109; chaps. 3, 5, 8.

50. Brown, *Play*, 48–73.

51. Brown, 58.

52. Nakao, "Special Series on 'Effects of Board Games.'"
53. qtd. in Ramirez and Squire, "Gamification and Learning," 630.
54. Selinger, Sadowski, and Seager, "Gamification and Morality," 380–81.
55. Reflection is a key component in developing virtuous practices, as described by Michael Lamb, Jonathan Brant, and Edward Brooks in "How is Virtue Cultivated? Seven Strategies for Postgraduate Character Development."
56. Sicart, "Playing the Good Life," 233–34.
57. Rigby, "Gamification and Motivation," 123.
58. Jacobs, *The Puzzler*, 8–9.
59. North, "When Novels Were Bad For You."
60. McGonigal, *Reality Is Broken*, 354.

Bibliography

Alter, Adam. *Irresistible: The Rise of Addictive Technology and the Business of Keeping Us Hooked*. New York: Penguin Books, 2017.

American Pain Society. "Video Games and Virtual Reality Proven Helpful as Pain Relievers." *Communications of the ACM* (blog), May 7, 2010. <https://cacm.acm.org/news/89918-video-games-and-virtual-reality-proven-helpful-as-pain-relievers/fulltext>.

Barrot, Michel, Susan R. Sesack, François Georges, Marco Pistis, Simon Hong, and Thomas C. Jhou. "Braking Dopamine Systems: A New GABA Master Structure for Mesolimbic and Nigrostriatal Functions." *The Journal of Neuroscience* 32, no. 41 (October 10, 2012): 14094–101. <https://doi.org/10.1523/JNEUROSCI.3370-12.2012>.

Bateson, Patrick, and Paul Martin. *Play, Playfulness, Creativity and Innovation*. Cambridge: Cambridge University Press, 2013.

Brown, Stuart. *Play: How It Shapes the Brain, Opens the Imagination, and Invigorates the Soul*. With Christopher Vaughan. New York: Penguin Group, 2009.

Carter, Stephen L. *Integrity*. HarperCollins, 1996.

Chen, Angela. "Please Stop Calling Dopamine the 'Pleasure Chemical.'" *The Verge*, March 27, 2018. <https://www.theverge.com/2018/3/27/17169446/dopamine-pleasure-chemical-neuroscience-reward-motivation>.

Chicka, Benjamin J. *Playing as Others: Theology and Ethical Responsibility in Video Games*. Waco: Baylor University Press, 2021.

Cogburn, Courtney D., Jeremy Bailenson, Elise Ogle, Tobin Asher, and Teff Nichols. "1,000 Cut Journey." In *ACM SIGGRAPH 2018 Virtual, Augmented, and Mixed Reality*, 1. SIGGRAPH '18. New York, NY, USA: Association for Computing Machinery, 2018. <https://doi.org/10.1145/3226552.3226575>.

- Colwell, John. "Needs Met through Computer Game Play among Adolescents." *Personality & Individual Differences* 43, no. 8 (December 2007): 2072–82. <https://doi.org/10.1016/j.paid.2007.06.021>.
- Coyne, Sarah M., Wayne Warburton, Cara Swit, Laura Stockdale, and W. Justin Dyer. "Who Is Most at Risk for Developing Physical Aggression After Playing Violent Video Games? An Individual Differences Perspective From Early Adolescence to Emerging Adulthood." *Journal of Youth & Adolescence* 52, no. 4 (April 2023): 719–33. <https://doi.org/10.1007/s10964-023-01739-0>.
- Crist, Walter, Alex Voogt, and Anne-Elizabeth Dunn-Vaturi. "Facilitating Interaction: Board Games as Social Lubricants in the Ancient Near East." *Oxford Journal of Archaeology* 35, no. 2 (May 2016): 179–96. <https://doi.org/10.1111/ojoa.12084>.
- Critical Core*. Game to Grow, 2019. <https://gametogrow.org/criticalcore/>.
- Csikszentmihalyi, Mihaly. *Finding Flow: The Psychology of Engagement with Everyday Life*. 1st ed. New York: BasicBooks, 1997.
- Dartigues, Jean François, Alexandra Foubert-Samier, Mélanie Le Goff, Mélanie Viltard, Héléne Amieva, Jean Marc Orgogozo, Pascale Barberger-Gateau, and Catherine Helmer. "Playing Board Games, Cognitive Decline and Dementia: A French Population-Based Cohort Study." *BMJ Open* 3, no. 8 (August 28, 2013): e002998. <https://doi.org/10.1136/bmjopen-2013-002998>.
- Eisenberg, Nancy, Natalie D. Eggum, and Laura Di Giunta. "Empathy-Related Responding: Associations with Prosocial Behavior, Aggression, and Intergroup Relations." *Social Issues and Policy Review* 4, no. 1 (December 1, 2010): 143–80. <https://doi.org/10.1111/j.1751-2409.2010.01020.x>.
- English, James F., and Heather Love, eds. *Literary Studies and Human Flourishing*. The Humanities and Human Flourishing. Oxford, New York: Oxford University Press, 2023.
- Ferguson, Christopher J., Nicholas David Bowman, and Rachel Kowert. "Is the Link Between Games and Aggression More About the Player, Less About the Game?" In *The Wiley Handbook of Violence and Aggression*, 1–12. John Wiley & Sons, Ltd, 2017. <https://doi.org/10.1002/9781119057574.whbva036>.
- Froehlich, Janice C. "Opioid Peptides." *Alcohol Health and Research World* 21, no. 2 (1997): 132–36.
- Fuist, Todd Nicholas. "The Agentic Imagination: Tabletop Role-Playing Games as a Cultural Tool." In *Immersive Gameplay: Essays on Participatory Media and Role-Playing*, edited by Evan Torner and William J. White, 108–26. McFarland & Company, 2012.

“Gaming Disorder.” Accessed March 6, 2023. <https://www.who.int/standards/classifications/frequently-asked-questions/gaming-disorder>.

Gone Home. The Fullbright Company, 2013. <https://gonehome.com/>.

Gordon, Nakia S., Sharon Burke, Huda Akil, Stanley J. Watson, and Jaak Panksepp. “Socially-Induced Brain ‘Fertilization’: Play Promotes Brain Derived Neurotrophic Factor Transcription in the Amygdala and Dorsolateral Frontal Cortex in Juvenile Rats.” *Neuroscience Letters* 341, no. 1 (April 24, 2003): 17–20. [https://doi.org/10.1016/s0304-3940\(03\)00158-7](https://doi.org/10.1016/s0304-3940(03)00158-7).

Gutierrez, Belinda, Anna Kaatz, Sarah Chu, Dennis Ramirez, Clem Samson-Samuel, and Molly Carnes. “‘Fair Play’: A Videogame Designed to Address Implicit Race Bias Through Active Perspective Taking.” *Games for Health Journal* 3, no. 6 (December 2014): 371–78. <https://doi.org/10.1089/g4h.2013.0071>.

Gwinup, G., T. Haw, and A. Elias. “Cardiovascular Changes in Video-Game Players. Cause for Concern?” *Postgraduate Medicine* 74, no. 6 (December 1983): 245–48. <https://doi.org/10.1080/00325481.1983.11698546>.

Hoffman, Martin L. *Empathy and Moral Development: Implications for Caring and Justice*. Cambridge: Cambridge University Press, 2000.

Huberman, Andrew. “Using Play to Rewire and Improve Your Brain.” Huberman Lab, n.d. <https://castbox.fm/episode/Using-Play-to-Rewire-%26-Improve-Your-Brain-%7C-Episode-58-id4758848-id465855002?country=us>.

Huizinga, Johan. *Homo Ludens: A Study of the Play-Element in Culture*. Kettering, OH: Angelico Press, 2016.

Inan, Gamze, and Sevil Inal. “The Impact of 3 Different Distraction Techniques on the Pain and Anxiety Levels of Children During Venipuncture: A Clinical Trial.” *The Clinical Journal of Pain* 35, no. 2 (February 2019): 140–47. <https://doi.org/10.1097/AJP.0000000000000666>.

“Internet Gaming.” Accessed March 6, 2023. <https://www.psychiatry.org/443/patients-families/internet-gaming>.

Jacobs, A. J. *The Puzzler: One Man’s Quest to Solve the Most Baffling Puzzles Ever, from Crosswords to Jigsaws to the Meaning of Life*. New York: Crown, 2022.

Jovanovic, Bojan. “Gamer Demographics: Facts About the Most Popular Hobby.” Dataprot, August 2, 2022. <https://dataprot.net/statistics/gamer-demographics/>.

Kamenetz, Anya. “Is ‘Gaming Disorder’ An Illness? WHO Says Yes, Adding It To Its List Of Diseases.” *NPR*, May 28, 2019, sec. Education. <https://www.npr.org/2019/05/28/727585904/is-gaming-disorder-an-illness-the-who-says-yes-adding-it-to-its-list-of-diseases>.

Character and . . . Play

Kleinschmit, Adam J. "Transformative Discovery Science: Character and Play as Key Elements." *Character and . . . Play* 9 (2023): 78-107.

Koushali, Ali, Reza Daryabeigi, Nasrollah Alimohammadi, and Mostafa Najafi. "The Effect of a Multi-Dimensional Play Program on Children's Pain Intensity During Burn Dressing Change in Burn Intensive Care Units: A Clinical Trial." *Journal of Critical Care Nursing* (October 10, 2017). <http://jccnursing.com/article-1-380-en.html>.

Kringelbach, Morten L., and Kent C. Berridge. "New Pleasure Circuit Found in the Brain." *Scientific American*, August 1, 2012. <https://doi.org/10.1038/scientificamerican0812-40>.

Kühn, Simone, Dimitrij Tycho Kugler, Katharina Schmalen, Markus Weichenberger, Charlotte Witt, and Jürgen Gallinat. "Does Playing Violent Video Games Cause Aggression? A Longitudinal Intervention Study." *Molecular Psychiatry* 24, no. 8 (August 2019): 1220–34. <https://doi.org/10.1038/s41380-018-0031-7>.

Lam, Wing-Kai, Rui-Tan Liu, Bob Chen, Xin-Zhou Huang, Jie Yi, and Duo Wai-Chi Wong. "Health Risks and Musculoskeletal Problems of Elite Mobile Esports Players: A Cross-Sectional Descriptive Study." *Sports Medicine - Open* 8, no. 1 (May 13, 2022): 65. <https://doi.org/10.1186/s40798-022-00458-3>.

Lamb, Michael, Jonathan Brant, and Edward Brooks. "How Is Virtue Cultivated? Seven Strategies for Postgraduate Character Development." *Journal of Character Education* 17, no. 1 (2021): 81–108.

Laycock, Joseph P. *Dangerous Games: What the Moral Panic Over Role-Playing Games Says About Play, Religion, and Imagined Worlds*. Oakland, CA: University of California Press, 2015.

Leacock, Matt, and Matteo Menapace. *Daybreak*. CMYK, 2023. <https://www.daybreakgame.org>.

Louie, Dexter, Karolina Brook, and Elizabeth Frates. "The Laughter Prescription." *American Journal of Lifestyle Medicine* 10, no. 4 (June 23, 2016): 262–67. <https://doi.org/10.1177/1559827614550279>.

McCaw, Beth Lindquist. "The Oxymoron of 'My Comfort Zone.'" *Character and . . . Discomfort* 5 (2019): 9–26. <https://digitalud.dbq.edu/ojs/index.php/character/article/view/41/33>.

McGonigal, Jane. *Reality Is Broken: Why Games Make Us Better and How They Can Change the World*. Penguin Group, 2011.

Mortensen, Jesper, Lola Qvist Kristensen, Eva Petersson Brooks, and Anthony Lewis Brooks. "Women with Fibromyalgia's Experience with Three Motion-Controlled

- Video Game Consoles and Indicators of Symptom Severity and Performance of Activities of Daily Living.” *Disability & Rehabilitation: Assistive Technology* 10, no. 1 (January 2015): 61–66. <https://doi.org/10.3109/17483107.2013.836687>.
- Nakao, Mutsuhiro. “Special Series on ‘Effects of Board Games on Health Education and Promotion’ Board Games as a Promising Tool for Health Promotion: A Review of Recent Literature.” *Biopsychosocial Medicine* 13 (February 19, 2019): 5. <https://doi.org/10.1186/s13030-019-0146-3>.
- Nebbe, Charity. “Happy Danes and Holy Danes,” *Talk of Iowa*, November 25, 2015. <https://www.iowapublicradio.org/show/talk-of-iowa/2015-11-25/happy-danes-and-holy-danes>.
- North, Anna. “When Novels Were Bad For You.” *The New York Times*, September 14, 2014, sec. Opinion Pages. 1410717646. <https://archive.nytimes.com/op-talk.blogs.nytimes.com/2014/09/14/when-novels-were-bad-for-you/>.
- Osborne, Michael T., Lisa M. Shin, Nehal N. Mehta, Roger K. Pitman, Zahi A. Fayad, and Ahmed Tawakol. “Disentangling the Links Between Psychosocial Stress and Cardiovascular Disease.” *Circulation. Cardiovascular Imaging* 13, no. 8 (August 2020): e010931. <https://doi.org/10.1161/CIRCIMAGING.120.010931>.
- Paciello, Marinella, Roberta Fida, Luca Cerniglia, Carlo Tramontano, and Ellie Cole. “High Cost Helping Scenario: The Role of Empathy, Prosocial Reasoning and Moral Disengagement on Helping Behavior.” *Personality & Individual Differences* 55, no. 1 (July 2013): 3–7. <https://doi.org/10.1016/j.paid.2012.11.004>.
- Pilozzi, Alexander, Caitlin Carro, and Xudong Huang. “Roles of β -Endorphin in Stress, Behavior, Neuroinflammation, and Brain Energy Metabolism.” *International Journal of Molecular Sciences* 22, no. 1 (January 2021): 338. <https://doi.org/10.3390/ijms22010338>.
- Przybylski, Andrew K., and Netta Weinstein. “Violent Video Game Engagement Is Not Associated with Adolescents’ Aggressive Behaviour: Evidence from a Registered Report.” *Royal Society Open Science* 6, no. 2 (February 2019): 171474. <https://doi.org/10.1098/rsos.171474>.
- Ramirez, Dennis, and Kurt Squire. “Gamification and Learning.” In *The Gameful World: Approaches, Issues, Applications*, edited by Steffen P. Walz and Sebastian Deterding, 629–52. Cambridge, Massachusetts: The MIT Press, 2014.
- Ranjbar-Slamloo, Yadollah, and Zeinab Fazlali. “Dopamine and Noradrenaline in the Brain; Overlapping or Dissociate Functions?” *Frontiers in Molecular Neuroscience* 12 (2020). <https://www.frontiersin.org/articles/10.3389/fnmol.2019.00334>.

- Rigby, C. Scott. "Gamification and Motivation." In *The Gameful World: Approaches, Issues, Applications*, edited by Steffen P. Walz and Sebastian Deterding, 113–37. Cambridge, Massachusetts: The MIT Press, 2014.
- Robinson, M. J. F., A. M. Fischer, A. Ahuja, E. N. Lesser, and H. Maniates. "Roles of 'Wanting' and 'Liking' in Motivating Behavior: Gambling, Food, and Drug Addictions." *Current Topics in Behavioral Neurosciences* 27 (2016): 105–36. https://doi.org/10.1007/7854_2015_387.
- Schrier, Karen. "Reducing Bias Through Gaming." *GAME: The Italian Journal of Game Studies* 2, no. 7 (2018). <https://www.gamejournal.it/?p=3503>.
- ScienceDirect. "Endorphin - an Overview." Accessed June 27, 2023. <https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/endorphin>.
- Selinger, Evan, Jathan Sadowski, and Thomas Seager. "Gamification and Morality." In *The Gameful World: Approaches, Issues, Applications*, edited by Steffen P. Walz and Sebastian Deterding, 371–92. Cambridge, Massachusetts: The MIT Press, 2014.
- Sicart, Miguel. "Playing the Good Life: Gamification and Ethics." In *The Gameful World: Approaches, Issues, Applications*, edited by Steffen P. Walz and Sebastian Deterding, 225–44. Cambridge, Massachusetts: The MIT Press, 2014.
- Sinno, Rafic. "Navigating a Pokémon Go World." *Character and . . . Screen Life* 3 (2017): 33–51. <https://digitalud.dbq.edu/ojs/index.php/character/article/view/15/12>.
- Smith, Adam Benjamin. "Discomfort, Attention, and Character." *Character and . . . Discomfort* 5 (2019): 27–45. <https://digitalud.dbq.edu/ojs/index.php/character/article/view/30/24>.
- Song, Felicia Wu. *Restless Devices: Recovering Personhood, Presence, and Place in the Digital Age*. Downers Grove, Illinois: IVP Academic, 2021.
- Spiegel, Taru. "The 'Happy Danes' vs. the 'Sad Danes': Assimilation and Religious Divide amongst Danish American Immigrants." Library of Congress. *4 Corners of the World* (blog), October 23, 2020. <https://blogs.loc.gov/international-collections/2020/10/the-happy-danes-vs-the-sad-danes-assimilation-and-religious-divide-amongst-danish-american-immigrants/>.
- Stephan, Walter G., and Krystina Finlay. "The Role of Empathy in Improving Intergroup Relations." *Journal of Social Issues* 55, no. 4 (Winter 1999): 729–43. <https://doi.org/10.1111/0022-4537.00144>.
- Stevens, Matthew Wr, Diana Dorstyn, Paul H. Delfabbro, and Daniel L. King. "Global Prevalence of Gaming Disorder: A Systematic Review and Meta-Analysis." *The*

- Australian and New Zealand Journal of Psychiatry* 55, no. 6 (June 2021): 553–68. <https://doi.org/10.1177/0004867420962851>.
- Stuhr, John J., ed. *Philosophy and Human Flourishing*. The Humanities and Human Flourishing. Oxford, New York: Oxford University Press, 2022.
- Suits, Bernard. *The Grasshopper: Games, Life and Utopia*. 3rd ed. Peterborough, ON: Broadview Press, 2014.
- Suler, John. “The Online Disinhibition Effect.” *CyberPsychology & Behavior* 7, no. 3 (June 2004): 321–26. <https://doi.org/10.1089/1094931041291295>.
- Tonietto, Gabriela N., Selin A. Malkoc, Rebecca Walker Reczek, and Michael I. Norton. “Viewing Leisure as Wasteful Undermines Enjoyment.” *Journal of Experimental Social Psychology* 97 (November 1, 2021): 104198. <https://doi.org/10.1016/j.jesp.2021.104198>.
- Ünver, Seher, Özlem Güray, and Seda Aral. “The Effects of Game Intervention on Postoperative Anxiety and Pain Levels in Children: A Randomized Controlled Study.” *Journal of Pediatric Research* 8, no. 2 (June 2021): 116–23. <https://doi.org/10.4274/jpr.galenos.2020.92259>.
- VanderWeele, Tyler J. “On the Promotion of Human Flourishing.” *Proceedings of the National Academy of Sciences* 114, no. 31 (August 2017): 8148–56. <https://doi.org/10.1073/pnas.1702996114>.
- “Video Games - Worldwide.” Statista Market Forecast. Statista.com. Accessed November 15, 2022. <https://www.statista.com/outlook/dmo/digital-media/video-games/worldwide>.
- Voorhies, Barbara, ed. *Prehistoric Games of North American Indians: Subarctic to Mesoamerica*. U of Utah P, 2017.
- Wang, Sam, and Sandra Aamodt. “Play, Stress, and the Learning Brain.” *Cerebrum: The Dana Forum on Brain Science* 2012 (September 24, 2012): 12.
- Ward, Annalee R. “Character and Discomfort.” *Character and . . . Discomfort* 5 (2019): 2–8. <https://digitalud.dbq.edu/ojs/index.php/character/article/view/27/22>.
- Warren, Chezare A. “The Utility of Empathy for White Female Teachers’ Culturally Responsive Interactions with Black Male Students.” *Interdisciplinary Journal of Teaching and Learning* 3, no. 3 (2013): 175–200.
- Yao, Mengyun, Yuhong Zhou, Jiayu Li, and Xuemei Gao. “Violent Video Games Exposure and Aggression: The Role of Moral Disengagement, Anger, Hostility, and Disinhibition.” *Aggressive Behavior* 45, no. 6 (2019): 662–70. <https://doi.org/10.1002/ab.21860>.

