Open Questions for Empathy and Games

Karen Schrier (Marist College) and Matthew Farber (University of Northern Colorado)

Abstract: In this paper, we pose questions about the intersection of video games with empathy. To do this, we provide a thematic overview of research related to empathy and games, including investigations on game elements that may be connected to empathy, such as communication, perspective taking, and relationship building. We identify current gaps in the research related to using games for empathy and make recommendations on next steps for this burgeoning field.

Introduction

In January 2018, the World Health Organization (WHO) identified "gaming disorder" as the latest addition to recognized psychological disorders (WHO, n.d.). This builds on the American Psychiatric Association's (APA) recent move (APA, 2017) to include "gaming addiction" as a condition to research in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)*. On the other hand, many organizations, such as Higher Education Video Game Alliance (HEVGA), and researchers spoke out against this categorization, explaining that there was limited evidence to support this designation (HEVGA, 2018). HEVGA, for instance, suggested that the actions reflect a sensationalized conversation around games, which often superficially equates games as causing social ills or moral destruction, rather than considers their complexity and variability. In this paper, we want to continue to further the conversation and consider how games may support prosocial attitudes and behaviors, too, such as enhancing connection, engagement in relationships, and perspective taking, all actions associated with empathy (e.g., Belman & Flanagan, 2010; Farber & Schrier, 2017; Isbister, 2016). In other words, can games also empower people to connect with others, take on new perspectives, and express emotions and identities? Can games help people to empathize with others and listen to their stories and ideas? What are the limitations and under what conditions can particular games support empathy? In this paper we will look at three specific areas related to games and empathy: (a) perspective taking, (b) relationship building, and (c) communication, social interaction, and reflection.

What Is Empathy?

First, what is *empathy?* One conception of empathy is that it involves "being in another's shoes," "understanding what someone else is feeling or thinking," and taking on *our perception* of someone else's lived experience and his or her inner emotional state. Empathy includes "feeling for another person who is suffering" (Batson, 2009, p. 8). This is distinct from other concepts such as compassion and sympathy. With empathy, for instance, we *take on and even feel* others' suffering, joy, heartbreak, or pride, whereas with sympathy and compassion, we value others' feelings and care about their needs without necessarily enacting their feelings or performing their experiences (Bloom, 2017).

Empathy is often characterized as having cognitive, behavioral, and emotional components. Gerdes, Segal, Jackson, and Mullins (2011) identify four core components of empathy, including:

(1) the capacity for an automatic or unconscious affective response to others that may include sharing others'

> emotional states; (2) a cognitive capacity to take the perspective of another; (3) the ability to regulate one's emotions; and (4) a level of self-/other-awareness that allows some temporary identification between self and other, but also ultimately avoids confusion between self and other. (p. 112)

Notably, the second component suggests that perspective taking is a key part of empathy, which involves trying to understand othe people's feelings, experience their viewpoints, enact their stories as they would tell them, and see another's experience as they would experience it, rather than as you would (Brown, 2013). In other words, people who act, think, and behave empathetically see the world as others see it, are nonjudgmental, have an understanding of another's feelings, and can communicate this understanding (Wiseman, 1996, p. 1165).

There are many other definitions and approaches to empathy (Schrier & Farber, n.d.). Furthermore, the salience and usefulness of empathy has been debated (e.g., Marinova, Singh, & Singh, 2018). Bloom (2017), for instance, argues that compassion is more relevant because although empathy leads to feeling what another feels, it does not mean the outcome of decisions and actions are appropriate and effective. Bloom argues that one's empathy can be exploited to disadvantage some groups or further activate people to fight against people they believe to be enemies (Bloom, 2017). Just as empathy can help people connect and bond, it can also make people feel more threatened or anxious, similar to how oxytocin (a "bonding" hormone) may make people judge those they know differently (either much more or much less favorably), depending on their personal attachments and context (Bartz, Zaki, Bolger, & Ochsner, 2011). Empathy may also look and function very differently across cultures.

For the purposes of simplicity, we will focus on empathy for this paper. However, compassion and sympathy may also be useful to consider further in relation to games, gaming, and play. Moreover, empathy should be analyzed in terms of both its possibilities and limits—and all of its complexities—rather than assuming that "empathy" is always desired, and always useful and effective.

Why Empathy and Games?

We are specifically interested in understanding the relationship between games and empathy for four key reasons.

1. Games Are Increasing in Popularity and Pervasiveness

Digital games are an increasingly ubiquitous part of today's popular culture. Games are played in approximately two-thirds of all United States households and almost two-thirds of all households in the United States have at least one person who plays three or more hours of games weekly (Entertainment Software Association, 2017). Games are being played by children but also adults, with the average age being 35 years old (Entertainment Software Association, 2017), with 54% of frequent game players explaining that games help them connect with others, such as friends. People also play with their friends (41% of gamers), family (21%), parents (18%), and partner (17%), according to the Entertainment Software Association (2017). Thus, understanding more about how people are playing games and possibly connecting with others through them is imperative to furthering not only our knowledge of games, but also our understanding of our relationships and society.

2. We Need to Reveal the Full Complexity of Games, Rather Than Just Focus on Their Negative Aspects

Compared to "traditional" media (i.e., books, film), digital games are a new medium (Behringer, 2016). As a new medium, it has invited "moral panic." For instance, games have been viewed as a possible type of psychological disorder (APA, 2017) or a sign of decaying values (Ferguson, 2008). Darvasi (2016) notes that games are often cited and emphasized in terms of antisocial behavior, such as violence, aggression, addiction, and isolation, rather than by their strengths. However, even though video games are "new" we need to explore their contours and experiment with their possibilities, while also realizing their limitations and weaknesses. We need to readdress and reconsider games, even those games made for commercial aims and popular enjoyment, and propel more nuanced conversations about what games can (and cannot) do.

3. We Need to Find New Ways to Teach Essential Socio-Emotional (SEL) Skills, Such As Perspective-Taking and Reflection, Which Are Related to Empathy

Games have been implicated in supporting skills and practice in a variety of areas, such as mathematics and history, physics and music, writing and painting (Gee, 2007; Schrier, 2018a). Can games also support socio-emotional learning (SEL) and skills, such as communication, reflection, and argumentation, or identifying and regulating one's emotions, and engaging in deliberation? For instance, Bréjard, Bonnet, and Gaetan (2016) observed that those who frequently play digital games are more adept at regulating their emotions than those who report occasional play; however, those same players may "express their emotions less than irregular gamers" (p. 347). The ability to be empathetic is a social awareness competency and part of the Collaborative for Academic, Social, and Emotional Learning's (CASEL) evidence-centered social emotional learning framework (Core SEL Competencies; CASEL 2018). Social awareness includes the ability "to take the perspective of and empathize with others, including those from diverse backgrounds and cultures" (CASEL, 2018, para. 4), and it is a desired 21st-century skill. We need to further test the conditions by which games can and cannot help build other types of SEL skills, such as empathizing and perspective taking.

4. Empathy-Related Skills Are Necessary in Everyday Practice

Divisiveness between groups has always existed (particularly between "in-groups" and "out-groups"), but in our increasingly interconnected world, we need to find new ways to reach out, listen to others' perspectives, and connect with those in all groups (Schrier, 2018b). In fact, incivility may even be increasing. For instance, with the perpetuation of "echo chambers," where people hear only their own perspectives, ties to "in-groups" may grow stronger, and people may feel more belongingness to their own group. This could even further the divide between the in-group and out-group by helping to "other" the out-group and reinforcing it as outside of one's own. This then may further discourage people from engaging in civil discourse with others who do not share their views (Yusuf, Al-Banawi, & Rahman Al-Imam, 2014, p. 1). Regardless of whether incivility is actually increasing, or if civil discourse is decreasing, we need to cultivate empathy-related skills so we can, for instance, understand others' points of view, work together with people with diverse mind-sets and skill sets, and be able to together solve real-world issues and complex global problems (Schrier, 2018b). For instance, how do we mitigate fear among groups, racism, disrespect for others, and xenophobia? How do we manage and de-escalate behaviors such as trolling, online harassment, and cyberbullying? How do we empower people to deliberate effectively, to act respectfully, and to consider others appropriately and ethically online and in public? We need to find novel, innovative ways to help people work together, listen, bridge gaps, engage

in civil discourse, connect, gain respect for others, and learn about perspectives and peoples different from themselves (Kahne, Middaugh, & Evans, 2009; Schrier, 2018b).

Open Questions and Gaps

How might games, specifically, support empathy and related skills and behaviors? To investigate this, we looked at an initial list of possible characteristics, skills, and processes related to empathy and games from previous research (Belman & Flanagan, 2010; Darvasi, 2016; Farber & Schrier, 2017; Greitemeyer, 2013) and identified overlapping elements to consider for this paper. The skills that emerged are: perspective taking, relationship building, and communication and reflection. While there also may be other skills, we will use these initial skills, and current research on these skills, to help guide our identification of open questions and gaps in the research. Future research may consider a more systematic approach to investigating which skills and/or thematic areas emerge at the intersection of games and empathy.

Perspective Taking

Perspective taking is the act of taking on another's views such that we can better understand them, even if we do not hold these views or agree with them (Farber & Schrier, 2017). Darvasi (2016) explains that perspective taking often involves actively considering those who seem initially very different (an "outgroup") such as by embodying their "mental state, points of view, and motivation" (p. 3). Part of the process of perspective taking involves openness. To take on new perspectives, we need to first value those other perspectives enough such that we want to embrace them and consider them more fully. These new perspectives need to matter to us and we need to be motivated to seek them out. Thus, perspective taking involves being persuaded that other perspectives are meaningful and should be attended to (Cohen, 2001; Darvasi, 2016). It is important to note that Darvasi (2016) suggests that games may be particularly powerful at supporting perspective taking because they combine the enabling of other perspectives with those persuasive techniques (Bogost, 2007).

The process of taking on new perspectives or "perspective taking" has been shown to reduce bias and improve one's attitudes toward people in an "out-group," or those who initially seem different from yourself (Farber & Schrier, 2017). One reason this works is that when you take on the perspective of an "out-group," it ends up seeming more familiar and similar to your own, more like an "in-group" and less like an "out-group" (Darvasi, 2016; Todd & Galinsky, 2014). However, perspective taking can also be ineffective. Darvasi (2016) notes that perspective taking has not been shown to be effective in reducing bias for three reasons:

- If the people doing it identify too strongly with their own group (in-group) such that they feel they cannot ever step outside of it, or consider anyone else's but their own;.
- Relatedly, that they have such low self-esteem that they cannot feel secure enough in their own perspectives to reach out to another's perspective;
- There is a high-stakes or conflict-filled environment, such that people do not feel comfortable and secure enough to take on other's views, or it is too risky to do so.

Moreover, what happens if you take on someone else's perspective so much that you lose sight of

other perspectives and cannot see the big picture ("far-sightedness"), or you get so overwhelmed with another's perspective that you cannot see any other views ("short-sightedness")?

A key factor involved in perspective taking is the ability to identify with that perspective, and also to identify with the person or character who holds that view, embodies a type of belief, way of life, or value (Farber & Schrier, 2017). However, when considering perspective taking in relation to a game, this brings up important questions about identity. When playing a game, are players acting as themselves or playing the role of another? If there is an avatar in the game (a digital or virtual representation of the player that the player controls to play the game), to what extent do players keep their own perspectives or take on that of their avatar's? Gee's (2007, 2008) describes the idea of a projective identity, a type of hybrid identity between that of the avatar and player. Do players take on the identities of their avatar, or do they engage in complex negotiations between their own identity and that of their avatar? Do players make choices based on their own perspectives, that of their avatar's, or based on some type of hybrid perspective between the two?

Darvasi (2016) suggests that the "point of view" of a particular digital game also matters in how a player may take on new perspectives or form identities in a game. For instance, he explains that in first-person perspective games (i.e., the player sees exactly what the avatar sees), the player embodies the avatar but does not see the avatar. In the first-person perspective, the avatar is not visible but is implied to be present through its omnipresent voice and/or sometimes the presence of parts that a person may see of him- or herself, such as an arm, leg, or weapon. In this scenario, the player may be less likely to engage in perspective taking, and his or her identity will blur with that of the avatar. However, the player may care about and take on the perspectives of other players or nonplayer characters (NPCs), or virtual characters that are not controlled by another human being, but by the game. Other games enable a third-person (or even a more removed "bird's-eye view–like") perspective on a game. In a third-person perspective, a player still may control a character but can see that character, as well as other characters in the game. In other games, players can switch between perspectives, such as from first to third person. Darvasi (2016) explains that in third-person perspective situations, and in games where players can switch from first to third person, players are more readily able to take on the perspective of that character, as they can see the character and can more easily empathize with its views, needs, and experiences.

Moving forward, more research is required to parse out the specific game elements that support perspective taking. Open questions include:

- What is the relationship among identity, perspective taking, transportation, point of view (first, third, "bird's-eye view,") and empathy in games?
- How do we better cultivate perspective taking through games, particularly those with views different from our own?

Relationship Building

In the previous section, we discussed how different perspectives can more readily support empathy for a character. Those who embodied their avatar may not have felt "empathy" for that character because *they were* that character. Typically, we feel empathy *for others*, rather than *for ourselves*. This may explain why although players might identify with their on-screen avatars, even stronger attachments may be to the nonplayer characters (NPCs are those characters that are not controlled by the player or by another

player). After all, we would not need to attach "to ourselves," because we are ourselves. When players bond with NPCs, this can even possibly evoke similar empathetic emotions as one might experience when building relationships with real people (Harth, 2017; Isbister, 2016).

It may seem surprising to find out that players form attachments with nonhuman virtual objects and characters. However, previous research by Turkle (2011) and Isbister (2016) suggests that human beings can build attachments with nonhuman and virtual characters. For instance, Harth (2017) analyzed how humans socially interact with NPCs and found that players were social with NPCs and exhibited "virtual empathy" for their virtual game companions (Harth, 2017, p. 19). Some participants reported that the empathy formed with NPCs was not as strong as with actual people, but similar to the type of emotional attachment an audience would have with characters in a book or film (Harth, 2017).

Isbister (2016) suggests that an attachment comes from spending time and interacting alongside an interdependent being, such as a virtual character or NPC. For example, in the role-playing game *Fable III*, players play as a prince or princess of the fictional world of Albion and go on missions to help the townspeople (all NPCs). During the main character's training sessions, Walter (an NPC) helps to mentor and train the player's avatar. After the player spends around 10 hours of gameplay alongside Walter, he gets hurt during one of the missions. The player must decide whether to bring Walter to safety or just leave him and escape alone. Schrier (2016) found that almost all *Fable III*–playing participants decided to drag Walter to safety, even though there was no benefit to helping him, and the game eventually forces you to leave him behind (giving you a meaningful choice that ends up having no consequential effect on the story line or gameplay). Participants noted that the reason they tried to save Walter is that they formed an attachment with him and felt emotionally connected to him (Schrier, 2016). However, players were less invested in a superficial friendship that they had with an NPC in the very beginning of the game, suggesting that perhaps time with a character, and having meaningful interactions with it, is important to building attachment and connection, just as it would be with a real person outside of a game (Schrier, 2016).

Thus, we may also question whether game players become too invested emotionally in these relationships or embed themselves so deeply into the perspective of a character such that they make decisions that are not in their or a character's best interest. For example, Bloom (2017) explains that emotion can bias decisions and affect how people think through decisions and choices. Moving forward, designers should consider how best to create emotional attachments through games, such as between players and digital actors, or NPCs, and we need to understand more about design strategies for allowing for these relationships to unfold. Open questions include:

- What is the role of relationship building, even with NPCs, in supporting empathy in games? How can we develop authentic relationships based on intimacy and trust, rather than just points and game rewards?
- How do emotions and emotional interactions in games relate to empathy?
- How do relationships unfold in games as opposed to outside of games? Are factors such as time important? What types of meaningful interactions are necessary for the formation of connections?

Communication, Social Interaction, and Reflection

Gaining perspectives and views from NPCs can be useful, and interacting with digital characters

can build relationships. But communication and interaction with real people can also help to support perspective taking, role-playing, reflection, agency, identify formation, and relationships. For example, studies have suggested the importance of social interaction in practicing empathy-related skills and learning ethics and morality (e.g., Belman & Flanagan, 2010; Farber & Schrier, 2017; Maclagan, 2003; Noddings, 2010; Schrier, 2017).

There are a number of ways in which real people help to teach and communicate empathy skills through social interactions and reflection, such as:

Modeling. A key component of learning involves the modeling of behavior (Bandura, 1977) or being able to directly observe how others behave and then also behaving in a way such that others learn from it and enact it themselves.

Communication, dialogue, and discourse. People also learn from the act of engaging in dialogue with others. Klein (2012) explains that by listening to other people's arguments and viewpoints, people are able to explore their perspectives and reflect on their own perspective. Nussbaum explains that "critical, elaborative discourse" (Nussbaum, 2008, p. 347) is essential to ethical decision making, which also requires compassion and empathy.

Expression of emotion and relationship building. Emotion is also a component of communication and interaction among people. People need to observe and identify each other's emotional states when they are working together and adjust their interactions accordingly (Van Kleef, 2009). People need to be aware of another's emotions, and care about them, to be able to build a relationship, develop intimacy, and communicate effectively to achieve goals or shared purposes. Thus, the practice of communicating and continually identifying emotions and responding to them helps to support and facilitate empathy for one another (Iacoboni, 2009).

Reflection. Reflection and reflective practice help people better understand themselves and others because they enable people to think back on their experience and to reconsider new information, relationships, and learning. Reflection in digital games, both at moments during the game, and after one's gameplay, can help to strengthen connections with other people and other characters as well as to frame new knowledge (Schön, 1983).

However, just as communication may be empowering, social interactions can be used for negative means, such as to promote bullying and uncivil behavior, toxic talk, and other problematic activities. Moving forward, we need to more fully consider how to design empowering and constructive communication and reflection. Open questions include:

- What is the role of communication in building relationships and supporting empathy through games?
- How can community features, emergent communities, and cultural contexts support or limit empathy?
- How are reflection and reflective practice involved in supporting empathy?

Conclusions and Next Steps

In this paper, we sought to pose questions and share initial insights into the intersections among games

and empathy. Our discussion was driven by some underlying questions, such as: Is there existing research as to the elements, processes, and/ or actions related to digital games that inspire empathy-related skills? What are any limitations and gaps in our understandings? In this paper, we specifically looked at three key areas identified as being connected to empathy: perspective taking; relationship building; and communication, social interaction, and reflection. We shared recent research and evidence to help share open questions and gaps. Research and empirical evidence in the intersection among games and empathy is limited, so we recommend more research in this burgeoning area and, in particular, more consideration into the specific factors of gaming that may inspire or constrain empathy skills, behaviors, and attitudes related to perspective taking, communication, and relationship building, such as character design and storytelling, choice making and meaning in games, context of play, game content and gameplay, audience, opportunities for reflection, emergent communities around and within the game, and player interactions.

References

American Psychiatric Association (APA). (2017, 16 May). Internet gaming—Addictive potential? Retrieved from https://www.psychiatry.org/news-room/apa-blogs/apa-blog/2017/05/internet-gaming-addictive-potential

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bartz, J. A., Zaki, J., Bolger, N., & Ochsner, K. N. (2011). Social effects of oxytocin in humans: Context and person matter. *Trends in Cognitive Sciences, 15*, 301–309.

Batson, C. D. (2009). The definition of empathy. In J. Decety and W. Ickes (Eds.), *The social neuroscience of empathy* (pp. 3–16). Cambridge, MA: The MIT Press.

Behringer, M. (2016, February 1). Bias against new media. Retrieved from https://www.filamentgames.com/blog/ bias-against-new-media

Belman, J., & Flanagan, M. (2010). Designing games to foster empathy. *Cognitive Technology, 14*(2), 5–15.

Bloom, P. (2017). Empathy and its discontents. *Trends in Cognitive Sciences, 21*(1), 24–31. doi:10.1016/ j. tics.2016.11.004

Bogost, I. (2007). *Persuasive games*. Cambridge, MA: The MIT Press.

Bréjard, V., Bonnet, A., & Gaetan, S. (2016). Video games in adolescence and emotional functioning: Emotion regulation, emotion intensity, emotion expression, and alexithymia. *Computers in Human Behavior, 61,* 344–349. doi:10.1016/j.chb.2016.03.027

Brown, B. (2013). *Brené Brown on empathy* [Video]. Retrieved from https://youtu.be/1Evwgu369Jw

CASEL (Collaborative for Academic, Social, and Emotional Learning). (2018). *Core SEL competencies.* Retrieved from http://www.casel.org/core-competencies/

Cohen, J. (2001). Designing identification: A theoretical look at the identification of audiences with media characters. *Mass Communication & Society, 4*, 245–264.

Darvasi, P. (2016, November). *Empathy, perspective and complicity: How digital games can support peace education and conflict resolution* (UNESCO MGIEP Working Paper 2016-03). Retrieved from http://unesdoc.unesco.org/images/0025/002599/259928e.pdf

Entertainment Software Association. (2017). *Essential facts about the computer and video game industry.* Retrieved from http://www.theesa.com/article/two-thirds-american-households-regularly-play-video-games/

Farber, M., & Schrier, K. (2017). *The strengths and limits of games as "empathy machines"* (UNESCO MGIEP Working Paper). Retrieved from http://unesdoc.unesco.org/images/0026/002619/261993E.pdf. doi:10.1111/1365-2648.ep8554631

Ferguson, C. J. (2008). The school shooting/violent video game link: Causal relationship or moral panic? *Journal of Investigative Psychology and Offender Profiling, 5*(1-2), 25–37.

Gee, J. P. (2007). *What video games have to teach us about learning and literacy* (rev. ed.). New York, NY: Palgrave Macmillan.

Gee, J. P. (2008). Video games and embodiment. *Games and Culture, 3*(3-4), 253–263. doi:10.1177/1555412008317309

Gerdes, K. E., Segal, E. A., Jackson, K. F., & Mullins, J. L. (2011). Teaching empathy: A framework rooted in social cognitive neuroscience and social justice. *Journal of Social Work Education, 47*, 109–131.

Greitemeyer, T. (2013). Playing video games cooperatively increases empathic concern. *Social Psychology, 44*(6), 408–413. doi:10.1027/1864-9335/a000154

Harth, J. (2017). Empathy with non-player characters? An empirical approach to the foundations of human/ non-human relationships. *Journal of Virtual Worlds Research, 10*(2), 1–25. doi:10.4101/jvwr.v10i2.7272

HEVGA. (2018, 25 June). Media incorrectly reports 'gaming disorder' included in ICD-11. Retrieved from https://hevga.org/article_writeups/media-incorrectly-reports-gaming-disorder-included-in-icd-11/

Iacoboni, M. (2009). Imitation, empathy, and mirror neurons. *Annual Review of Psychology, 60*(1), 653–670. doi:10.1146/annurev.psych.60.110707.163604

Isbister, K. (2016). *How games move us: Emotion by design*. Cambridge, MA: The MIT Press.

Kahne, J., Middaugh, E., & Evans, C. (2009). *The civic potential of video games*. Cambridge, MA: The MIT Press.

Klein, M. (2012). Enabling large-scale deliberation using attention-mediation metrics. *Computer Supported Cooperative Work, 21*, 449–473.

Maclagan, P. (2003). Varieties of moral issue and dilemma: A framework for the analysis of case material in business ethics education. *Journal of Business Ethics, 48*(1), 21–32. doi:10.1023/B:BUSI.0000004364.63317.73

Marinova, D., Singh, S. K., & Singh, J. (2018). Frontline problem-solving effectiveness: A dynamic analysis of verbal and nonverbal cues. *Journal of Marketing Research, 55*(2), 178–192. doi:10.1509/jmr.15.0243

Noddings, N. (2010). Moral education and caring. *Theory and Research in Education, 8,* 145–151.

Nussbaum, M. E. (2008). Collaborative discourse, argumentation, and learning: Preface and literature review. *Contemporary Educational Psychology, 33*(3), 345–359. doi:10.1016/j.cedpsych.2008.06.001

Schön, D. A. (1983). *The reflective practitioner*. London, England: Temple Smith.

Schrier, K. (2016). Designing role-playing video games for ethical thinking. *Educational Technology Research & Development, 65*(4), 831–868.

Schrier, K. (2017, 31 May). Designing games for moral learning and knowledge building. *Games & Culture*. https://doi.org/10.1177/1555412017711514

Schrier, K. (2018a). Guiding questions for game-based learning. In J. Voogt, G. Knezek, R. Christensen, & K.-W. Lai (Eds.),*Second handbook of information technology in primary and secondary education* (pp. 887–905). Switzerland: Springer International.

Schrier, K. (2018b). Using games to solve real-world civic problems: Early insights and design principles. *Journal of Community Engagement & Higher Education, 10*(1), 21–35.

Schrier, K., & Farber, M. (N.d.) *Defining the field of empathy and games* (Unpublished manuscript).

Todd, A. R., & Galinsky, A. D. (2014). Perspective taking as a strategy for improving intergroup relations: Evidence, mechanisms, and qualifications. *Social and Personality Psychology Compass, 8*(7), 374–387. doi:10.1111/spc3.12116

Turkle, S. (2011). *Alone together.* New York, NY: Basic Books.

Van Kleef, G. A. (2009). How emotions regulate social life: The emotions as social information (EASI) model. *Current Directions in Psychological Science, 18*(3), 184–188. doi:10.1111/j.1467-8721.2009.01633.x

WHO (World Health Organization). (n.d.). 6C51.0. Gaming disorder, predominantly online. Retrieved from https://www.who.int/features/qa/gaming-disorder/en/

Wiseman, T. (1996). A concept analysis of empathy. *Journal of Advanced Nursing, 23*(6), 1162–1167. Retrieved from http://media.virbcdn.com/files/74/676ff59b09b7482f-conceptanalysisofempathy.pdf

Yusuf, N., Al-Banawi, N., & Rahman Al-Imam, H. A. (2014). The social media as echo chamber: The digital impact. *Journal of Business & Economics Research, 12*(1), 1–10. Retrieved from https://www.cluteinstitute.com/ojs/index.php/JBER/article/view/8369. doi:10.19030/jber.v12i1.8369