Article

# Mechanics and Experience in *Call of Duty: Modern Warfare*: Opportunities for Civic Empathy

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## Abstract

*Background.* Videogames are widely considered effective learning environments, with powerful lessons relevant to those who design teaching and learning experiences. Violent **videogames**, however, are often left out of such conversations.

*Intervention.* In this context, we examine ***Call of Duty: Modern Warfare (MW)*** as a violent **videogame** that might suggest design principles useful for effecting emotional experiences, a key element to the formation of memories and therefore learning.

*Methods.* Through narrative description of two missions from *MW* and interleaved discussion of its **mechanics**, we contend even violent **videogames** might inform the design of interactive learning experiences.

*Results.* We highlight how *MW*'s **mechanics** (a) are designed to constrain player's actions to facilitate visceral experiences, while being (b) thoughtfully juxtaposed with typical first-person shooter mechanics, to (c) create opportunities to develop what we call *civic empathy*, the ability to understand—even share to some extent—the feelings of another person with whom one shares a common affiliation with and responsibility to one or more social groups. We also highlight

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the concept of *global **civic empathy***, in which one includes the world's citizens as co-members of a global community.

*Discussion.* Learning from simulations and games is often discussed through the lens of actions made available to players. Our contribution is the flip side of that coin—what a game or simulation *prevents* players from doing—is equally important.

*Limitations.* We played these missions ourselves. We therefore limit our conclusions to our own experiences, though we contend our findings may inform the design of learning games and simulations.

*Conclusion.* In simplest terms, our theory of action is this: (1) Constraining **mechanics** (2) create juxtaposition and cognitive dissonance, which in turn (3) create emotional experiences that serve as rich sites for complex learning (**empathy** development) to take place.

> *I want to talk about video games—yes, even violent video games—and say some positive things about them* (Gee, 2003).

In January 2020, the President of the United States sanctioned the killing of Qasem Soleimani, a preeminent Iranian general. Fear gripped many as the world seemed primed for what could balloon into global conflict.[1] At the time, we were each playing the latest installment of the mega-popular Call of Duty series, Call of Duty: Modern Warfare (henceforth MW). As friends and colleagues, we found our conversations shaped by the intersection of two spheres of our lives: on the one hand, what seemed a very real possibility that our country could become embroiled in renewed global conflict, and on the other, the unsettling and visceral experiences we were having as part of our gameplay. As education and games scholars, we began to wonder whether MW might be worth exploring in terms of its potential to humanize those whom we might otherwise view as a faceless antagonist. Put simply, we were ourselves deeply shaken by some of the experiences we had while playing MW, and we found ourselves using those experiences to frame our discussion of world events. We found ourselves accessing these experiences in ways that allowed us to humanize and empathize with people a world away whom we had never met, and that this empathy seemed to engender a worldview quite different from those apparently guiding the United States war machine. We think there may be some value in understanding more about how we came to these experiences and sharing them with the scholarly community.

The scholarly community has for some time now viewed videogames[2] as rich sites of teaching and learning (e.g., Gee, 2003; Squire, 2011; Steinkuehler, 2006; Young et al., 2012).

Violent videogames, however, are often left out of these conversations, at least in the context of K-12 education, where their violent themes are viewed as antithetical to the aims of publicly funded teaching and learning. Where they often take center stage, however, is in conversations about societal violence. In this context, videogames are given, perhaps ironically, too much credit for their power as pedagogical tools, with prominent political figures blaming videogames for a host of atrocities perpetrated in the United States (Drapper, 2019; Kain, 2020). Indeed, and curiously, the vilification of violent videogames is one of the few things bridging the current sociopolitical divide in the United States.

This is problematic, we argue, for at least two reasons. First, this idea that violent videogames are spaces for converting unwitting gamers into heartless killers does not align to the research on the subject (e.g., Przybylski et al., 2009; Rigby & Przybylski, 2009; Walkerdine, 2007). This misalignment between perception and reality clouds our view of the subject and can marginalize gamers, who play such games for a variety of reasons, including the games' ability to deliver on basic motivational needs like autonomy, belongingness, and competence (Hayward & Fishman, 2020; Rigby & Ryan, 2011; Ryan & Deci, 2000). Second, and interrelated with the first, writing off violent videogames as purveyors of mindless digital killing leads us to ignore the pedagogical implications of an entire category of games that consistently succeed in creating visceral experiences for players. Ignoring an entire genre in this way blinds us to what such games may be able to add to our understanding of how certain kinds of experiences can be designed and supported in pursuit of a diverse array of learning goals.

With this in mind, we set out to explore this gap in the literature concerning what kinds of positive learning experiences may be offered to players in thematically violent videogames. Operating with the research-informed assumption that thematically violent videogames do not create violent people, we set out to answer the question, "What good might be found in playing videogames steeped in thematic violence?" We took as our case of interest the popular first-person shooter, *Call of Duty*, specifically the most recent iteration at the time of this writing, *Call of Duty: Modern Warfare*.

We looked at how the game mechanics of *MW* created visceral experiences for us as players, and what those experiences were. We describe in the following sections our own experiences with two missions in the game, The Embassy and Hometown, which we found particularly provocative and unsettling. We found game mechanics that interacted with the game's theme to create deeply visceral experiences. We note in particular that it was often what the mechanics did *not* allow us to do in the game—how they constrained our takeable actions in tense moments of gameplay—that had the greatest effect on our emergent affective experiences with the game.

With these findings in hand, we want to use this essay to forward a provocative idea: that not only are concerns about games like *MW* largely unwarranted in light of the research, but that games like *MW* may in fact possess unique affordances as a component of democratic education in an era of escalating tensions across an increasingly complex and global world. We invite readers to entertain the possibility that games like *MW* might offer players just the kinds of vicarious experiences necessary for developing what we call *civic empathy*, the ability to understand—even share to some

extent—the feelings of another person with whom one shares a common affiliation with and responsibility to one or more social groups. We want to clarify that we are using the terms *civic* and *citizenship* more broadly to apply not only to how citizens engage with the procedural processes of government but more importantly as a conceptual encapsulation of how citizens consider themselves and their co-citizens as members of sociopolitical groups that make decisions about what society is and becomes and for whom (Kessner et al., 2020). Because of its globetrotting theme, we see *MW* as a learning space rife with opportunities to develop a particular kind of civic empathy, *global civic empathy*, or the ability to understand and share to some extent the feelings of another citizen of the world with real-world experiences very different from one's own.

We believe these basic definitions are sufficient for our present purposes—to provide illustrative examples of one way in which violent videogames may be given short shrift in education—and, therefore, we do not go into depth on these concepts here. Rather, this exploration into the value *MW* might represent to the educational endeavor was grounded in our personal experience with the game, particularly in the context of what appeared to be the brink of war with Iran in early 2020.

Before proceeding, we want to establish the greatest possible clarity concerning two points. First, we are not suggesting videogames steeped in thematic violence be taken up wholesale or uncritically. Furthermore, we are not advocating that games like *MW* be consumed by audiences that fall outside the determinations of regulatory organizations such as the Entertainment Software Rating Board (ESRB). Relatedly, we are also not necessarily suggesting such games be taken up as teaching and learning tools in formal K-12 settings. We believe schools should be places in which learners are asked to imagine the very best of what they, others, and the world can be—not a place in which they vicariously experience the horrific traumas it ought to be the purpose of education to extinguish. Thus, and as we will explore more thoroughly in the discussion section, while we may see potential value in K-12 students playing games like *MW*, we are not prepared to make that recommendation. Rather, we are more interested in learning *from the design* of *MW* than we are in the idea of learning through playing *MW*. Indeed, this is the very distinction Gee (2003) has had to make since publication of his seminal text on videogames and learning nearly two decades ago: it is not that particular games themselves should necessarily be used for learning, but rather that games are designed to do teaching and learning well, and that we can learn from those designs. Similarly, we have observed that *MW* does visceral experience well, and we want to look more closely at how.

Second, we are not saying playing a game like *MW* can create in players anything even remotely close to a true understanding of the horrors of war, and even more to the point of this essay, nor can it make real for players the lived experience of systemic, institutionalized oppression and injustice that often surround such events. What we *are* saying is that *MW*, by way of its mechanics and how they interact with the game's theme, creates visceral experiences that have the potential to better inform us as active civic agents in a complex, global world. Furthermore, these

experiences can simulate—not, by any means, replicate—the real experiences of the people (combatants and noncombatants alike) caught up in the complex systems of power, injustice, and state-sponsored and -perpetrated violence that serve as the backdrop for games like *MW*.

## Experience, Emotion, Memory, and Action

We are arguing that those who play a game like *MW* may learn something from the experience, that this experience may shape the way they see the world and inform the actions they take within it. Central to this argument is our contention that learning is fundamentally an issue of creating memories, and that these memories inform the goals we have for ourselves and others in the world. Thus, memory is simultaneously the result of and impetus for learning, while also serving as a primary means of decision and meaning making (Gee, 2017; Glenberg, 1997).

People create memories by having experiences in the world, and the more and stronger emotions associated with these experiences, the stronger the memories (Damasio, 1999; Immordino-Yang & Damasio, 2007). People engage in what Gee (2015) called *conversations with the world*. People survey their environment, form goals, and create simulations of themselves taking different actions in the world (Bergen, 2012). People imagine how the world (and the people and things in it) might respond if they take certain actions in certain ways. If they like how their simulation plays out in their heads, they act, and then reflect on how the world responds. Whether what actually happens matches the simulation or not, whether it turns out well or poorly, people metabolize these experiences into memories, which in turn shape their ongoing conversations with the world around them (Seligman et al., 2016).

Games are another kind of world that fosters these conversations (Gee & Gee, 2017). In this way, games are just as much experiences as ones we can have in the real world, and thus, they can be just as good at helping us create memories—and we must re-member: memories are what drive the actions we decide to take in the world. Fur-thermore, the original context of experiences–that is, whether they are real or digitally simulated—seems not to matter much in how they are stored in the brain and drawn upon to inform action (Reeves & Nass, 1996).

But we will go another step further in our argument that games are worthwhile experiences for creating memories that inform action by contending games may ac-tually, in some cases and for some learning goals, be better than the experiences we can have in the real world. This is so for at least two reasons, both of which pertain to the role games play as simulations of real-world phenomena. First, not every real-world experience is equally accessible, and some are inaccessible altogether. Some experi-ences are cost prohibitive. For example, it would be altogether impossible to experience the set of specific factors and series of in-the-moment decisions that led to the outbreak of either of the world wars; but, it is perfectly possible, through carefully designed role-play, to approximate the environmental, social, and historical factors that were part of the overall "package of decisions" for the historical actors involved.

Furthermore, there are some experiences we simply do not want to have around at all—we do not want anyone to have access to them, whether as perpetrator or victim. For example, whether access to a war-torn country and the suffering of the people within it is logistically feasible or not, the goal is surely not to have such a situation in the first place. Thus, relying on real-world experiences of such traumas in order to prevent them creates a logical inconsistency in which keeping parts of the world at war becomes necessary to prevent war.

Second, many real-world experiences are too dangerous to have, or having them (particularly without access to or fluency with the proper tools to mediate the experience) would have drastic, and often dire consequences for all those involved. Thus, simulated experiences are preferable to real-world ones. War is the easy example here. Preventative negotiation keeping cold wars from turning into hot nuclear ones is another. Participating in simulations of the Cold War between the United States and the USSR, as sometimes happens in history classrooms, may help voters make informed choices between candidates in times of global tensions.

## Mechanics and Meaning

If videogames are memory-making experiences, what is it exactly that influences our experiences when playing particular games, and thus the memories we subsequently create and which inform future action? It is a game's mechanics that achieve these things.

What games are about is often confused with their theme (i.e., topic, setting, characters, etc.). Nevertheless, theme does not in and of itself constitute meaning (Johnson, 2012): the 'aboutness' of games is determined not by their topical theme (e.g., World War II, space warfare) but by their mechanics. For example, the game *Offworld Trading Company,* which takes place on Mars and thematically the science of human habitation of the red planet, is not a game about surviving on Mars but rather a game about supply and demand, marginal utility, opportunity cost, and other economics concepts, because the game mechanics position players to use those concepts to take actions (Kessner, 2021). Or, the made-for-school history-oriented videogame *Mission US* falls short of being a game about historical thinking, as its developers claim, not because it lacks an historical theme but because the game mechanics do not engage players in doing the kinds of things historians do (Kessner & Harris, 2022). Similarly, a game with a violent theme is not necessarily about perpetrating violence.

Definitions of game mechanics abound. Johnson (2012) described mechanics as "the set of decisions and consequences unique to [games]" (p. 33), while Sicart (2008) defined them as the "methods invoked by agents for interacting with the game world" (p. 1). Rouse (2005), discussing games from the perspective of design, noted that mechanics are the "guts of a design document," in that they describe "what the players are able to do in the game-world, how they do it, and how that leads to a compelling game experience" (p. 310). Hunicke et al. (2004) described games perhaps most concretely when they described mechanics as "the particular components of the game,

at the level of data representation and algorithms" (p. 2)—in other words, how players interact with a game at the level of input and feedback. Put in simplest terms, however, where games scholars seem to agree is that mechanics are what players can do in games. Thus, as Gee (2015) put it, "gamers see the game world in terms of verbs (actions)" (p. 42). The actions players see in the game world, however, are shaped by the "toolkits" available to players—that is, what players are able to do and what they cannot do.

This is important, as learning is inseparable from doing (Gresalfi et al., 2009; Lave & Wenger, 1991). Consider the following illustration of this idea in the form of a grammatical proof: What we know how to do is the present tense form of describing what we have learned (the past tense of "to learn"). We can make absolute, definitive statements about what we know how to do (what we have learned) only through the actual doing of those things (Wenger, 1999). We show we have memorized an historical fact by recalling it, for example, in response to seeing the term on a flash card. Nevertheless, we cannot know whether we can put that same historical fact to use in the world until and unless we actually do it (or at least some approximation of that same task). We know, therefore we do; we do, therefore we know. By shaping what players can do in games, mechanics thus shape what is learned.

Doing, however, is itself inseparable from the context in which that doing takes place, which is what gives meaning to choices and actions. Context gives situational meaning (Gee, 2017) to the landscape of takeable action arrayed before us. For example, as Gee discussed, the word "coffee" has multiple literal meanings depending on whether you can drink it, grind it, pick it, or clean it up because it spilled (and then, you could do so with a mop or a broom). Mechanics in games operate the same way. The actions you can take, and what those actions mean to us, to others, to the wider gameworld, are shaped both by the gameworld and the tools it gives us to take action within it. Thus, while maintain our contention that theme on its own remains insufficient to confer meaning, we note that theme shapes the meaning that emerges from what game mechanics position players to do in games.

## Methods

We leverage an autoethnographic, immersive participatory approach (Cuttell, 2015) in this work. By autoethnographic we mean we generated data ourselves as a function of our own experience and reflections thereon. By immersive participatory we mean we played the game missions we discuss, rather than, say, observing others play. Thus, the two researchers played the single-player missions of the game on their own. Such an approach allowed us to "gain insight and get critical purchase on elements of both the game and experience of play which other methods of visual analysis, on their own, do not address" (p. 56). This approach is particularly useful given our interest in this study in the affective dimensions of learning to be in the world. This immersive-participatory approach allowed us to study the game as insiders, thus developing a level of fluency with the game and its mechanics that are crucial to an informed analysis of the

immersive elements that can only be uncovered and understood through gameplay (Skalski et al., 2017).

Due to autoethnographic approach we leveraged, it is important to note our (the researchers') positionality. Both authors are lifelong gamers, and both have significant experience playing the FPS genre (e.g., *Call of Duty, Halo, Star Wars: Battlefront*). Both authors are games scholars, and both are able-bodied CIS straight men. Author 1 acknowledges his position as a white man within a hegemonic power structure designed around his identity, while Author 2 identifies as Latino. Important to the points we make about civic empathy, both authors are United States citizens, with Author 2 offering the additional perspective of hailing from Puerto Rico, a US territory. Author 1 offers the additional perspective of being a former history and social studies teacher and current social studies teacher education scholar, also relevant to the ideas about civic empathy we forward here.

Our approach is not without limitations. Most notably, our study design is ill-equipped to support broad, generalizable claims. The researchers played the game themselves, and thus cannot present the findings as applicable to all players in all contexts. Indeed, games scholarship has identified the need for rigorous study of players *in context* (DeVane & Squire, 2008). We do not disagree with this need in the broad sense. Nevertheless, given the exploratory nature of the work we report here, we contend the autoethnographic approach we leveraged will suffice for the purpose of highlighting the novel procedural rhetoric we set out to study in *Modern Warfare*.

Additionally, a purely person experience-driven account of the game would not suffice for the scholarly examination we set out to conduct, as such an interaction with an immersive text like a videogame requires a certain level of critical distance. To facilitate this distance between our emotional participation with the game and our analytical position we maintained analytic memos (Emerson et al., 1995; Maxwell, 2012) and met regularly to discuss our gameplay-facilitated experiences. We either paused the game to take notes on our observations and/or wrote reflections at the conclusion of missions. In our memos and during our researchers' meetings we emphasized the emotions we experienced and how the game's mechanics facilitated these emotions. Throughout and at the culmination of our gameplay, we discussed the missions we would include as cases. We describe below those cases from our data which are most illustrative of our findings.

## Mission Cases

In this section, we describe two case missions in *MW* that illustrate the conceptual argument we have forwarded thus far. In *The Embassy*, the game exposes players to several unique mechanics that operate in stark contrast to those typically found in FPS games. In particular, we note how each mechanic we discuss operates in strict opposition to the heroification typical of many FPS games (Rigby & Ryan, 2011). In *Hometown*, we highlight players' jarring transition from gung-ho hero to all-but-helpless child. In particular, we describe how each mission's mechanics create

opportunities for visceral affective experiences that afford the development of civic empathy. Each of the following vignettes is intended to illustrate episodes of gameplay we feel show the potential of the mechanics of *MW* for generating sites that facilitate the development of civic empathy.

## The Embassy

*The Embassy* mission begins with the player's ongoing quest to extract Omar "The Wolf" Sulaman, the leader of what has been labeled a terrorist organization featured in the game. The Wolf has been captured and is being held at the United States embassy in the fictional country of Urzikstan. The player's directive is to enter the embassy and retrieve the Wolf to face justice (from one perspective) for his actions. Complicating the task is a mass of angry protestors gathered outside the embassy gates working to free the Wolf.

It is early in this mission we encountered the first mechanic we discuss. As the player enters the embassy, the movement mechanic, which usually propels the player forward at the pace of a jog or a sprint, has become an unperturbed, casual ambling. The player can neither jog nor run—they must walk at an anxiety-inducing, glacial pace past large windows, through which the player can see the protestors that have gathered, bringing with them wailing women and children. The apparent leader of the protest—known in-game as the Butcher—pounds on the glass security door, demanding it be unlocked. It might be obvious that we did not immediately oblige this demand—at least until he shot one of his hostages, the mother of a small child visible in the crowd. The assailant then threatened the child at gunpoint. In one of our playthroughs, we opened the door at this point, a decision many veteran gamers would identify as a grave error. It was indeed: the assailant immediately pushed open the door, opened fire on our avatar, and our screen went black—game over. Nevertheless, it is worth noting that the scenario offered to us by the game provoked enough emotion that we at least considered—and ultimately took—action atypical of our own gamer selves and in direct opposition to our gamer instincts. In the next playthrough, we of course refused to open the door, knowing the game would not allow us to continue playing with that option taken. With opening the door a clearly untakeable action, we were forced to walk—*walk*—past the horrific scene, knowing at least one hostage would die as the result of our decision. It was in this context we witnessed The Butcher make good on his word: he murdered not just the woman, leaving a small child without his mother, but also the child.

We take a break from the narrative here to note two points of import: how game mechanics and context are (a) juxtaposed in opposition, and (b) coupled in complement to make meaning. First, the juxtaposition between the emotionally charged content of the scene, on the one hand, and the inability of the player—constrained by the game's mechanics—to match their in-game behavior to the tenor of the scene, on the other. Drawing again on the metaphor of conversation, it is as if the game is saying to the player something like, "There are people dying just over there, so you should take your time." This is, by all accounts we can conceive of, a nonsensical statement, which we

contend brings the event into stark relief for the player. Second, it is the pairing of two elements—the player's inability to intervene, and the wailing of the victims on the other side of the glass—rather than their juxtaposition, that helped to create the emotion of the scene.

We note also that, while the mechanics we have described thus far afford taking some in-game actions over others, they do so as *constraints* on typically takeable game actions. In most FPS games, player avatars can move at a jog indefinitely and even sprint at speeds and for durations of time atypical of the average or even physically elite human. Thus, FPS games usually position players as unstoppable forces of heroism and righteous justice who must pay little more attention to the game's setting than is required to identify targets. In contrast, the mechanics we have described thus far slow the player down such that the only things to see and hear are just what FPS games typically gloss over or omit altogether: the very real suffering that goes on around the glorified actions of heroes on important missions in the name of the State. It is worth clarifying that this game scene we have described and analyzed was not a cut scene. Rather, players had every ability to choose where they went, and they did indeed have choices to make (such as whether to open the door to hostage situation). Thus, players are active participants in this scene, as opposed to passive observers.

We turn now to the second episode we discuss from the Embassy mission. Following the scene at the security door, the player proceeds to where the Wolf is being held in order to extract him from the embassy. On the way, the player meets Stacy, an embassy employee, who is trapped hiding in one of the office rooms. Stacy has a keycard that will get her through the embassy exit to safety, but the embassy is overrun by armed assailants, who have shown no reticence to shoot on sight. The player must guide Stacy to the exit unharmed. To facilitate this undertaking, the player is confronted with a mechanic galaxies away from those typical of FPS games.

Typically, players confront such scenarios by rushing in, guns blazing, to rescue the innocent NPC in harm's way. In *MW*, however, the player is not afforded this option, and Stacy's survival is the difference between moving on or facing a "Game Over" screen. The player is given control of the building's security cameras, and they must be Stacy's eyes and ears, helping her remain unseen by the men patrolling the embassy with AK-47s as she searches for a means of escape. To facilitate this, the player is in cell-phone contact with Stacy, and they can view the scene from multiple angles by selecting different security cameras. In mechanics terms, the player can shift the view of the security camera to (a) identify a different security camera and choose to view the scene from that angle, (b) center the camera on different places in the room for Stacy to move to and hide, and (c) tell Stacy when to move to a new hiding place by timing when they hit the action button with where the gunmen are, where they are moving, and where they are looking.

For us, this was a hard mechanic to master, in no small part, we suspect, precisely because it is so atypical of FPS games. Thus, completing this level required a great deal of trial and error, which is standard fare for most games. But in this mission of *MW*, "a great deal of trial and error" meant watching an innocent woman gunned down over and

over as a result of our repeated failures. To say the least, this was a deeply uncomfortable experience, in no small part due to the committed voice acting behind Stacy's digital persona, as well as the fact Stacy's on-screen death took several (unskippable) seconds to complete from scream to gunshots. Though we ultimately completed the game, we put down our controllers at several points to seriously consider whether we really wanted to play the rest of the game.

Again, we note the juxtaposition between the mechanics we have described and the "hero mechanics" typical of FPS games. In games that do confront players with the need to rescue innocent hostages, failure to do so is usually remedied by moving, aiming, and shooting faster. Finding ways to do this in real time, while navigating the game landscape and keeping a mental map of moving enemies trying to shoot you, consumes enough mental and emotional bandwidth to background any reckoning players may need to do upon failure. The security camera mechanic, on the other hand, is neither flashy nor practiced; it is slow and fumbling, requiring immense focus. That focus, we contend, flows into how the player experiences the grisly on-screen effects of their failure.

As we have noted, the horrors and traumas of war are safely backgrounded in most FPS games behind the righteous courage of an unstoppable, "justice"-dispensing killing machine. In our playthrough of this mission of *MW*, however, we found few opportunities to ride typical "hero mechanics" through to glory. Instead, we found ourselves constrained in multiple ways that forced us to take in the details of the harrowing scenario in which we found ourselves.

Thus far, we have discussed how the mechanics of *MW* create opportunities to experience some of the horrors of war generally. In the next section, we turn to another mission, one in which we found mechanics that (a) painfully highlight the wide range of people who find war thrust upon their lives, and (b) bring into sharp relief assumptions pertaining to the extent to which those who find themselves the victims of war have agency over their destinies.

## Hometown

Our next mission of interest, *Hometown*, is a flashback episode meant to tell the backstory of Farah, an Urzikstan freedom fighter. The mission opens to a dark screen, with the sounds of emergency responders coming in muffled from somewhere outside the player's vision. The player cannot move the avatar's body, save for the ability to move her head side to side. In so doing, the player discovers a woman lying in what appears to be a pile of rubble—dead. The player soon learns they are playing as Farah, and the dead woman is her mother. Scanning the environment, the player realizes they have little recourse for escaping their entrapment beneath the rubble, save for a brick they can pick up and bang against the large piece of tin roof to alert the would-be rescuers to Farah's location. Again, *MW* has eschewed typical FPS mechanics in favor of one used to communicate a particular story. As young Farah, the player is helpless, able only to hit buttons on the controller and wait for what comes next. The player is at

the mercy of the game, just as Farah is at the mercy of a geopolitical situation she had no hand in creating.

As Farah is pulled from the wreckage of the collapsed building, it becomes clearer the player is playing as a small child, no older than 10. Farah finds her father and brother, and they together navigate the streets to their home amidst what becomes clear is a military attack by Russian forces. Running through the streets, the player is constrained in multiple ways. First, as a child, she cannot move quickly—young Farah's short legs, relative to her adult father's, slow her down. This is another example of how *MW* juxtaposes constraining mechanics with the player's expectation of what they should be able to do in FPS games to create narrative tension. By embodying the player with abilities far different than those typically afforded through hero mechanics, the game forces players to experience and approach a typical FPS war scenario from an altogether foreign point of view. Second, Farah has no weapons. Thus, the player must run, hiding from the villains they would ordinarily confront head on. Furthermore, as with the *Embassy* mission, the player moves through the streets confronted with an unending wave of war crimes they experience from a first-person point of view. As Russian soldiers beat, gas, and murder Farah's fellow citizens, the player can do nothing but walk.

Upon arriving at their home, little time passes before a large Russian soldier breaks into the house. Farah's father confronts the man in an effort to save his children. As experienced FPS players, we acted on our first instinct: attack the soldier. We used the melee attack button over and over, but no avail. Notably, the game registered our attempts—the Farah avatar punched out, and the game produced the thuds of making contacting—but Farah, as a child, was simply too physically weak to make any difference in the struggle. We attempted this tack multiple times, but each time, upon murdering Farah's father with his bare hands, the soldier simply turned to our avatar, grabbed her, and the screen went blank. Realizing this strategy was clearly (a) anticipated by the game designers, and (b) designed to be ineffectual, we were forced to concede defeat on this count and ran away to hide in the house. Thus, we found ourselves on the precipice of perhaps the most disturbing scene of the game.

We hid from the Russian soldier under the bed, and we found and equipped Farah with a screwdriver as our only means of defense. Knowing the soldier, not only massive and muscularly built but also equipped with a fully automatic assault weapon, was beyond Farah's physical abilities, we had planned to simply hide from the soldier, hoping he would leave. After many minutes of scurrying among hiding places, however, it became clear the game had no intention of rewarding this strategy. We were forced to confront the man in a physical contest. Running up behind him, we jammed the screwdriver into his leg—we were then shot. We tried again, this time jabbing and running away. We progressed like this, losing the game multiple times, until at last we succeeded in a series of horrific attacks that ultimately left the soldier in a pool of blood on the floor of Farah's childhood home.

As with the previous examples, this series of mechanics significantly constrains the player's avatar, and thus render irrelevant the strategies players are well-trained to

employ in FPS games. By forcing players to retreat from a confrontation they would otherwise not hesitate to meet with practiced violence, the game highlights the presence of the many helpless noncombatants found in every warzone. Furthermore, by refusing players a "hide and wait" solution, the game brings into stark relief the fact that many of the people caught in the midst of war have no such option.

We highlight one final scenario from this mission. After escaping their childhood home and navigating through the town streets past trauma after trauma, Farah and her older brother, Hadir—also a child—discover a truck they believe they can use to escape the town. Nevertheless, the truck is attended to by two more Russian soldiers. The children quickly come up with a plan: Hadir will create a distraction to allow Farah to take an unattended pistol lying atop a shipping crate. The plan works, and Farah obtains the weapon, though it becomes clear Farah must use it to kill both the soldiers before they can escape (we tried several times to simply board the truck, but the soldiers shot the children). When the player attempts to aim the gun at the soldiers, however, they find Farah cannot hold the gun steady. Farah's aim, unaided by the stronger, well-trained muscles of the grown soldiers typical of FPS avatars, waivers uncontrollably up and down, side to side. Lacking a reliable aiming mechanic, the player cannot hope to down both soldiers before the second attacks the children—we tried. Thus, Farrah must utilize the tall grass surrounding the scene to fire from cover, buying her time to prepare another shot as the second soldier searches for the source of the first shot. Again, we highlight how the mechanics constrain players' actions, the stark juxtaposition this creates between typical FPS mechanics and those we have described from *MW*, and how this juxtaposition, by creating cognitive dissonance in the player, creates an emotional experience and opportunity to develop civic empathy.

## Conclusion and Discussion

We have argued for widening the lens through which we view videogames as relevant to education. Violent videogames, though largely inappropriate for formal K-12 educational settings and thus often ignored in those contexts, may yet hold lessons relevant to those who do the work of teaching and learning. In particular, we have argued that mechanics that thoughtfully constrain the actions players instinctively seek to take when positioned within familiar game genres create opportunities for players to reflect on the lived experiences and agency of their avatars' real-world counterparts. In other words, intentionally constraining mechanics have the potential for developing players' global civic empathy.

In simplest terms, our theory of action is this: (1) Constraining mechanics (2) create juxtaposition and cognitive dissonance, which in turn (3) create emotional experiences that serve as rich sites for complex learning (empathy development) to take place. It was our hope with this argument to unsettle current thinking about which kinds of games are relevant to the ongoing project of education, though we recognize such unsettling often falls short of making every point and attending to every resulting set of questions it

generates. This is, of course, the nature of such provocation, but we attend now to some of the questions we anticipate readers might have.

First, we want to reiterate—perhaps make more forcefully—an important point we raised at the beginning of this essay: Our stance is *not* one sympathetic to or supportive of guns in general, nor of American gun culture more specifically. Indeed, we view as deeply concerning the United States' position among developed countries as a leader in gun access and gun violence. What we have sought to do in this paper is not to glorify guns or violence, nor to suggest in any way school children ought to have increased access to realistic portrayals of trauma. Rather, we have sought to explore the role videogame mechanics might play in creating visceral emotional experiences that facilitate the development of important and complex learning goals in pursuit of a more just and equitable global community for all those who live within it.

Second, we do not take for granted the ideological world(s) reflected in and (re) produced by games like *MW*. Such games, by their very nature as FPS games are most of the time—if not all the time—bereft of peaceful solutions to conflict, whether on the macro, meso, or micro scales. When players pick up games like *MW*, *Battlefield*, or *Halo*, they do so expecting to play stereotypical, often hypermasculine heroes. For instance, it is typical to see protagonists assume the "Duke Nukem approach": out to "Kick ass and chew bubble gum," but having run out of bubble gum. Players take for granted that the game world—and thus, to some extent, the real world—is populated and clearly demarcated by "good guys" and "bad guys," and that the solution to the world's ills is violence and domination. We view these issues as deeply problematic and troubling in a world that, throughout history, seems unable to get out of its own way in its pursuit of peaceful coexistence. We return to one of our main points, however: Our goal was not to wholesale endorse *MW*, nor to suggest it be required "reading." Rather, we note it seems to do something quite well—create visceral experiences that may influence how we see the world and empathize with the people with whom we share it—and that that may be a very good thing.

Third, we concede not all players will experience games like *MW* in the same way as we have, and not all players will make meaning of those experiences in the same way. More research should be done on this topic, in particular robust and methodologically defensible empirical research. We do not suggest this essay accomplishes this goal. Rather, what we have sought to do here is begin a conversation, grounded in the way of thinking about mechanics we have advocated, about what we might learn about teaching and learning complex, social justice-oriented, emotionally grounded learning goals from a genre of game that is typically left out of the conversation.

## Declaration of Conflicting Interests

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## Notes

1. Since this time, Russia has launched a war of choice against Ukraine, a follow-up to Russia's invasion and ultimate annexation of the Crimean Peninsula in 2014. To us, this highlights that, despite decades of relative global peace since WWII, shaping public sentiment away from global conflict remains of vital import.
2. We use the term "videogame," as opposed to "video game," to indicate our preference for a term that aligns to our view of the medium as unique, with unique affordances for interaction. We acknowledge this does not align to convention. We use "video game(s)" in quoted text when it is the phrase used by the original authors.

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