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## Mobile Gaming Behaviors: An Exploratory Study of Mobile Game Players' Agency in Space and Time

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# Mobile Gaming Behaviors: An Exploratory Study of Mobile Game Players' Agency in Space and Time

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Texas Instrument's TI-83 Plus graphing calculator, and the related TI-84 and TI-89, could be found in almost every backpack of high school and college math students for several decades. When attending high school, my parents purchased the required TI-83 Plus calculator for my geometry class, and being acquainted with the nerdiest, but arguably the smartest, students in that class, it was not long before I was playing independently/illegally produced games like Breakout, Bowling, and Blockman on the dimly-lit graphing screen. The calculator included its own, simplified coding language, thus allowing for the creation of these arcade-style games. The games were shared over a transmission cable that could connect two calculators together, and through this system games were shared across the country. My first exposure to game design and coding came from my learning of the programming language to design my own RPG-inspired game on the TI-83 Plus. Several characteristics distinguished gaming on the TI-83 from the Nintendo Gameboy which I also owned at the time: the calculator was in no way designed as a gaming machine, it was constantly by my side because of its use for homework, it was lighter and slimmer, and the games were much simpler and more easy to learn than traditional games.

If the reader can forgive the personal anecdote, the contrast between what mobile gaming was to what it has become is startling. Throughout the 1990's and early 2000's, mobile gaming was limited to dedicated hardware produced by game companies such as Nintendo's Gameboy, Sega's GameGear, and Sony's PSP. The games mimicked their console-based counterparts in terms of time commitment, required player focus, and button placement. The spread of mobile phone use, at least in the United States, began to offer other opportunities for mobile games, including the famous game of Snake on the Nokia "Brick"—actually called the Nokia 3310. However, games on mobile phones were far from ubiquitous, and other handheld technology such as Palm Pilots were more of a novelty than a cultural mainstay. The introduction of Apple's app store, and then competing digital marketplaces from Google and Microsoft, changed the gaming landscape by providing easily accessible, readily downloadable, and, perhaps most importantly, easily playable games for mobile phones. Unlike the portable gaming devices of the past, people of all ages carried their phones everywhere they went, and with those phones also went the variety of games that could be played at a moment's notice. Currently, almost anybody with a mobile phone has access to, and possibly plays, mobile games, from toddlers playing Angry Birds (Rovio Entertainment 2009) on their parents' tablet computer to retired professionals who replaced their Sudoku books with the mobile game equivalent. And while mobile gaming might attract certain players based on lifestyle or personality (Seok and DaCosta 2015), it is estimated that over half of the U.S. population plays mobile games (Wadsworth 2016).

The design of mobile games allows players to start and stop games at will throughout their day, playing the games in short intervals, and the mobile nature of these games and devices invite players to interact with games in almost any location. Unlike traditional games that anchor players to a physical gaming space such as a living room, mobile games create mobile gaming bodies that inhabit various spaces and times. I call this characteristic mobile gaming's corporeal agency, and while mobile games include many limitations to player agency, the increased freedom of bodies to traverse time and space merits discussion and analysis. Interviews conducted for this study reveal that mobile games invite particular behaviors conducive to a corporeal agency that break away from traditional conceptions of gaming time and space. I argue that mobile gaming bodies demonstrate a more fluid relationship with space. time, and physicality than traditional forms of gaming, allowing players to move their bodies through time and space while performing the corporeal task of gaming. After drawing upon what limited literature has been written on the subject and describing several methodological considerations, I begin my analysis by addressing corporeal agency in terms of mobile gaming physicality followed by sections dedicated to temporality and spatiality.

#### **Casual Games and Mobile Players**

Mobile games present a conundrum to both popular culture and scholarly researchers alike considering how differently they appear when compared to traditional gaming. Unlike the arcade cabinets of the 1970's and 1980's or the living room consoles of the 1990's or 2000's, mobile gaming demonstrates several characteristics that demarcate them as a unique gaming phenomenon. While portable games have long existed since the advent of Nintendo's Gameboy and continue to exist through today's current handheld gaming devices, mobile games are different than portable games: a portable game device was made for gaming, while a mobile game device is a phone, tablet computer, or some other piece of hardware designed primarily for other purposes such as communication or productivity. Portable game devices have a control system dedicated for that purpose, but mobile games kludge the utilities of a phone or tablet in order for players to play games. As McCrea (2011) argues, portable gaming still functions as a form of traditional gaming, even if it is transportable, while mobile gaming, such as on phones or tablets, exhibit an entirely novel set of characteristics. Mobile gaming tends to take place on devices not designed for that purpose, such as cell phones or tablet computers, and touchscreen technology has combined the utility of the television screen and controller into a single device. Mobile game design also relies less on gaming as a dedicated occasion and tends towards games that allow for greater freedom of when or where to play, such as puzzles or turn-based games.

The ambiguity of mobile gaming, at least in its current manifestation on mobile phones and tablet computers, has inspired scholars to engage in discourse to define the meanings inherent in mobile or casual gaming. Their findings question popular assumptions about mobile gaming's characteristics, such as its recent surge in popularity. Parikka and Suominen (2006) approach mobile gaming as a cultural history and trace its roots to practices dated as far back as the nineteenth century. They argue that mobile games stem from cultural contexts readily seen throughout

the last few centuries, such as increased travel, mechanized play, mobile entertainment—such as newspapers or print novels—and various other social characteristics. Through this lens, mobile gaming is a natural extension of these particular cultural factors and by no means a surprising phenomenon. While mobile games might have emerged naturally, Chan (2008) suggests that mobile gaming changes how people experience presence in their daily lives by arguing that mobile games are evidence of the continued convergence of culture and presence, both on and off the screen. Christensen and Prax (2012) continue this line of thinking by suggesting that mobile gaming influences how people use technology by reconfiguring various relationships, both social and technological. Through a study of smartphone use in relation to the online computer game World of Warcraft, Christensen and Prax (2012) argue that mobile gaming demonstrates the fragmented nature of modern gaming, what they call an assemblage of play: instead of thinking of gaming as discrete experiences bound in one time and space, such as during a typical play session of a computer game, mobile apps that allow for chatting among player groups or participating in the game's item economy disrupt gaming and takes it to a variety of times and places.

Mobile gaming challenges traditional assumptions about gaming, and these challenges have not gone unnoticed by game scholars. The magic circle, for instance, is a design concept that both producers and commentators use to describe the immersive quality of gaming (Castronova 2005, p.147). Inside of the magic circle, players feel as if they are in a different world. However, as Moore (2011) argues, mobile games resist the metaphor of the magic circle insomuch as players include mobile gaming as part of their everyday lives. Anable (2013) further explains in her study of time management of casual games that mobile games tend to be ambiguous for both scholars and popular culture precisely because of their role in everyday life. She suggests that the cultural meaning of mobile games resides in the spaces between:

Rather than being blank spaces in our day, casual games are affective systems that mediate relations between players and devices, workers and machines, and images and code (and our feelings about those relations). As such, casual games constitute a contemporary "structure of feeling," in Raymond Williams' term, that gives shape and expression to emergent ways of being in the world as well as emergent ways of understanding what the world means. (para. 3)

In other words, casual games change relationships between people, places, work, machines, and other constructs by filling time and space between them. For example, casual games may be as a fundamental part of the work day as a trip to the watercooler, and their existence in workplaces do not make them a distraction but instead a means of understanding labor.

Given the transgressive nature of mobile gaming in terms of typical expectations regarding bodies, space, and time, the majority of the work on space deals with hybrid-reality games. Also known as augmented reality games, or ARGs, these games utilize mobile phones' GPS and other capabilities to gamify everyday spaces, and their design incentivize players to move through real space (Laine and Suk 2016). Hjorth (2011) describes how mobile gaming ARGs challenge the boundary between what are known as hardcore and casual gamers by utilizing game mechanics that require various levels of involvement that both complement and

distract from everyday life. ARGs also create hybrid spaces, or new territories informed by mobile technology, through the mobile gaming experience, according to Lemos' (2011) study on the subject. de Souza e Silva and Sutko (2008) further argue that these ARGs, and the mobile technology that allows for their existence, connect physical spaces, gaming, and technology to the practice of daily living, and their inclusion in ordinary life speaks to how mobile gaming breaks away from traditional conceptions of gaming spaces.

The recent corporeal turn in game studies invites scholars to investigate bodies, and the spaces they inhabit, as a primary method for understanding the role of gaming in culture (Anderson 2017). ARGs are hardly the site of the most popular mobile gaming experiences, but there has yet to be many comprehensive studies about mobile gaming spaces, places, time, and bodies. Some scholars have begun to ask what mobile gaming means for bodies. For instance, Richardson (2011) studied the particular corporeal behaviors of mobile gaming, citing the particular behaviors, gestures, etc. that emerge from playing mobile games, and Lam (2011) describes how the smaller screens of mobile devices has constructed novel viewing spaces for game spectatorship. My study expands on the ground covered these scholars in an attempt to describe the actual experiences of mobile game players in relation to when, how, and where, they play.

#### **Methodological Considerations**

The purpose of this study was to discover how mobile gaming invites corporeal behaviors different than other, more traditional, gaming forms. Although game design merits inclusion in this analysis, players' behaviors and personal reflections are more salient to the goal of the study because they tell us how the games are actually used. Therefore, the following research question guided the methodological considerations of this study:

1) What are the most prominent corporeal characteristics of mobile gaming according to mobile game players' reported experiences?

I interviewed nine self-identified mobile game players, three female, six male, ranging in age from late-twenties to early sixties. The interviews were in-depth discussions ranging from twenty minutes to an hour, and though pre-written questions guided the discussion, follow up questions and back-and-forth talking led to the subjects describing experiences that I had not anticipated. The interviews were recorded and transcribed for further analysis. Consistent themes among subjects' replies were grouped together to form response categories, and the following sections expand on those categories through a discussion of the findings.

#### **Corporeal Agency and Mobile Gaming Bodies**

Mobile games rely on particular, embodied behaviors on behalf of the players, behaviors that interact with space and time in ways unseen in other game forms. And when the players comply, as they tend to do, mobile games emerge into a realm free of the typical limitations of console or PC gaming. It was not just the games that do

this, but it is the astute combination of gaming hardware in the form of a phone or tablet computer, the manner in which the games are designed to invite these behaviors, and finally, and, perhaps most importantly, players' corporeal behaviors. The mobile gaming body demonstrates a variety of characteristics that not only set it apart from other forms of gaming corporeality, it also fundamentally produces and maintains the mobile gaming experience as it is culturally known today. Specifically, the interviews with mobile game players demonstrated three consistent elements of mobile gaming bodies: physicality, spatiality, and temporality.

#### **Mobile Gaming Physicality**

Although both the body's place in space and time occupies the primary feature of mobile gaming corporeality, various aspects of mobile gaming invite identifiable physical characteristics, or at least the physical limitations, to the discussion at hand. Before mobile gaming bodies may traverse space and time, they demonstrate particular ways of physically engaging with the gaming technology, such as how to hold or interact with the device.

The players identified various body positions in which they are able to play mobile games, mentioning specific ways of sitting, standing, or prostrating that they felt was most comfortable for them when playing. The majority of the players described their body positions when playing mobile games as being the results of that day's schedule. One player explained: "Common location would probably be the living room, sitting on the couch. Occasionally, I would play at work at my desk. The most common place would be living room and on the couch, in the common space." Another player discussed playing mobile games sitting in a car, lying in bed, leaning against a wall at work, and slouching over the device when waiting at a doctor's office. Without a specific question regarding the matter, every player mentioned some way in which mobile games allowed them the choice of how to position their bodies when playing games.

Mobile games not only provide liberty when choosing how to position the body to play the games, they allow each player to explore which physical positions best fits their needs. While PC or console games often produce a limited number of body positions—usually sitting—mobile games, and the phones and tablets on which they are played, let players interact with the games in any position as long as players are able to hold the device, control the game, and see the screen. But even with these limitations, players may express a great variety of ways of positioning their bodies for playing games, and this freedom opens other avenues of corporeal choice. If playing a mobile game is comfortable when lying in bed, then playing mobile games becomes an option when relaxing right before going to sleep. If a player is able to easily control a mobile game when leaning against a wall, a short lull at work becomes an opportunity to play a game. In this way, the freedom of body positions interacts with other elements of gaming agency, such as the ability to choose where and when to play, to open additional avenues of play.

The manner in which players hold their game devices further personalizes the corporeal experience of playing mobile games. Players reported particular ways of holding their devices that best fit their play style and comfort. For instance, one

player stated, "Most often, either iPad or phone, it's holding it with one hand and using one finger on the other hand to click or touch or whatever." Each player tended towards one specific way of holding their device, although players also described how they would alter how they held devices depending on their circumstances. One player mentioned a preferred method of holding the device followed by a caveat regarding how s/he played games while eating: "One hand, pinky on the bottom, control with my thumb. When I'm eating . . . I use my pinky." Players also described the varying distances at which they would hold their devices from their faces, such as one player who described how it depended on the game: "If I had to really concentrate on it, I'll hold it really close to my face, I'd say about here, about 6 inches or so from my face. If it is more of a relaxed game, I'll have it down here and I'll just be playing with my index finger with my other hand." Oftentimes the distance between the device and players' eyes would be determined by the location or other circumstances surrounding play, such as setting the device on the table while eating or while at a work desk.

Related to how players hold their mobile devices, methods of input and game control provide a meaningful array of options for players. The design of a typical console controller portrays a single ideal for how players should input commands insofar as certain fingers belong to particular parts of the control and command a limited set of button. The touchscreen design of mobile game devices increases the number of available methods of input, and the players interviewed for this study described how both their personal preferences as well as each game's design dictates the options for control. For instance, players reported that games which require only single taps could be held by one hand and tapped with the thumb, held by two hands and tapped with a thumb, and held in one hand while tapped with a finger from the other. To visually illustrate the point, the game Hungry Shark Evolution (Future Games of London 2012) lets players tap, hold, and drag on nearly any part of the screen, and the location of the first tap becomes the reference point for movement: after tapping, if the player drags the finger to the right, the shark will move right. Because players may easily control the game regardless of how they hold the device or where they tap on the screen, they may choose what body, hand, and finger positions are the most accommodating to play the game in any particular circumstance. The game's design is not the only factor dictating methods of control, and some players reported controlling the same game differently on different devices depending on the size, shape, and weight of the device.

Variability in methods of holding and controlling mobile gaming devices exemplifies corporeal agency at its most minute, almost to the point of being taken for granted. Video games have a long, yet somewhat consistent, history regarding how hands and arms should interact with game hardware, and from arcade cabinets to living room consoles the hardware has oftentimes dictated how players could hold devices. However, the merging of screen and controller in mobile gaming devices produces instances in which players have a greater liberty when holding devices. The abstract nature of touchscreen phones and tablets gives game producers and players varying options for how to hold and interact with the devices. Some games require two hands to hold the device to manipulate the devices gyroscope while also touching the screen with thumbs. Others simply need single taps of a finger, and it could by any of the hand's digits. Some games invite certain ways of holding devices through dense visual details requiring close examination. Regardless of the specific game, mobile

games demonstrate a tradition of fitting the variability of modern, mobile life, letting players interact and hold their devices as they see fit in most circumstances.

One noteworthy caveat to corporeal agency in mobile game physicality is that increased freedom to choose body positions and methods of holding/controlling devices is that there appears to be a greater chance of unintended physical discomfort. Although traditional game controllers might undergo extensive ergonomic testing, the truth of the matter is that manufacturers did not design mobile devices as game machines, at least primarily. And the variability allowed when physically interacting with mobile devices presents opportunities for players to choose body and hand positions that may lead to discomfort. Most players described at least one way they have experienced physical discomfort when playing games, all of which relate directly to how they chose to play the games: eye strain from holding the device to close to their eyes for extended periods of time, neck strain from poor posture, and arm, wrist, and finger fatigue from holding the device up. It should go without saying, but unlike other forms of gaming wherein the screen sits on a desk, table, or is mounted on a wall, in mobile gaming the controller and the screen are the same thing. As such, mobile devices require players to constantly negotiate how they are looking at and controlling the device, sometimes favoring one at the expense of the other. These negotiations may invite certain body, arm, hand, and finger positions that may feel painful after playing for an extended period of time.

#### **Mobile Gaming Temporality**

Although discomfort may arise during extended play sessions, most the players tended to play mobile games at short intervals throughout their day, a phenomenon that demonstrates temporal agency for gaming bodies. When asked about the length of a typical play session, answers varied, but none were longer than an hour, and only in the most extreme cases would a player play longer than that. The majority reported a typical play session lasting twenty minutes or less. Some described their play sessions as lasting around five minutes. Shorter play sessions were common, however, but they depended on the circumstances. The shortest typical play sessions were two to three minutes, just enough time to play a single turn or complete one challenge.

Players also described play sessions lasting throughout the day but interrupted by various tasks like caring for children or working. The following statement is typical of the experiences described by the players:

I would say usually, most of the time, it'd be shorter increments of time and then a couple times a day. For me, very rarely would I dive into a game and spend two hours playing it. With the exception of this one car racing game I have, I really got into it. I would play it for one or two hours at a time.

Some games interested players for extended periods of time, such as the racing game in this example, but the majority of the time the players reported playing games in short play sessions throughout their day. Another player stated:

Those were anywhere between two and five minutes. The thing about these games is they are played for me usually as time fillers. That's why your question about where you play the most is sort of hard to answer because if I have ten minutes, I would sit down and mess around with it, but if any time during those ten minutes I needed to do something else, like if the doctor walked in or anything, I would immediately blank out the tablet and stand up or whatever. These games are something to keep my mind a little busy as my body waits.

Interruptions and games as time fillers were common themes that arose throughout most of the interviewers, and players utilized these games in short bursts according to their temporal needs throughout the day.

In traditional gaming, such as on game consoles or on a computer, the time requirement for gaming tends to be more taxing. Quitting the game in the middle of play often punishes the player or results in a game over scenario. Mobile games, however, seem to reject typical temporal limitations in favor of catering to players sometimes sporadic schedules. Mobile gaming bodies demonstrate a level of temporal agency uncommon in other forms of gaming, and they are able to start, stop, pause, and restart games at a moment's notice depending on the given circumstances. This agency results in players being able to eschew planning on any given amount of time for a play session; i.e., they need not ask themselves if five minutes is enough time to play a particular mobile game. Instead, any amount of free time in their day may result in playing a mobile game inasmuch as they know they may stop the game at any moment to accommodate interruptions.

The temporal agency inherent in mobile gaming also invites play sessions at times when gaming would have otherwise been impossible or unexpected. In other words, this characteristic lets players choose to make the use of a period of time for one task as well as playing a game. Players reported choosing to play games during lunch breaks, while using the bathroom, or while performing a task at their jobs. In these instances, gaming is not a distraction while waiting, nor is it something to put away the moment something more pressing comes to players' attention. The short, adjustable play sessions of mobile gaming, and the temporal agency that arises from this characteristic, invites players to make gaming an addition to an activity they are already performing. Players need not choose between one activity and another, in these circumstances, but instead may include mobile gaming as a supplemental activity knowing that the games fit into a variety of temporal limitations. Players can play a single turn of a game while they are chewing their food, and then pause or stop the game to get another bite or sip their drink. Players are able to perform a duty at their job, play for a few moments on their game, and then promptly attend to the next task. Mobile gaming exhibits adaptability in how it allows players to play within various temporal contexts, and this adaptability lends itself to increased agency for players.

One characteristic of mobile gaming that supports adaptability of play session and when to play is turn-based gameplay. A large number of the most popular mobile games require players to take turns when playing against other players, but players reported that time limits dictating when they have to take their turns are functionally non-existent. Several players attempted to describe the time limitations of their turn-based games:

"You would get people who would take a few days to take their turn."

"I know with Draw Something, it seemed indefinite."

"It'll wait for you for; whenever it is your turn, you get, I believe, it's three days to answer a question, if in three days you don't answer the question you lose the game."

One player explained their surprise when, upon opening a game they had not played in over a year, they saw they had several hundred opportunities to finish games s/he had started with other players.

If short play sessions demonstrate mobile gaming bodies' temporal agency in the short term, turn-based games suggest that temporal agency extends into the long term. Players not only may choose when and how long they play throughout their day, they may choose which day of the week, month, or year they wish to continue playing a game. And this phenomenon occurs with as little fanfare as a player who casually hit the home button on their phone to close a game at the end of a lunch break only to open the game again several days later to continue the game as if nothing happened. The freedom to start, continue, and end a play session at a moment's notice suggests that mobile gaming bodies are more free than their console counterparts to dictate how time interacts with their gaming lifestyle, whether they play for a couple of hours after work, or they play for a few minutes while riding the train to the bank. They can quickly take their turn while waiting in a grocery store check-out line, and they can wait several days—or longer—to take their next turn when it becomes available. Some games take advantage of this temporal agency by building waiting mechanics into the games' designs, meaning that players are sometimes required to wait a particular amount of time before they are allowed to continue playing. Players may pay money to guicken the process, or they choose simply to wait, as every player interviewed for this study reported doing, because the sporadic, and sometimes long, periods of time were a normal part of their playing behaviors.

One final temporal characteristic that deserves inclusion, if only because it was consistently mentioned among the majority of the interview participants, was the freedom players felt over how long a game should played before deleting it from their device. Traditional console or PC games tend to require significant time commitments on a variety of levels: time to save money to purchase a new game or wait for it to be on sale, time to download or install the game which may take several hours or longer, time to learn the game, and the time to complete any significant amount of the game's content. Mobile game players reported what could be best described as a somewhat whimsical attitude towards downloading, playing, and deleting games. Players claimed to have heard about a game in a casual conversation, downloaded it in a matter of seconds during the conversation, and played the game as soon as they were free to do so. Once downloaded, it often took little time to learn how to play the game, giving players freedom over how and when to play the game. Once the game did not interest the players any longer, with little to no regard for the amount of the game completed, they reported promptly deleting the game and moving on to other games. Many of the common time requirements found in other game forms do not limit mobile game bodies, and players often demonstrate control over when, during what, and how long they play.

#### **Mobile Gaming Spatiality**

Players' mobile gaming devices also serve a primary function as cell phones or tablet computers, and players tend to have the devices on their person or within close proximity throughout the day. The cell phone or tablet is in a purse, pocket, or bag while at home, work, or traveling throughout the day. Spatial agency puts the "mobile" in mobile devices, and the characteristic offers opportunities for gaming experiences at any convenient location, including places not typically considered gaming spaces.

Players reported playing mobile games at various locations, but several behavioral patterns emerged from the responses. For instance, players consistently chose to play mobile games at their places of employment. Several players explained how they would play games at work as a way to fill gaps of time between their obligations. One player stated: "When I'm in the car wash at work I just can't help it. You get a quick three minutes or so, so you're like, whatever, why not? When I'm on break at work. ... A lot of work related stuff." Another player expressed how gaming occupied time during both intended and unintended moments at work: "[I would play] five to ten minutes if I had a break in work, or in between reading emails. Mostly breaks in work, if I had a client that didn't show up." Other players used games to relax during their planned breaks, such as lunch breaks. One player changed her/his work schedule to better accommodate her/his gaming preferences: "I had it on my iPad and I had it on my iPod and I would take my iPod to work. I would take an early lunch, play during my lunch hour." With personal devices near players while at work, gaming appeared to become a natural part of the work day.

The spaces people inhabit often dictate, on several levels, who they are, what they do, and how they do it. This fact is especially true in an employment situation, one where businesses pay people to behave in particular ways. Gaming at work lets players resist some of the boundaries on their behavior by infiltrating their work space with mobile games. A space traditionally reserved for mental focus, such as a desk area in an office, transforms into a gaming space the moment a player places their device on the desk surface and opens a game. Even spaces meant for more physically demanding labor, such as at a car wash in the case of one of the interviewed players, may become gaming spaces. While at work, players subject their bodies to the rules of their employment, but they also resist those rules and insert their gaming identities into those places. A spare moment or boring task turns the workplace into an opportunity to play a game, and therefore players' bodies become more than sites of labor. Incidentally, when asked about any negative repercussions for playing games at work, not a single player reported having any superiors or fellow co-workers speak to them regarding their gaming habits.

In a similar vein, players described their gaming behaviors during transit, such as when they were passengers in trains, airplanes, and cars. Sitting in transit is by no means an activity that requires the full attention of passengers, and a casual glance around a city bus, for example, would reveal various forms of media consumption such as reading or listening to music. However, these other media have had a history of being forms of mobile communication: reading a book or listening to portable audio is hardly novel. Games, on the other hand, have only recently entered public culture as a mobile phenomenon, and gaming bodies now appear in almost any form of

transportation, private or otherwise. If understood as a consequence of technological advancement, mobile devices may operate for long periods of time without needing to reconnect to a power supply, and this, now common, feature of personal tech lets gaming bodies travel great distances during typical play sessions. When interviewed, players talked about playing during transit as a forgone conclusion, as if it was the most obvious place to play games. Their responses demonstrate a cultural transformation in which gaming bodies on the move are typical, even expected, in any location where people are traveling.

Although grounded gaming spaces still exist, mobile gaming bodies that traverse space, such as while in transit, suggests that bodies contextualize the spaces they inhabit. For instance, when several passengers playing mobile games occupy a city train, the train signifies the added purpose of "a place to play games." Gaming bodies legitimize modes of transportation for gameplay simply through their presence. Of course, mobile gaming during transit is not necessarily a new phenomenon—video game companies have been producing mobile game hardware for years—but only now does the ubiquitous nature of gaming during transit seem to translate into consecrating these moving spaces as being appropriate for games.

Places of residence are another common location for mobile gaming, according to the interviewed players, but unlike traditional gaming which also takes place in homes, mobile games allow players to inhabit the entire residential space as gaming bodies. Players reported playing in every conceivable place in their homes: in living rooms, on couches, at desks, at kitchen tables, in the bedroom, and even in the bathroom. Although game consoles and computers tend to reside in living rooms or bedrooms, locked into place given their technological limitations, mobile game bodies and their devices roam from room to room depending on their preferences at the moment. Much like gaming at work, other activities may dictate where and how players participate in mobile games while at home. One player explained how the places s/he played at home depended on the morning and evening routine:

With my evening routine, usually after the kids go to bed, I'll work on school. I'm sitting at my kind of makeshift desk right now. So I'll play here, not very often will I play in bed. Sometimes in the morning, if we're having a little bit of a lazy morning, [I'll play in bed], because I usually work the later shift so I usually don't go in until late morning, 11 o'clock or noon, usually. If we have a lazy morning, I might play a little bit in bed, but normally, [my daughter] and I will watch cartoons or something on the iPad. Probably mostly when I'm at home, I'll play either at my desk or on the couch.

Other players offered similar explanations for where they play in their homes, choosing to play games where other activities took them. The locations in the home also tended to be the result of habit, such as one player describing playing a game on the couch for twenty minutes on her/his tablet as a way to unwind from a long day at work (a day at work that also included moments of playing mobile games, incidentally).

Homes present a trickier space to analyze regarding game bodies simply for the fact that traditional gaming forms already have inhabited homes for roughly twenty years. However, the difference between traditional gaming and mobile gaming in the home resides in the consistently changing locations of gameplay. For example, a player

may play on the couch while their partner watches television, take their device with them while they use the bathroom, and then play for a few minutes in bed before retiring for the night. In this instance, the gaming body inhabited three different locations in the home, thus expanding the game space from the living room to the entire residence. According to players' interview responses, the entire home is appropriate for playing games, and therefore mobile game bodies may occupy any given location in the home instead of limiting gameplay to the more traditional space of the living room.

Throughout players' days, many moments present opportunities to play games, and the locations may vary drastically. One player's response was typical for those interviewed regarding the seemingly random variety of spaces mobile gaming bodies may inhabit:

I used to play games a lot when I was in the bathroom. But, I found that I wasted a lot of time in the bathroom, so I stopped doing that. If I'm waiting at the doctor's office or waiting for an appointment or something . . . Like a couple weeks ago I went to go get my oil changed for my car and they had some show on their TV that I wasn't interested in so I pulled out my phone and started playing some games. So yeah, I guess if opportunity is there and there's nothing else I would be doing, I probably pull out a game.

Mobile game bodies demonstrate a level of adaptability when choosing where to play that is impossible with other forms of gaming. Any place wherein a player has their device presents an opportunity to play a game. In this way, mobile gaming bodies pop into and out of existence throughout the day, in various places, depending on the circumstances of the particular context.

#### **Implications**

Agency is a loaded term with a history of contentious definitions (Campbell 2005), but if examined as a series of behaviors, or potential for behaviors, then mobile gaming agency revolves around bodies in time and space. The specific ways players described engaging with mobile games demonstrate that gaming corporeality extends beyond arbitrary or traditional boundaries. If console gaming players tend to exhibit a commitment to time, from thirty minutes to thirty hours, then a temporal boundary surrounds those gaming bodies inasmuch as players restrict their expectations for how and when they disrupt that engagement. However, mobile game players expand those expectations so that time commitment becomes an afterthought to the gaming process. Similar phenomena occur spatially when mobile game players inhabit a great number of places and body positions when gaming, including home, work, and during transit. Mobile game bodies do not chain themselves to one space, time, or position, and players' behaviors and expectations regarding their physical experience of gaming include the freedom to start, stop, and move as they see fit.

These findings provide a new paradigm through which to understand the relationship between bodies and games. Instead of a media effects perspective in which the games perform most the rhetorical labor in shaping how players' bodies behave during gameplay, this expanded paradigm suggests that players' bodies also shape the gaming experience. Players' bodies dictate how, when, and where the game is consumed. For instance, mobile games tend not to require prolonged gameplay sessions which allow players the freedom to play a variety of contexts. Mobile games do not limit where and when they can be played. Instead, players may determine when and where any particular mobile game would be useful or appropriate. This agency insists that the best analyses of mobile games take player choices seriously inasmuch as much of the meaning players derive from mobile games depends on how they choose to consume them. Throughout the interviews, players freely divulged what their games meant to their lives, or their interpretations of how mobile games contribute to the actual practices of daily living. Whether to relax, to distract, to entertain, or even to socialize, players' choices for how, when, and where to play foregrounded the ways in which players' bodies contextualized the nature of the gaming experience.

Inherent in this paradigm is the implication that the times and places in which players choose to corporeally engage with mobile games dictates the nature of any particular time and place: spare moments become gaming times, and any place becomes a game space. And throughout these events players' bodies become gaming bodies which traverse temporal and spatial boundaries. These findings engage with current work on the rhetorics of space and place inasmuch as it subverts the power of the space in favor of players' behaviors. For instance, Conway (2010) offers an excellent assessment of sports video games and culture, including a discussion of how players position themselves in living rooms when playing Pro Evolution Soccer 2008 (Konami 2007). His approach works well with console games inasmuch as they seem to structure the gaming experience: the sports game introduces a sports culture in the living room, and players' behaviors in that space follow the expectations of that space. However, mobile games appear to transgress the assumptions of this approach inasmuch as the places and times so often change. Players may start a game at home, continue to play it at work, play another game while waiting in line at a grocery store, and then play for a few minutes in bed before going to sleep. In these instances, players' behaviors structure the space instead of the space structuring the gameplay. Players who play mobile games while waiting for a mechanic to repair their cars make their space a space for gaming. Of course, this behavior does not necessarily determine that everybody acknowledge that space is one meant for gaming, but instead the space is a personal one. The player's space is the gaming space. However, observing others play games in any given space might suggest to some people that gaming is appropriate.

Corporeal gaming agency includes some lesser discussed implications, including how the variability of gaming positions lets those with some physical disabilities play games as naturally as they would participate in any other activity. By way of a personal anecdote, after undergoing surgery on my elbow after a bicycle accident, I could not play PC or console games given the physical restrictions on my arm and hand. However, I could fully operate my touchscreen phone inasmuch as I could hold and position the phone in a great variety of ways, allowing me to pass the many hours of immobility by playing mobile games. Others with more permanent physical limitations might find the physical agency of mobile gaming exceeds that of other, more traditional, forms of gaming. Many smart phones include a number of accessibility options that would put console and PC gaming to shame. Touchscreen

technology allows players to play games with their toes, elbows, knuckles, various fingers, or even parts of the face. Corporeal agency does not only imply a greater number of options for all players, it also provides gaming experiences to a wider variety of players who otherwise would not have been able to participate.

Given the recent materialist and corporeal turns in games studies (Apperley and Jayemane 2012; Anderson 2017), this study further expounds on game researchers' concerns regarding players' experiences off the screen and in the daily habit of living. Mobile touch technology has expanded what gaming means for bodies in terms of when, where, and how it occurs, but only when contrasted with other forms of gaming does the recent popularity of mobile games makes sense as one part of a widespread phenomenon of gaming corporeality, which is neither new or a passing fad. Augmented reality, virtual reality, and even the spatially transgressive nature of the Nintendo Switch gaming console all point to gaming as it occurs throughout physical space.

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