WHOSE "GAME CULTURE" IS IT, ANYWAY?

EXPLORING CHILDREN'S GAMEPLAY ACROSS CAPE TOWN

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Gaming is a ubiquitous practice in Cape Town, South Africa, where young people across socio-economic groups partake in mobile, console, arcade, online, offline and PC gaming. In this chapter, we weave together our research about young people's gaming practices from multiple sites within the metropolis of Cape Town. In doing so, we seek commonalities, articulate differences and offer provocations about the role of place in gaming practices. We argue that gaming practices are *infrastructured* in various ways.[1]

Our cases are drawn from a range of research projects, theses and game development initiatives. We've explored gaming practices in domestic spaces in a low-income neighborhood and two public library contexts, as well as after-school settings in the wealthy suburbs of the city. These sites are characterized by differential access to gaming technologies, along with other forms of social stratification. We argue that *where* young people play and the *infrastructure* of play is as important as *who* plays, *what* they play and *how* they play.[2] Our research demonstrates that, even within the context of a single city, game cultures can be as diverse as the people and spaces of the city itself.

RESEARCHING GAMING PRACTICES IN CAPE TOWN

This chapter contributes to emerging scholarship investigating the global diversity of gaming cultures by sharing games research pertaining to young people and digital games conducted in a range of sites across Cape Town. The various projects in which we have been involved have either focused on, or included, primary school-aged children and teenagers playing games in a variety of public and private settings across South Africa's capital. The University of Washington-sponsored *Global Impact Study of Public Access to Information & Communication Technologies* (2007-2012) investigated public access to ICTs, and Walton and Donner conducted in-depth studies associated with the report's findings, focusing on the interplay between teens' public access to ICTs and private and shared access to mobile phones, which included use for gaming.[3]

The field work that has contributed to this chapter has varied by author. Following her involvement as a research assistant on this project in 2011, Anja Venter investigated communities of practice amongst PC gamers in Cape Town's Central Library, while her Master's thesis focused on children playing console and mobile games in domestic settings in Ocean View.[4] Nicola Pallitt's Ph.D. on children's

1. Susan Leigh Star, "The Ethnography of Infrastructure," *American Behavioral Scientist* 43.3 (1999): 377–391.
2. Adrienne Shaw, "What Is Video Game Culture? Cultural Studies and Game Studies," *Games and Culture* 5.4 (2010): 403-424.
3. Araba Sey, Chris Coward, François Bar, George Sciadas, Chris Rothschild and Lucas Keopke, "Connecting People for Development: Why Public Access ICTs Matter," *Technology & Social Change Group, University of Washington*, 2013, https://tascha.uw.edu/projects/global-impact-study/; see also Marion Walton and Jonathan Donner, "Public Access, Private Mobile: The Interplay of Shared Access and the Mobile Internet for Teenagers in Cape Town," Global Impact Study Research Report Series, *Technology & Social Change Group, University of Washington*, 2012, https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/20956/Public access private mobile final.pdf.
4. M. Anja Venter, "Gamers in Ganglands: The Ecology of Gaming and Participation amongst a Select Group of Children in Ocean View, Cape Town," Master's Thesis, University of Cape Town, 2012.

gendered gameplay in middle-class and suburban after-school settings included a pilot study at a boys' school in Rondebosch, a children's holiday club hosted there for children from across Cape Town and an after-school gaming club at a neighboring co-ed school.[5] Muya Koloko did field work toward his Ph.D. on children's responses to violence in video games at Harare Library in Khayelitsha as well as at a co-ed school in Rondebosch.[6] While these studies share a focus—on young people and games—the papers and dissertations that were produced from this work demonstrate how radically different gaming technocultures can be, even when located within a kilometer's radius of one another.

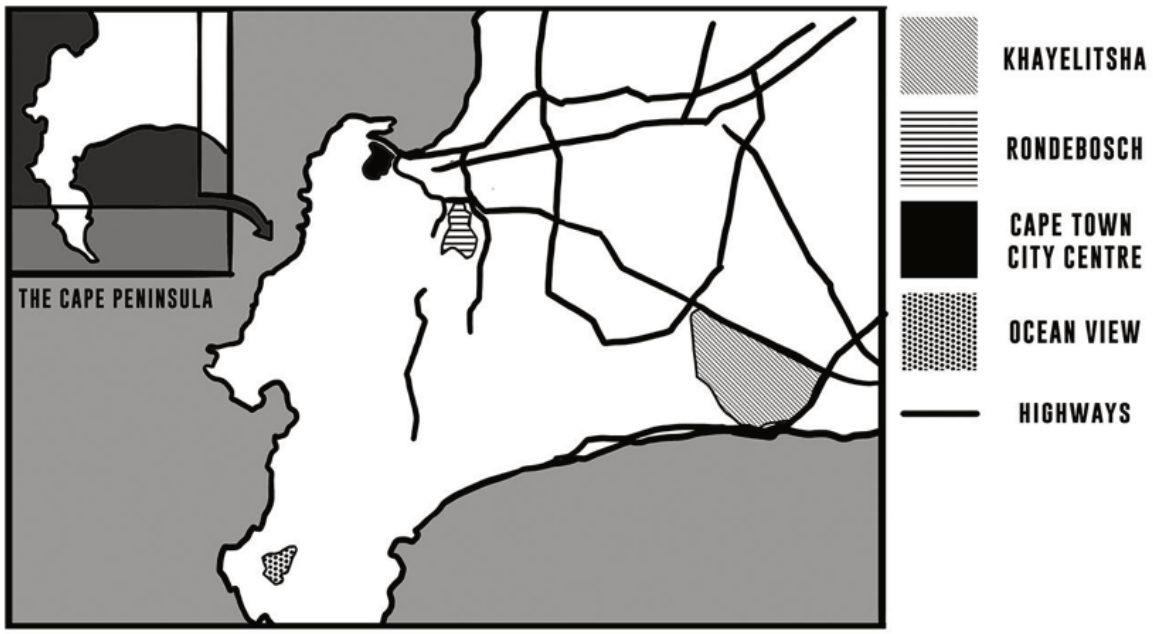

Image 3.6.1. A map of Cape Town depicting the locations of this chapter's field sites.

As each of our broader projects had a distinct theoretical perspective, analytic framework and research design, we found we needed a shared conceptual framework to discuss the infrastructure of play across sites.[7] The following section describes this framework, after which we will analyze specific cases from our research. Judging from our experiences, gaming practices in various locales are often characterized by resource constraints, necessitating a focus on infrastructure. While strides have been taken to analyze the discursive dimensions of gaming as texts that travel from the global north to the global south (such as in chapters by Souvik Mukherjee and others in this volume), in this chapter we focus on the practicalities of gaming, specifically the material and spatial conditions that support gaming practices in Cape Town.

5. Nicola Pallitt, *Gender Identities at Play: Children's Digital Gaming in Two Settings in Cape Town*, Ph.D. Dissertation, University of Cape Town, 2013.
6. Pallitt and Koloko did field work at the same co-ed school site in Rondebosch but at different times and with different children. Children played games as part of an existing extra-mural after school which became akin to an informal games club. Subsequent to our research, the school also started a multimedia room (in addition to their computer lab) where children can play games on a range of devices owned by the school.
7. See the authors' individual works for details about more specific analytical approaches, ethics, data collection, selection and analysis. For the purpose of this chapter, we acknowledge that we share broadly ethnographic approaches which included spending extended periods of time in our respective field sites, observing and recording gameplay and conducting interviews.

PARANODAL PLAY AND INFRASTRUCTURED GAMING PRACTICES

Regional "game culture" tends to emphasize consumption. Internationally, South Africa does not rank among major game consumers or developers.[8] However, figures from marketing and industry reports related to gaming in Africa and South Africa in particular demonstrate growing gaming industries.[9] Recent interest in games in South Africa has been motivated by government-supported initiatives which seek to develop an industry around serious games.[10] While local reports and proposals consider players as markets and game designers as part of a growing industry, they often fail to account for gaming practices that fall under their radar, which, from our experience, include a broad spectrum of game-related habits and behaviors. Consumption and play practices are different phenomena: researchers who "follow the money" can understand consumption, but not necessarily paranodal play practices. Ulises Mejias defines paranodal as being outside of networks and argues that the paranodal offers nuance, allows us see beyond participation and/or non-participation, enables us to question the idea of digital networks and how theorizing the outside of networks is about uncovering the paranodal contributions that nodocentrism renders invisible.[11] This concept and a critical perspective of networks more broadly provides insight into invisible players described in the introduction of this anthology. Likewise, many of the gaming experiences of South Africa's poor majority are paranodal: un-networked, offline, untrackable.

While the most common metaphor when talking about digital practices in contemporary scholarship has been that of networks and their nodocentric formulations of participatory culture,[12] few of the gamers we encountered participated in play that was networked. Rather, many of these gaming practices emerged as part of a broader phenomenon referred to as "pavement internet."[13] Walton's formulation of pavement internet builds on the work of Nyamnjoh,[14] who argues that digital social media in the context of Africa are a welcome extension of local traditions of informal word-of-mouth communication which has been dubbed *radio trottoir*—translating to "pavement radio." Radio trottoir is conceptualized as the circulation of information in the form of gossip or rumors that enhances public knowledge. For example, while some individuals might read the newspaper, or gain information from more "official" sources, news is also distributed through personal networks as a form of sociality. Walton's theorization of a pavement internet explains how information (including data such as images and digital goods such as games) downloaded from the web (making it expensive to obtain owing to young people's limited data resources) trickle down through interpersonal networks at low data costs. Owing to exorbitant data costs, these practices frequently go unregistered on the network and result in off-network workarounds, making them paranodal in nature. Gaming in public access venues such as libraries and internet cafés, as well as other localized sharing practices in which the country's poorer majority engage could thus be conceptualized as "pavement gaming"—not on the well-trodden "roads" of the networks, but just outside of their scope. As Nyamnjoh contends,

8. The authors would like to acknowledge that this depends on how consumption and development is defined (and who is doing the defining) as well as the relationship between them.
9. Recent figures are collated in Nicholas Hall, Mandy J. Watson and Adoné Kitching, *Serious About Games* (IESA, 2017). The report shares a position on the state of South Africa's local game development industry and the opportunity for serious games to create social impact. In comparison to other countries, game development in South Africa was delayed by trade sanctions and censorship which disrupted global media flows during apartheid.
10. *Serious About Games* is a Cape Town-based initiative that aims to support the growth of South Africa's serious games sector. Further information is available at http://seriousaboutgames.co.za/.
11. Ulises Mejias, *Off the Network* (University of Minnesota Press, 2013).
12. See Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale University Press, 2006); see also Henry Jenkins, Mizuko Ito and dana boyd, *Participatory Culture in a Networked Era: A Conversation on Youth, Learning, Commerce, and Politics* (Polity, 2015).
13. Marion Walton, "Pavement Internet: Mobile Media Economies and Ecologies for Young People in South Africa," in *The Routledge Companion to Mobile Media*, eds. Gerald Goggin and Larissa Hjorth (Routledge, 2014), 450-461.
14. Francis B. Nyamnjoh, "Children, Media and Globalisation: A Research Agenda for Africa," in *Yearbook 2002: Children, Young People and Media Globalisation*, eds. Cecilia von Feilitzen and Ulla Carlsson (Nordicom Goteborg University, 2004): 29.

if globalization and its networked logic "is a process of accelerated flow of media content, to most African cultures and children it is also a process of accelerated exclusion."[15]

Recently, for example, the use of a game cloning application called ShareIt has become pervasive among township youth. The application uses the no-data WiFi direct protocol to quickly clone applications and games from another person's phone or device. In the case of ShareIt, the distribution of these copies cannot be measured by official distribution channels. In many of the cases presented in this chapter, players go without seeing their accomplishments recorded on official leaderboards, and without gaining visibility as legitimate, recorded consumers online like most of their counterparts in the global north.

Paranodal play is part of how we define infrastructures of play, using Star's definition,[16] which takes infrastructure as both relational and ecological, embedded in structures, social arrangements and technologies and shaped by conventions of practice.

CHILDREN'S GAMEPLAY ACROSS CAPE TOWN

Cape Town has over 600 neighborhoods, but residents tend to reduce its complexity by talking about the certain neighborhoods as being similar in economic, ethnic/racial and/or linguistic terms: "the 'Cape Flats' [former Coloured working-class townships towards the east of the city], the 'southern suburbs' [wealthy, mostly White and English-speaking], or the 'northern suburbs' [affluent, also mostly White with a large proportion of Afrikaans-speakers]."[17]

While today, people of color may legally live wherever they want, few people who find themselves in townships have the social and economic mobility to make such choices. Under the apartheid regime, Group Areas Act 41 was passed and enforced after 1950, and stipulated that the best locations were granted to White people while people classified as Black and Coloured were forcibly moved to less favorable locations.[18] These under-resourced and often overpopulated urban areas were, and are still, known as "townships." According to the City of Cape Town, 98.9% of Khayelitsha township residents earn R25,600 (US$1,969) or less per month, with 74% earning R3,200 (US$246) or less.[19] This is coupled with 38% of residents being unemployed. Conversely, Rondebosch has close to half of its residents earning a minimum of R25,601 with 6.6% earning R102,401 (US$7,877) or more per month and only 5% of residents being unemployed.

Understanding the social dynamics and implications of factors like income, infrastructure and education contributes importantly in ways that games researchers need to consider when analyzing gaming practices. The cases described in the following section are located in the following sites: domestic spaces in a low-income neighborhood (Ocean View), two public library contexts (Cape Town City Centre, Khayelitsha) and after-school settings in a wealthy suburb (Rondebosch).

15. Ibid.
16. Star, "The Ethnography of Infrastructure."
17. Ana Deumert, "Tracking the Demographics of (Urban) Language Shift: An Analysis of South African Census Data," *Journal of Multilingual and Multicultural Development* 31.1 (2010): 20.
18. "Coloured" is a highly contested—yet resilient—term, which stems from racial classification employed by the Apartheid government to refer to individuals of mixed race or Khoi heritage. The continuing legacy of Apartheid in South Africa has enforced these social and cultural divisions, and Coloured people in Cape Town continue to have unequal access to economic resources. Use of racial categories in this chapter does not indicate support for them. See also *South African History Online (SAHO)*, 2016, http://www.sahistory.org.za/.
19. "City of Cape Town – 2011 Census Suburb Khayelitsha," *capetown.gov.za*, 2011, http://resource.capetown.gov.za/documentcentre/Documents/Maps and statistics/2011_Census_CT_Suburb_Khayelitsha_Profile.pdf.

GAMING IN HOUSEHOLDS, OCEAN VIEW

Ocean View was established in 1968 under the Group Areas Act as a "Coloured area" consisting of dormitory housing, for people who were forcibly removed from re-zoned "White areas" along the South coast of Cape Town. It is situated 45 kilometers outside of the Cape Town Central Business District, between the previous demarcated "white neighbourhoods" of Fish Hoek, and the "black township" of Masiphumele. Ocean View is what Moses has described as a "geographic island" which does not share boundaries with any of the neighboring residential areas.[20] This isolation from the economic centers of the city, among many other factors, contributes to the economic stagnation of the neighborhood. Homes in Ocean View consist of small free-standing houses, semi-detached houses, and most predominantly, blocks of council flats. An informal settlement of shacks, nicknamed "little Khayelitsha" by residents, buffers the Southern margin of the neighborhood. Facilities include a multi-purpose center, a library, civic center, police station, health clinic, a soccer field and public spaces which are marked by vandalized and broken playground equipment.

Venter's study was conducted in-home among a neighborhood peer group who would often meet to game together. The participants consisted of four boys and three girls who regularly met after school to play mobile and console games. The group ranged from 9 to 13 years in age. Two older family members (ages 20 and 17) often joined them. Data was collected over a period of 9 months (August-September 2011 and February-May 2012) in the form of continual participant observation sessions, as well as formal and informal interviews with the peer group, older siblings and extended family members.

In this setting, the gamers' technologies were not connected to any digital networks. None of the digital devices (including consoles and laptops) could go online, and while most of the gaming activities took place on mobile devices, these young people did not have any substantial data usage available with which to surf the web. In fact, most of the devices were intentionally disconnected from any cellular networks, as the gamers feared their data would be "eaten up" through hidden network costs.

Despite being "off the network,"[21] members of this group would nonetheless discuss the latest technologies on offer in the mobile phone market: with better technology, they would have better gaming experiences. They often discussed asking their parents for new phones; lamented that their phones weren't compatible with certain games; and were constantly making deals with older family members who had better model phones to swap with them. Rudie had successfully swapped phones with his aunt, "upgrading" him from a Samsung E250 to a Nokia E66. Sadly, within a month this phone was stolen from him as he walked to a friend's house.

Likewise, over nine months Duke possessed three different phones: first a Samsung E250, then a Nokia music Xpress and finally a Nokia C3. Duke was an avid gamer most often glued to his phone, gaming, and therefore found it very important that his phone should be the best for gaming:

> skerm is groot, die klank is goed, die graphics is kwaai, al daai. Dis nou die beste een tussen almal.
>
> [The screen is big, the sound is good, the graphics are awesome, all of that. It is now the best out of everyone.][22]

20. Susan Moses, "The Impact of Neighbourhood-Level Factors on Children's Well-Being and Identity: A Qualitative Study of Ocean View, Cape Town," *Social Dynamics* 321.1 (2005): 117.
21. Ulises Mejias, *Off the Network*.
22. Transcription of informal conversation, 23 March 2012.

The latter phone was released with a free library of downloadable games, including titles such as *The Simpsons: Minute to Meltdown* (Electronic Arts, 2007), *Need For Speed: Undercover* (Electronic Arts, 2008) and *Need for Speed: Pro Street* (Electronic Arts, 2007). Duke downloaded these titles at great data costs, earning him bragging rights among his friends.

The boys perceived mobile gaming to be a generally solitary pastime. They were not able to play games together on their phones, so interaction was limited to talking about new games, and recommending web pages from which one could download games. At times they would take turns to play one game on someone's phone, or observe when someone had downloaded a highly anticipated game, but the small screens hindered the enjoyment of such activities.

When taking a more expansive view of gaming ecologies, one can also include the "swapping game" that these young people played with their phones. Images of celebrities or other interests were treated as commodities stored on their phones to be collected or traded via Bluetooth. This was reminiscent of playground games where children swap stickers or trade collecting cards.[23] They negotiated the relative "value" of images amongst one another (similar to sticker exchanges where furry, oily, puffy or glitter stickers would carry more currency than plain stickers). They exchanged them accordingly. Certain images were considered to be rarities; either downloaded from Google Image Search at high download costs (due to exorbitant data costs in South Africa, especially for non-contract subscribers), or purchased from "wap" sites such as Zonkewap.com. They could therefore only be exchanged for images that carried "equal monetary value."

Girls would most often swap images with girls, and boys with boys, because their preferences for content were gendered, as is found elsewhere in children's media-referenced play.[24] In this Ocean View peer group, the girls were collecting images of female pop artists such as Nicki Minaj and popular television franchises such as High School Musical or Hannah Montana, whereas the boys collected images of cars, rap artists, soccer players or the flags of their favorite sports teams.

Through the sharing game, these children created their own cultural economy which offered a low-cost alternative to collecting physical youth culture artifacts and merchandise.[25] For example, a pack of Hannah Montana stickers retailed at ±R30 (approximately US$3) for 6 stickers in 2012. To most of this peer group, R30 was a relatively large sum of money, since they reported spending that amount per month on airtime. That amount could have bought them 200 MB of data on a cheap network, which could have provided scores of images to collect, swap and barter.

While the home boasted a PlayStation 2 with scores of games, the Ocean View gamers seldom played console games over the period of observation. As the console was connected to the only television in their home, the choice of entertainment was frequently vetoed by older family members (including a grandmother and an aunt who lived in the house). These older women exerted their power to halt any gameplay, and switch the channel to their preferred daytime viewing of reality television, soap opera reruns or talk shows. Thus, while the infrastructure for console gaming exists, the ways in which these possibilities are controlled through the complex moral economy of the household strongly affects how these young people navigate the space and utilize opportunities for play.[26]

23. John Lenarcic, "Trading Card Games as a Social Learning Tool," *Australian Journal of Emerging Technologies and Society* 3.2 (2005): 58-70.
24. Pallitt, *Gender Identities at Play*.
25. Pierre Bourdieu, "The Forms of Capital Handbook of Theory and Research for the Sociology of Education," in *Handbook of Theory and Research for the Sociology of Education*, ed. J. Richardson (Greenwood, 1986), 241-258.
26. Roger Silverstone, Eric Hirsch and Roger Morley, "Information and Communication Technologies and the Moral Economy of the Household," in *Consuming Technologies: Media and Information in Domestic Spaces*, eds. Roger Silverstone and Eric Hirsch (Routledge, 1992).

GAMING IN THE LIBRARY, CAPE TOWN CITY CENTRE

Walton and Donner's work with the University of Washington's Global Impact Project explored how teenagers at Public Access Venues (PAVs) across Cape Town utilized the digital infrastructure at these spaces for various goals, in relation to their use of mobile digital devices.[27]

As part of this research project, Venter conducted interviews with a group of low-income, resource-constrained boys who played games at the "Smartcape" section of the Cape Town central library. Smartcape computers were installed at every library in the greater Cape Town district as part of a government initiative to provide free computer and internet access to the public, with the only prerequisite for use being a library card, which grants the user an allowance of 45 minutes access per day.[28] After members log in, an on-screen countdown timer shows how much time each user has left. Once the timer neared the end of the designated period, pop-up windows show a countdown timer until the session expired.

At this particular venue, a children's section of the library hosted computers for the exclusive use of young people. Here, activities mostly centered around gaming, although many students also used the computers for research purposes.

During her observation period at the library, Venter noted the gameplay activities of 18 boys, and approached four of them for in-depth interviews. The majority of these players (between the ages of 10-13) were enrolled in grade 6 or 7 from inner-city township-serving school, but her selection also included three high school learners (who ranged between the ages of 13 and 15). Computer-based play at the library included a wide repertoire of games, including online arcade games—*Snow Bros* (Capcom, 1990), *Mortal Kombat* (Midway, 1992), *Pac Man* (Namco, 1980), *Metal Slug* (SNK, 1996), *Time Crisis* (Namco, 1995), etc.—as well as flash games played on sites such as dailygames.com, freeonlinegames.com, easyretro.com, playhub.com and bodyarcade.com.

While these gaming activities were limited to a few hours a week, this constituted a large portion of available recreational time for the players involved. All of the gamers interviewed commute to school and back from their township homes for around 3 hours a day. Many reported that their time spent at the library was a strategy from their parents, who worked in the city, to keep them safe for the period of time between the end of the school day and the end of their parents' working days. Thus, similarly to the Ocean View gamers, gaming is seen as a form of childcare.

As is the case with most PAVs, there are rules and regulations in place that control how people can and cannot act in the space. In the case of these gamers, the rules that support the quiet academic practice of the library came into sharp conflict with their play practices.

The computers were arranged in two islands of four, with screens all facing away from one another, offering privacy for those who want to work or study. Yet, for gaming, where players were keen to look at each others' gameplay, cheer on progress or help out others, it was a hindrance for gamers not to be able to see the screens of the players next to them. In addition, the library's "one person per computer" rule, along with the librarians' strict enforcement of silence, limited the embodied engagement of play. Those awaiting their turn on a computer were expected to sit in a row of chairs

27. Marion Walton and Jonathan Donner, "Public Access, Private Mobile: The Interplay of Shared Access and the Mobile Internet for Teenagers in Cape Town," *University of Washington Global Impact Study Research Report Series*, 2012.
28. Ibid.

arranged on the opposite end of the room. One of the interviewees, 13-year-old Samkelo, listed this as one of the aspects that he disliked about playing games at the library:

> Like when you play in the library, you always quiet, they don't usually say [roars and punches the air] "Yeaaaaah! I win!," they just keep quiet, and the exciting part…you don't make a noise, you just say [whispers] "yes, I did it, I did kill him, yes, I win this game" I don't just jump up and [roars] "Yeaaaaah!" it is not the same thing in the library"

Samkelo's lamentations speak to the library's configuration as a space supporting only one mode of solitary, quiet and individualized learning and play, which at times is in stark contrast to the jubilant, expressive, embodied enjoyment of digital games and their culture of "backseat gaming."[29]

However, the boys were quick to transgress these embedded rules if the librarian-on-duty or security guard happened to be absent. In such cases, children flocked around the computers, attracted to the most skillful players, voiced support and concern, shared tips or assisted each other through difficult obstacles. Yet, as soon as a library-appointed authority figure stepped into the space, the children would disperse and quickly return to their seats.

Another issue that prohibited successful gameplay in the library space was the 45-minute per person allocation. In addition, gamers could not save their gameplay, and had to effectually "re-spawn" every day. In an attempt to negotiate these technical and material boundaries, one high school student, 15-year-old Wesley, set himself the objective of seeing how many levels of *Snow Bros.* he could complete within the 45 minute timeframe.

He had achieved what many of the other players perceived as mastery of the game, and was by far the most popular player to watch during Venter's time spent observing games in the library. While for many, the timer was considered a hassle, as it signaled the player's inevitable death, Wesley had incorporated the limitation into his gameplay, acceding that "in the last ten seconds [on the timer] you can't do anything though."

GAMING AT HARARE LIBRARY, KHAYELITSHA

The video games room of Harare Library forms a crucial part of the library's mission to be a community safe space and hub where patrons are able to relax through play and pursue their academic interests. The library was established using funding from the Carnegie Corporation of New York in conjunction with the Violence Prevention through Urban Upgrading, the Neighbourhood Development Partnership Grant and Provincial Grant funding. The video games room is a 5 x 3 m. room that houses three Nintendo Wiis and two PCs, which operates in a very structured way for two hours on weekday afternoons. Games included *Wii Sports* (Nintendo, 2006) and *Wii Sports Resort* (Nintendo, 2009) for the Nintendo Wii, and *FIFA 13* (EA Sports, 2012) for the PC. All games on offer are rated A (All Ages) or PG (Parental Guidance), and patrons must show their library cards to gain access to the room. Once a patron's turn is over, they must wait, and only if there is sufficient time after everyone else has had a turn may they have a second one.

The most popular games used in the room were *Wii Sports* and *Wii Sports Resort*, each of which presented players with a variety of games so players could choose what they enjoyed the most. The most popular choices were Boxing from *Wii Sports* and Cycling from *Wii Sports Resort*. Once they were cleared to play, patrons were allowed one turn and were allowed to remain and watch others play once

29. Jonas Linderoth, "Beyond the Digital Divide: An Ecological Approach to Game-Play," in *Proceedings of the 2011 DiGRA International Conference: Think Design Play* 6 (2011).

they have completed their turn (usually in the hope of getting a second turn before the room closes). Children seemed mutually supportive in that space, often encouraging or advising their peers.

Being able to watch others play appeared to encourage a communal gaming environment where cooperative gaming thrived. The cooperation took the shape of other children encouraging the player to win or achieve high scores, and giving tips on how to use the controls if the player was not so familiar with them. Playing in this way, especially in a library, functions as a way of leveling inequality, as Adams has suggested.[30] The video games room presents information to the patrons and grants them access to games that most of them would usually not have. The children of Harare library are thus exposed to video games in a more regimented way than children with more resources, but they still have their own interpretations and responses to video games.

Khayelitsha township, particularly the neighborhood of Harare, has the third-highest murder rate in the province, fourth-highest rate of sexual assault and robbery with aggravating circumstances, and the fifth-highest rate of assault.[31] Consequently, children in Khayelitsha have high exposure to violence and sometimes become its perpetrators.[32] Notably, during Koloko's research, children from the Harare Library that had witnessed violence reported playing games like *Wii Boxing* as a way of learning self-defense. They suggested that their natural inclination would be to run, but if need be they would use what they learned in the game. An example came from 13-year-old Xolani, who had mentioned being in a fight. He explained that he enjoyed playing *Wii Boxing* and watching boxing on TV because it helped him learn how to fight to protect himself. He did however also explain that this was only in self-defense, but also that this self-defense was needed against children his age:

Researcher: ucinga ngumdlalo onjani iboxing?

Xolani: Ngumdlalo ondifundisa ukuzikhusela

Researcher: Ngoku ufunda ukuzikhusela okonjani?

Xolani: ndikwazi ukuzilwela,ndingayoxela […]

Researcher: Ngoku ucinga iboxing ikunceda uzikhusele kwabantwana abazintanga zakho okanye kwabantwana abadala kunawe?

Xolani: Kwintangazam

Researcher: Ungaiqala nawe ifight?

Xolani: Hayi,ndingaphindisa qha baumtu uyandiqala

[Researcher: What do you think of boxing as a sport?

Xolani: It teaches me how to protect myself.

Researcher: What type of protection do you learn?

Xolani: How to protect myself and not go to tell my parents […]

Researcher: Do you think boxing is important for protection from children your age or older children?

30. Suellen S. Adams, "The Case for Video Games in Libraries," *Library Review* 58.3 (2009): 196-202.
31. "Crime Statistics South Africa," *Stats SA*, 2016, http://www.statssa.gov.za/?cat=26.
32. Debra Kaminer, Bernice du Plessis, Anneli Hardy and Arlene Benjamin, "Exposure to Violence across Multiple Sites among Young South African Adolescents," *Peace and Conflict: Journal of Peace Psychology* 19.2 (2013): 112.

Xolani: Children my age.

Researcher: Would you start a fight?

Xolani: No, I would just fight back if someone picks a fight with me.]

While having a similar discussion about video game violence with 10-year-old Lungelo, he explained having witnessed an attempted armed attack on an individual while he was walking home:

Lungelo: Izikoli zileqha ezinye izikoli

Researcher: Nyani? Wawuvela phi xaubona lonto?

Lungelo: ndandivela kwamakazi wam ndabona izikoli zileqhana. Bendikoyika kodwa ndivezke ndaqhubeka nda hamba

[Lungelo: I've seen gangsters run after other gangsters trying to stab them.]

[Researcher: Really? Where were you when you witnessed that?]

[Lungelo: I was on my way back from my aunt's place when I saw the gangsters. I was scared but I continued walking].

It is experiences like Lungelo's that led to the establishment of the library and the games room in the first place. Contrastingly, children in Rondebosch presented with less exposure to violence, but were also more competitive in their play while also sometimes behaving cooperatively as a means of demonstrating expertise.

GAMING AT SCHOOL (AFTER SCHOOL), RONDEBOSCH

This section focuses on to two sites in Rondebosch where children played digital games at schools, but not as part of their formal schooling: an after-school Arts and Crafts extra-mural program at a co-ed primary school, and a holiday club attended by children of working parents hosted at an all-male primary school. The children from both settings can be regarded as middle- to upper-class, considering the fees of the schools they attend and the holiday club fees their parents are able to afford. Cape Town's typology of neighborhoods categorizes this area as upper middle-class, predominantly English-speaking (more than 75% English, 15-20% Afrikaans), majority White (close to 90% White, around 5% Black), with low unemployment rates, medium- to high-income and high educational achievement. While linguistically and ethnically diverse, the majority of these children can all be described as "advantaged" in comparison to the country's poor majority.

The children who attended the Arts and Crafts extra-mural program were between nine and ten years old, and the group consisted of a similar number of boys and girls, although the gaming sessions were more regularly attended by girls. Many of the children were school friends who also attended other extra-mural activities together, such as choir, drama, hip-hop dancing and swimming.

The holiday club was attended by a variety of children from neighboring schools in the area, which also have high school fees relative to other South African schools. The children's ages ranged from four to 13 years old. The children attended the holiday club because both of their parents work. In some cases a domestic worker collected children from the club.[33]

33. In the South African context, "domestic worker" refers to someone who is employed to do a family's household chores, and supervise children while parents are at work.

Access to ICTs for leisure purposes can be considered an everyday domestic practice for this group. There were some exceptions, such as one case in which two children did not have access to games at all because their parents took a strong stance against games and had rules for time spent with other media, such as watching television, as well. At the time of field work Pallitt (2010-2012) and Koloko (2012-2013) found that the majority of children had access to expensive digital gaming hardware (desktop computer, laptop, standalone consoles like the PlayStation 2, PlayStation 3, Nintendo Wii and hand-held consoles such as the Nintendo DS or PlayStation Portable [PSP]) and either owned these personally or had shared access with family members and played predominantly offline. While access to gaming platforms varied, we found that the children in the school sites were generally not permitted to play games online and parents also limited their screen time and what they are allowed to play. Some children (especially the older boys) took pride in explaining how they were able to circumvent parental rules by playing games rated as inappropriate for that age at a friend's house whose parents were less enforcing, and some reported playing games using their parent's Facebook profiles. The boys in both Pallitt's and Koloko's studies were knowledgeable about age-inappropriate games such as *God of War* (Sony, 2005) and regarded violent games as a form of aspirational social capital in their (predominantly male) peer groups. Parental attempts to protect children and "moral panics" extended to children's access to mobile phones—in contrast to the children in Ocean View, mobile phone ownership was not very prevalent among the children in the middle class school sites. Expensive, offline gaming hardware and devices were parents' preferred choice.

Disney Sing It (Disney Interactive, 2008) was one of the favorite games among the children who played at the co-ed school. Once one of the children finished singing a song, the group checked where their names were positioned on the score list. Casey and Nana were both loud, competitive girls and they were surprised that Yu (who is a very quiet girl) achieved a higher score than them. Later, Casey explained to me that she achieved "full rock star" when playing the game at her cousin's house, within hearing range of her peers:

> Casey: If you get full stars, it will say your name permanently with full rock star. And if you get it three times in a row then they, like, bring you in to full rock star shows.
> Researcher: How do you know?
> Casey: My cousin has it.
> Lee: Did she make it?
> Casey: I made it. Full rock star.[34]

Casey bragged about her expertise to convince the other children that she was a better singer than Yu. Casey displayed her knowledge about *Disney Sing It* as a way to prove to her peers that she achieved the status of "full rock star," and was therefore the best singer in the group. Rather than gaming to perform their singing talents, the boys at the holiday club used *Angry Birds* (Rovio, 2009) to demonstrate their gaming knowledge and expertise.

At the holiday club, some of the children reported that they had played *Angry Birds* before. Seven-year-old Joey had played this game on his father's iPad, and eight-year-old Ray had played it on the Internet. Twelve-year-old Mark, whose father owns an iPhone that has *Angry Birds* on it, told the other boys that this game was a bestseller on the iPhone app store in 2010. In spite of the global *Angry Birds* phenomenon, fewer than half of the children at the holiday club had played it before. The game was not as ubiquitous as researchers had imagined it might be among these middle-class children.
Some of the holiday club boys became frustrated waiting for their turn to play on the PlayStation

34. Interview transcript 8: "Casey the full rock star, Disney Sing It, St Mary's," 12 November 2010.

3. Their desire for quicker play turns among a larger group of boys motivated a particular take-up of *Angry Birds* on the laptop, where quick single-player turns resembled an arcade-machine style of play. When seven-year-olds Allen and Joey played the game together, they would just move on to the next level if they failed (earlier passed levels were saved on the laptop, making this possible). This was generally how the younger boys played *Angry Birds*, not taking the scoring system too seriously.

When an older boy, 12-year-old Mark, joined them, he regulated the arcade-machine style play of this game based on the boys' scores: if a boy passed a level, he played again and if he failed, it was the next boy's turn. Mark instructed the younger boys not to click on the next level if they failed "because that's cheating." Mark's expertise at the game such as telling the boys to aim higher or lower or to wait until the black bird blew itself up without being clicked (which he claimed was "more effective"), influenced the younger boys to take the game and their play turns very seriously. The game was transformed from being a casual game into a competitive one after Mark's intervention. The boys' appropriation of this game and their social rules became just as important in this setting. Although Mark did not play much himself, he managed the order of the four boys' play turns, changing players once they had used all their birds (as the levels get harder, players have fewer birds to aim at the pigs). The boys agreed that some of the levels were "way hard" (nearly impossible to complete), but at the same time, some bragged that they had finished the level before. The boys who said a particular level was easy, but failed it, were put on the spot, inviting the collective response, "If it's so easy, why can't you do it?" Therefore, the boys preferred to play up the idea of levels being "hard," which also resulted in a bigger success for those who managed to clear a "hard" level.

The boys competed against one another for status, establishing a pecking order among skilled players who could pass the "hard" levels, and who could thus earn longer turns than those who were less skilled. When Ray and Dale played the game together, they showed one another their favorite levels, also showing off their skills in particular levels where they had figured out how to kill all the pigs with a single bird.

At the co-ed school, Danny and Aaron took turns playing *Burnout Paradise* (Electronic Arts, 2008). Aaron said, "I'm not doing a race, I'm just driving 'cause it's very fun." Danny replied that "you have to actually race because you need to get money" and that "you need to work to get money, to get a new car." He explained to Aaron that "you can't customize, you need to get so much money that you can actually afford to customize" and "you have to listen to the speaker," referring to the car radio announcer in the game who announces the locations and details of races and other challenges. Danny mentioned the names of other games where players can customize their cars, such as *Grand Theft Auto: San Andreas* (Rockstar, 2004) and *Need for Speed: Underground* (Electronic Arts, 2003), which he reported playing at his cousin's house. He added that "you must modify your cars at the beginning of the game, then you can also change what you modified. Like my cousin, my cousin lets me modify any kind of car and then he—he's a nice cousin because he saves my cars for me—then when I play I have a nice car." He does not do races or challenges to win, but rather to get money so that he can play the part of the game that interests him the most: "pimping" his car or achieving a "nice car." At one of the gaming sessions, somebody forgot to save the game after playing and Danny's cars were not saved. At the next session he was frustrated that he could not select one of the cars that he found the previous time. This frustration confirmed his interest in building a collection of playable cars. Danny's display of knowledge about where the "nice cars" would be found allowed him to intrude on the other children's play turns. He would offer to find them "nicer" or "faster" cars and take up the controller. While the other children thought they were getting a more powerful or better-looking car, Danny was building up his collection.

DISCUSSION

The cases discussed highlight the importance of both infrastructure and socially-configured rules. The rules of spaces play as much a role as the rules of play that necessitate *what can be played* and how. While this has largely been understood as being prefigured by games as texts, in this chapter we argue that we need to go beyond games to understand play as a socially situated activity.

Players from Harare Library played in ways that were social and performative, but not competitive when compared to children from Rondebosch. Players at Harare Library played in a collective style as their access was such that they could only play in social settings like the Library. Further, there was less interaction with the games as possibility spaces due to the time players' had to play. By contrast, children in the after-school sites seemed more used to having direct control of their play. As such their turn taking was labored (children were hesitant to relinquish the controller when their time was up), and they appeared to try to one-up each other whenever they advised whomever was playing. Competitive play, customization and being personally identifiable and displaying expertise in the games they were playing were important features of their play compared to the children at Harare Library. The children at the co-ed school signified their role in the choir and used the game's scoring system to decide on the best singers, rather than identifying expert gamers. Despite being a racing game, Danny does not play *Burnout Paradise* to win races, collect "burnouts" and other reward points. He transformed the game into a collecting game where he could discover and play with "nice cars." This can be contrasted with the collecting games among the children living in Ocean View.

Conclusion

The cases shared demonstrate unique infrastructures of play across a range of sites in a single city. Following the work of Star, our chapter encourages games researchers to consider how play is "infrastructured." Those who study gaming practices in the global south could benefit from articulating how various material dimensions are infrastructural to play—these include spaces, configurations, bodies, hardware and software, as well as the games themselves. Scholars have largely focused on interactions between players in online games and in-game representations, but it is useful to look at the broader spaces and contexts where play is situated and subjected to available technologies, rules of the powerful, policies, moral economies, material resources such as airtime and electricity, and other constraints. Our hope is that such a focus may provide provocations and productive points of entry for game researchers who are investigating gaming in spaces where infrastructures and practices do not neatly correspond to studies hailing from or focused on the global north.

We hope to add empirical knowledge of the global diversity of gaming culture, by sharing examples of how gaming practices are situated and enabled by specific places, spaces and social arrangements. Gaming facilitates social spaces, which are given meaning over time not only by the strategies of those who yield power in these spaces, but by the tactics of those who make use of them. Infrastructure for gaming shapes possible interactions. Thus, if we are to theorize gaming in the global south, such theorizations need to encompass the gadgets of the wealthy as well as public access venues, second-hand mobile handsets and prepaid contracts of the poor.

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