Calibrating Play: Sociotemporality in South Korean Digital Gaming Culture

Stephen C. Rea

ABSTRACT This article examines the significance of digital gaming culture amidst broader institutional transformations in South Korea over the past several decades. Digital gaming is contextualized by a popular narrative about Korean society "speeding up" and complementary sociotemporal expectations for being and acting that stress qualities of both quickness and endurance. Approaching digital gaming's virtual- and actual-world sites as nested "taskscapes," I contend that *calibration*—processes that bring phenomena across different taskscapes into correspondence with one another—best describes how Korean digital gamers align their individual, embodied play with sociotemporal expectations. Specifically, I analyze two digital gaming practices in their ethnographic contexts—an e-sports performance metric called "actions per minute" (APM) and an online gaming activity known as *nogada*—as modes for calibrating play with dominant sociotemporalities. The contrast between quick and slow sociotemporalities and the necessity of continual recalibration across taskscapes is a source of unending stress and frustration for many Koreans. Thinking with play as a disposition for calibration helps to make sense of everyday strategies for making do in precarious circumstances. [*digital games, temporality, play, South Korea*]

RESUMEN Este artículo examina el significado de la cultura de juego digital en medio de transformaciones institucionales más amplias en Corea del Sur en las últimas décadas El juego digital está contextualizado por una narrativa popular acerca de la sociedad Coreana de "acelerándose" y expectativas socio-temporales complementarias por ser y actuar que enfatizan las cualidades de rapidez y resistencia. Aproximando los sitios virtuales y del mundo actual de juego virtual como "paisajes de tareas" anidados, afirmo que la *calibración* —procesos que traen fenómenos a través de diferentes paisajes de tareas en correspondencia uno con el otro— describen mejor cómo los jugadores digitales coreanos alinean su juego individual, corpóreo con expectativas socio-temporales. Específicamente, analizo dos prácticas de juego digital en sus contextos etnográficos —una métrica de rendimiento de deportes electrónicos (e-sports) llamada 'acciones por minuto" (APM), y una actividad de juego en línea conocida como *nogada*— como modos para calibrar el juego con socio-temporalidades dominantes. El contraste entre socio-temporalidades rápidas y lentas y la necesidad de una recalibración continua a través de paisajes de tareas es una fuente de estrés y frustración interminables para muchos coreanos. Pensando con juego como una disposición para la calibración ayuda a dar sentido a las estrategias cotidianas para salir adelante en circunstancias precarias. [*juegos digitales*, *temporalidad, juego, Corea del Sur*]

초록 본고는 지난 수십년간 한국의 폭넓은 제도적 변화 속에서 디지털 게임 문화가 갖는 의의를 고찰한다. 디지털 게임 은 한국 사회의 "가속화"와 더불어 민첩과 인내를 강조하는 상보적 사회 기대치라는 대중적 담화로 논의된다. 필자는 한 국 디지털 게임 문 화 속의 현실과 가상의 영 역을 중첩된 '행위경관(taskscapes)'으로 접근한다. 이를 통해, 이질적인 행 위경관을 교차하며 상호 반응하는 현상적 과정인 "조정과정(*calibration*)"이야말로 어떻게 한국 디지털 게이머들이 각기 체화된 플레이로 사회적 기대에 조정하고 있는지를 가장 잘 설명할 수 있다고 주장한다. 필자는 특히 두 가지의 디지털 게임 관행, 즉 "분당행동수(APM)"로 불리는은스포츠 수행 수치와 흔히 "노가다"로 알려진, 지배적 사회시간에 대한 조정 적 플레이의 방식을 통해 온라인 게임 활동을 분석하고자 한다. 사회 속도의빠른 변화와 행위경관을 넘나드는 계속적인 재교정의요구는많은 한국인들이가진 지속적인 스트레스와 불만의 원인이다. 플레이를 조정과정의 성격으로 이해하는 것은 불안정한 상황에 대응하는 일상적인 전략들을 이해하는데 도움이 될 것이다.[디지털게임시간플레이한국한국]

"K orean parents think that the most important thing is studying, and going to college, and getting a good job," Dong-ryul said. I had met the first-year university student a few months earlier at a professional electronic sports, or "e-sports," match in Seoul. Like many South Korean men his age, whenever Dong-ryul wasn't in class or studying, he enjoyed playing online computer games and watching professional *StarCraft II*, an e-sport dominated by Korean players. We were seated at a café in Incheon, having just come from a nearby online gaming café (PC *bang*), where we had spent the morning playing games. Reflecting upon digital games in Korean society broadly speaking, Dong-ryul continued, "Parents think games are having a slow effect, that because of games Korea is going so *slow*. It's a negative thing. They think Korea is slowing *down*" (interview, February 15, 2013).

Dong-ryul's comments reflected a familiar narrative about society "speeding up" that appears in Korean studies literature on political economy (Kim and Hong 1997), sociocultural values (Na and Cha 2000), and popular culture (Martin-Jones 2007), and which I encountered frequently in conversations with my interlocutors. Scholars and laypeople alike marvel at Korea's relatively rapid transformation over the course of a half century from one of the world's most impoverished nations to one of its largest economies. Korea's vibrant digital gaming culture is an index, product, and engine of that transformation insofar as it demonstrates the technological capacities of the nation's world-renowned information society, where the material artifacts of the speed-up narrative manifest in the world's fastest average Internet connections (Akamai Technologies, Inc. 2017). Digital games development was once recognized as a "strategic industry" (Kang 2014, 64) that helped accelerate Korea's informatization (jongbohwa) process in the 1990s, but as Dong-ryul suggests, digital gaming now occupies a more ambiguous symbolic position in the speed-up narrative.

Examining how digital gaming culture is situated within contemporary Korean society illustrates strategies that individuals use to, as Michel de Certeau put it, "make do" (1984, 18) amid the representational and practical changes characteristic of the speed-up narrative. Following Thomas Malaby's argument that play is "an attitude characterized by a readiness to improvise in the face of an ever-changing world that admits of no transcendently ordered account" (2009, 206), thinking with play as a disposition reveals ways of being and acting in quickly shifting, unsettled circumstances. I approach Korean digital gaming culture as an arrangement of what Tim Ingold calls "taskscapes"—that is, arrays "of related activities" in which "temporality ... is essentially social" (2000, 195). Taskscapes incorporate times, spaces, people, and practices, and are both interactive and embodied. Moreover, they are constituted by and through their relationships with other taskscapes; the temporality of a given taskscape "lies not in any particular rhythm but in the network of interrelationships between the multiple rhythms of which the taskscape is itself constituted" (197). Korean digital gamers operate simultaneously in and across several nested taskscapes: the virtual worlds of the games that they play, the actual-world environments where play happens, and where those worlds are situated vis-à-vis large-scale institutional processes. I contend that calibration-processes that bring phenomena across different taskscapes into correspondence with one another-best describes how Korean digital gamers align their individual, embodied play with sociotemporal expectations that stress qualities of both quickness and endurance. The desirable pace for activities in one taskscape may or may not be complementary with those in another, and so digital gamers must learn to calibrate simultaneously with potentially conflicting expectations. Acquiring the necessary skills and dispositions for succeeding in digital gaming taskscapes, gamers learn "techniques of the body" (Mauss 1973) that are indispensable not only for working in informatized Korea-an "infrastructural aptitude" (D. Lee 2015) that aligns embodied labor with technological affordances-but also for navigating institutional hierarchies.

My analysis is grounded in fifteen months of fieldwork conducted between 2009 and 2013, during which time I was a participant observer at more than twenty PC bang and in the virtual world of a popular Korean massively multiplayer online role-playing game (MMORPG); interacted with the *StarCraft II* fan community at over one hundred professional e-sports matches; and interviewed different stakeholders in digital gaming culture, from gamers to e-sports officials to medical professionals working on pathological digital gaming. Following the outline of my theoretical framework and situating games and gaming in Korea's social, cultural, and historical contexts, I examine two modes for calibrating play in Korean digital gaming taskscapes: an e-sports performance metric called *puntanghaengtongsu*, or "actions per minute" (APM), and a MMORPG activity known as *nogada*. I argue that APM and *nogada* represent two modes for calibrating play with the broader sociotemporal expectations regarding quickness and endurance that characterize Korea's speed-up narrative and inflect life and work in Korean society at large. Finally, I consider how play as a disposition for calibration helps make sense of individuals' everyday strategies for making do in a precarious labor market.

"SPEED IS CRITICAL HERE"

The speed-up narrative that Dong-ryul invoked implicitly is often expressed colloquially as ppalli ppalli munhwa, or "chop chop culture,"¹ a phrase that originated during the so-called Miracle on the Han River period of economic development in the 1960s and 1970s to convey affective experiences of rapid industrialization (see S. Lee 2003). As part of a larger discourse about postcolonial Korea, "This economic feature of speed and its inflections is then translated into a characteristic of cultural life in Korea, to describe a part of Koreanness, and is pressed into the service of its historical transformations" (Chung 2003, 7). Chang Kyung-sup has described this historical period as a "compressed modernity"-that is, "a civilizational condition in which economic, political, social, and/or cultural changes occur in an extremely condensed manner in respect to both time and space" (Chang 2010, 446). Compressed modernity is simultaneously an analytic and the object of analysis; it is a theoretical framework for interpreting Korean history in comparative perspective as qualitatively accelerated, but when it is taken as a given, it opens up a discursive space for being and acting articulated around sociotemporal qualities of speed. As Dr. Moon-a Korean psychiatrist who has treated problematic gamers for over two decades—explained to me, "Speed is critical here. Ppalli ppalli munhwa: 'If you need help, I can help you, but if you don't want it, I am very busy. You can just go your own way'" (interview, October 8, 2013).

Dr. Moon's comments are indicative of how ppalli ppalli munhwa is not only descriptive but also prescriptive, a "directive to do things rapidly" (Harkness 2013, 228) informed by a "temporal logic" (Mazmanian, Erickson, and Harmon 2015) that inflects activities across different taskscapes. Sociotemporal expectations compel individuals to calibrate themselves and their behaviors with the pace of ppalli ppalli munhwa through continual self-monitoring. My interlocutors chuckled nervously whenever I raised the subject of ppalli ppalli munhwa, describing it as a ubiquitous part of everyday life that was both invigorating and frustrating. Performing the quickness valorized in ppalli ppalli munhwa binds individuals with society at large, in which "a system of values [is] embedded in the uses of and calibrations of time" (Desjarlais 1997, 90). A pervasive anxiety about "falling behind" if one is not quick enough complements incentives for being and acting quickly; in this way, ppalli ppalli munhwa's sociotemporality filters into interpersonal relationships across a number of taskscapes, engendering "a Korean version of keeping up with the Joneses" (Kendall 1996, 512) whereby individuals work to keep pace with their peers.²

Discourses on Korean development and modernity reflect similar anxieties at a macrosocietal scale about Korea "falling behind" the rest of the world. Such was the logic of Korea's so-called developmental state (Woo 1991) and its political and business leaders who aggressively pursued "catch-up" strategies in order to bring about rapid economic growth in the Miracle on the Han River period (K. Lee and Lim 2001). Their approaches were consistent with patterns in other "late industrializing" economies (Amsden 1989) and discursively framed development in sociotemporal terms: Korea was a nation rushing to "catch up" with the rest of the world and, consequently, anxious about "falling behind" again. During the informatization era-when the Kim Young-sam (1993–1998) and Kim Dae-jung (1998–2003) administrations enacted policies designed to make Korea a global leader in information and communication technologies (ICTs)—this sentiment was made explicit, specifically in a slogan introduced by the Choson Ilbo newspaper in 1995 that would come to symbolize the era's economic, political, and social goals: "Late to industrialize, but ahead in informatization."³ The slogan cast informatization in the sociotemporal vernacular of "catching up" and "falling behind." The Korea of the past may have been late to develop, but the Korea of the present was accelerating in order to catch up with other nations; maintaining that acceleration would ensure a future in which Korea didn't fall behind and instead would set the pace for other information societies. The quickness, then, that is fundamental to the speed-up narrative and to ppalli ppalli munhwa is symptomatic in part of Korea's perceived "lateness" in economic development.

However, this emphasis on quickness belies the fact that Korea's sustained social and economic acceleration during the Miracle on the Han River period rested on an unsettled foundation. Bruce Cumings (2005) argues that there is nothing particularly "miraculous" about the speed of Korea's development but rather that it was made possible by the confluence of Cold War–era geopolitics, preferential loans to large conglomerates (chaebŏl), and, above all, the hard work of ordinary citizens. Furthermore, the benefits and opportunities afforded to political and business elites were not equally distributed to everyone, leaving many Koreans marginalized by the process. For example, Cho Han Hae-joang argues that the Korean feminist movement and young people entering the job market in the 1990s both suffered from "out-of-synch timing" with the pace of economic development, "and as a result, the gross inequities and unbalanced nature of society had become more severe" (Cho 2000, 54).⁴ The material consequences of such rapidity were evident as well in the collapses of Seoul's Seongsu Bridge in 1994 and the Sampoong department store in 1995 due to accelerated yet shoddy construction, both of which became emblematic of "the unexpected costs and risks that threaten[ed] the sheer sustainability" of economic and

social development (Chang 1999, 31). More recently, 2014's Sewol ferry disaster, in which 304 passengers and crew perished when the vessel capsized and sank, once again brought the human toll of ppalli ppalli munhwa into public discourse after an investigation revealed a lack of oversight in the hurried process of remodeling the ferry.

The Miracle on the Han River's precariousness culminated in the effects of the 1997 East Asian financial crisis, which many Korean academics attributed to the business and political models that had sustained accelerated economic growth in the first place (e.g., Shin 2000). In the immediate wake of the crisis, the Korean stock market lost nearly 20 percent of its total value, the value of the Korean won plummeted, and roughly 1.5 million workers lost their jobs. One of the crisis's unexpected consequences, however, was the emergence of online gaming as a popular leisure activity, driven in part by the appearance of PC bang. Many white-collar workers who had lost their jobs in the mass layoffs during the crisis turned to entrepreneurial projects like PC bang (Jin and Chee 2008). The number of PC bang grew quickly from an estimated one hundred in 1997, to around thirty-six hundred in 1998, to over thirteen thousand by 1999 (Aizu 2002, 14). At a time when home computers and broadband Internet services were still prohibitively expensive, PC bang and online games—especially StarCraft, which was released in the midst of the crisis in March 1998—demonstrated broadband's speed and utility, and drove demand for household subscriptions (Jin 2005; Lau, Kim, and Atkin 2005). As online gaming's popularity spread, PC bang managers began organizing tournaments for their customers that eventually developed into institutionalized e-sports activities backed by the Ministry of Culture, Sports, and Tourism (MCST), and broadcast live on two cable television channels devoted solely to e-sports programming. Korea was positioned firmly at the vanguard of global e-sports by the time the MCST partnered with Samsung to organize the first World Cyber Games-an international e-sports competition modeled after the Olympics-in Seoul in 2000. In a pre-recorded address at the opening ceremony, then-president Kim Dae-jung told the audience, "I hope that the first [World Cyber Games] will help our nation to become recognized as one of the leaders in games, knowledge industry, and IT infrastructure, as well as help the world's game-loving young people exchange information and build friendships" (quoted in Stewart 2004, 9, n. 3), effectively endorsing digital gaming and e-sports as vehicles for advancing informatization.

QUICKNESSES AND SLOWNESSES

Discourses about everyday life accelerating are by no means uniquely Korean; to wit, Hartmut Rosa argues, "The history of modernity seems to be characterized by a wide-ranging speed-up of all kinds of technological, economic, social, and cultural processes and by a picking up of the general pace of life" (2003, 3). ICT innovations have been particularly inspirational for theorizing speed and acceleration as transformative social phenomena, though such theories often verge on technological determinism (cf. Virilio 2010). However, even as they ostensibly work to speed things up, ICTs enable new slownesses as well. As Judy Wajcman observes, "Qualities such as speed and efficiency are not produced by technologies alone but are related to social norms that evolve as devices are integrated into daily life" (2014, 31), such that "the contours and rhythms of our lives are calibrated by and with machines" (33). Brian Larkin makes a similar point regarding Nigerian cultures of repair, in which "the experience of slowness comes as a consequence of speed-producing technologies, so that speed and acceleration, deceleration and stasis are relative, continually shifting states" (2008, 236). In other words, quickness is never a totalizing force but rather one aspect of sociotemporal expectations that are continually "moving the needle," so to speak, whereby "one person's speed is another person's slowness" (Cresswell 2010, 21). Korea's speed-up narrative and ppalli ppalli munhwa are no different in this respect. Representing an ever-accelerating social world, what was once an adequate pace for being and acting is suddenly "too slow."

Quickness and slowness have different valences and different corresponding entailments for individual calibration-in different sociocultural contexts. For example, Nancy Munn (2007) analyzes how quickness and slowness, as qualities of embodied spacetime, communicate broader symbolic meanings about place, gender, and activity (among others) in Gawan society. The dominant Gawan sociotemporality prescribes quickness as the desirable way of being and acting, and by extension produces anxieties regarding failure to properly calibrate oneself with such prescriptions. Munn writes, "In general, Gawans place considerable emphasis on the desirability of getting things done swiftly, or at the appropriate time rather than lagging behind—a standard that, not infrequently, they feel that they fail to meet" (77), an observation that could just as easily apply to Korean digital gamers vis-à-vis ppalli ppalli munhwa. Elsewhere, quickness and slowness are not oppositional poles of positive and negative value, respectively, but rather are both desirable qualities, depending on the activity in question. For example, Brad Weiss (1996) documents how the Haya calibrate the ripening of bananas for making alcohol depending upon their goals; when making beer, they prefer slowly smoking the bananas at the hearth, but when distilling gin, they find that smoking via a tunnel and enclosed pit is quicker and more effective. The slower pace of hearth smoking is understood to be more controlled, while the quickness of distillation is part of a riskier business proposition, thereby demonstrating how "the historical forces that have configured the multiple implications of qualities like 'speed' also make this a political and moral question" (72). Similarly, Korean digital gamers are compelled to move as quickly as possible in some taskscapes, whereas others demand a slower, more deliberate type of endurance work.

While dominant sociotemporal expectations prescribe certain ways of being and acting, this does not mean that they

are experienced universally in a given community. Rather, "the time-space compression of some groups can undermine the power of others" (Massey 1994, 150). Social inequalities necessarily affect how one is expected to calibrate oneself, not to mention who is expected to do the work of calibration and whose sociotemporality is always-already normative. As Sarah Sharma argues, "There is an expectation that certain bodies recalibrate to the time of others" (2017, 132), and, moreover, "What most populations encounter is not the fast pace of life but the structural demand that they must *recalibrate* in order to fit into the temporal expectations demanded by various institutions, social relationships, and labor arrangements. To recalibrate is to learn how to deal with time, to be on top of one's time, to learn when to be fast and when to be slow" (133). Sociotemporal calibration, then, is one strategy for making do within structures of unequal power relations. Pierre Bourdieu, for instance, argued that normative tempos for ritualized activities like gift exchange were just as important as their formal structures for understanding subjective experience and that "only a virtuoso with a perfect command of his [sic] 'art of living' can play on all the resources inherent in the ambiguities and uncertainties of behaviour and situation in order to produce the actions appropriate to each case" (1977, 8). In other words, effective calibration within structural constraints requires skill, but that skill is not equally distributed.

In Korean digital gaming culture's nested taskscapes, the sociotemporal expectations expressed in ppalli ppalli munhwa set a quick pace for being and acting. However, narrowly focusing on quickness elides the slownesses pervading many digital gaming activities that are experienced as drawn-out, tedious endurance work. The tension between aspirations for being and acting quickly and the necessity of enduring slownesses sets the parameters for calibrating play. A similar disparity underscores everyday life and work in contemporary Korean society, where possibilities for advancing quickly are predicated upon enduring slow, repetitive tasks. However, amid increasingly unsettled circumstances, performing the endurance work required for keeping pace with ppalli ppalli munhwa does not guarantee advancement through institutional hierarchies, especially for those at the margins.

SOCIOTEMPORALITY AND CALIBRATION IN NEOLIBERAL KOREA

The sociotemporal calibrations that Korean digital gamers make by and through their play are contextualized by neoliberal economic and political reforms that began in the mid-1990s and were hastened in the wake of the 1997 financial crisis. To address the crisis, Korea received US\$ 58.4 billion in loans from the IMF and other global financial institutions that were contingent upon structural adjustment and economic liberalization. Informatization played an integral role in Korea's postcrisis economic recovery as well as in its neoliberal transformations. The Kim Dae-jung administration, which came to power just as the crisis was beginning to unfold, enacted reforms intended to "accelerate the overall restructuring of the country through earlier deployment of the informatization to conquer the current economic difficulties" (NCA 1999, 8), once again invoking a sociotemporal lexicon: If the financial crisis had temporarily "decelerated" Korea's development, then these reforms would "re-accelerate" it.⁵

Korea's post-1997 recovery accompanied economic and social changes that had begun just prior to the financial crisis. Following Korea's entry into the WTO in 1995 and OECD in 1996, the chaebol (conglomerates) pressured the government to liberalize Korea's labor laws in their favor, helping lay the groundwork for a business-friendly postcrisis political climate (Koo 2007; see also Shin 2010). Labor reforms contributed to the proliferation of irregular workers (pichongkyuchikcha)—that is, temporary, daily, and part-time laborers-who eclipsed the population of regularly employed Koreans in 1999 (see Chun 2009).⁶ For Korean youth, especially, "the mainstreaming of nonstandard employment [has] forced young workers to move (or to always be ready to move) from one short-term job to another" (Lukacs 2015, 388), as job turnover for this population proceeds at an accelerated tempo relative to the precrisis labor market. Jesook Song relates the story of "Mr. Yu," a retired hwaesawon (salaried employee) working as a taxi driver, and his son, who was navigating Korea's postcrisis economic realities: "[They] respectively represent the virtues of those who have thrived in the past decades (due to their persistence, patience, and stability) and those who will probably succeed in coming decades (due to their flexibility, dynamism, risk-taking)" (2007, 344). In sociotemporal terms, their story demonstrates how the endurance work that made the Miracle on the Han River and ppalli ppalli munhwa possible no longer yielded the same returns in neoliberal Korea's fast-paced, precarious economy.

Many of the gamers who I met in PC bang were on the margins of the labor market. Some were retirees pursuing gaming as a postcareer hobby, others were unemployed and looking for work, while still others were pichongkyuchikcha who worked sporadically in construction, "disappearing" from the PC bang for months at a time whenever they had been hired on a project and returning once their contracts ended. Bong-hyun, a man in his early thirties, was unemployed when I met him and anxious about his job prospects. He had recently graduated from prestigious Korea University, which decades earlier would have all but guaranteed him a position at a chaebŏl, yet the degree no longer conferred the same symbolic capital. He lived at home with his parents, who were pressuring him to get a job and move out, but he had been unsuccessful up to that point. Bong-hyun told me that the job search was the primary source of stress in his life and that the only times he felt truly relaxed were when he visited PC bang and played online games.

Pervasive anxieties about whether hard work and endurance will eventually yield success are reflected in sociotemporal orientations to Korea's education system as well. Korean adolescents' lives are dominated by preparing for the college entrance examination, a period that has been referred to as "examination hell" (*sihom chiok*) since the early days of industrialization, when securing stable employment in a chaebŏl was all but impossible without a degree from a top university. The applicant pool far exceeds the number of spots available at such schools, so students and their families pursue any available means for gaining an advantage over their peers by enrolling in "cram schools" and after-school tutoring programs. The costs are not just financial but temporal as well; preparing for the entrance exam involves countless hours of rote memorization and drilling beyond classroom instruction, a type of endurance work called yŏnsŭp, which entails "making a new habit through repeating a specific task" (Sorensen 1994, 30). Through yŏnsŭp, students calibrate their schedules with the sociotemporal expectations expressed in the phrase "samdang sarak (pass with three [hours' sleep], fail with four)" (Seth 2002, 144), an expression that has been used to describe high schoolers' chances of success since the 1960s and remains prevalent to this day.' In other words, the hour of potential study time that is lost by sleeping four hours per night as opposed to three is represented as the margin between passing and failing the college entrance exam.

In light of Korea's precarious labor market, many students experience yonsup as increasingly diminishing returns. Among her university students, Cho Han Hae-joang "identified many gamers who loved role-playing games ... for their predictability; these games allow players to advance to higher levels based on the effort players invest in the game" (Cho 2015, 457). For these students, digital gaming contrasted favorably with studying not only in the pleasure taken in each activity but also in its sociotemporality. Dr. Hong-a neuropsychiatrist researching problematic digital gamingechoed Cho's observations in describing what he saw as digital games' strongest appeal for players: "The best point of online games is that they are fast, strong, and very fair. If some adolescent invests one hour, they get one hour reward. But this is not the same with studying. Although they invest more than ten or twelve hours, their grades are still very low. At that time, they feel that the reward for studying is very *slow*" (interview, December 13, 2012). Dong-ryul's friend Hyunjae expressed a complementary perspective on the sense of certainty and stability that game taskscapes offered him. "Korea is a competitive society [kyŏngjaeng sahwae], and this is important to game culture," he told me. "Online game servers have rankings where a gamer can see that he is the best in the world. That is good for the competition mindset" (interview, February 15, 2013). For Hyun-jae, these clear indications of endurance work translating into achievement in the context of games were well aligned with sociocultural values about competition and helped him make sense of his own standing.

The incongruities between virtual- and actual-world taskscapes reinforce tensions between aspirations for advancing quickly through organizational hierarchies and the slow, repetitive endurance work that such advancement requires. Quickness can only be sustained through mundane repetition—that is, through endurance, at an everaccelerating pace. Yet quickness does not necessarily yield returns, immediate or otherwise, whether in the labor market's cycles of irregular employment or in the constant fear that yŏnsŭp will not pay the dividends that it promises. Against these broader institutional contexts, digital gaming taskscapes are inflected by sociotemporal expectations for quickness and endurance with which gamers calibrate by and through play, and in so doing learn strategies for making do.

APM AND TIMING

Puntanghaengtongsu, or actions per minute (APM), rate is a calculation of the number of in-game commands that a player executes via mouse clicks and keystrokes over the span of one minute. It is especially relevant for evaluating performances in certain e-sports, such as StarCraft II, in which cultivating and maintaining a high APM rate is a prerequisite for the top echelons of competition. Professional Korean StarCraft II players typically sustain average APM rates of three hundred over the course of a single match, occasionally rising above one thousand during particularly intense engagements. For StarCraft II fans, the quickness that APM represents indexes not only pro gamers' skills and talents but also their individual playing styles. For example, during my fieldwork some commentators had taken to affectionately calling Hwang Kang-ho "the king of APM" due to his uncommonly quick reflexes. By contrast, Markus Eklöf-one of the few non-Korean players signed to a Korean teamhad earned the nickname "spoon killer" (sutkarak sarinma) for his slower and more methodical pace of play.

Cultivating a high APM rate is key to StarCraft II players' professionalization and is one of the primary ways in which they calibrate play with the game's sociotemporality. A common refrain that I heard from Korean e-sports fans, former pros, and commentators was that StarCraft II is "all about timing." Dong-ryul, who enjoyed playing StarCraft II almost as much as watching it, told me that "*fast* hand speed" was a professional's most important skill because it allows players to better manage their resources and "make [their] forces go faster than other players." However, he added that manual quickness must be complemented by intuition (*chok*) because "if the other player's strategies are very different, then the match is going to be different" (interview, February 15, 2013). Pro gamers' chances of victory ultimately depend upon how well they can balance superior strategies (known as the "macro game") with precision maneuvering of individual game units (the "micro game"), and APM rate is one method of measuring that execution. Balancing macro and micro in StarCraft II's virtual taskscape is contingent upon players calibrating their own embodied play tempos with both the tempo of a given match and the tempos that are programmed into the game itself.

Learning to master *StarCraft II*'s timing and cultivating high APM rates entail two sorts of calibration. The first involves the manipulation of computer equipment. Every *StarCraft II* pro gamer uses a mechanical, nonmembrane keyboard with spring-activated key switches instead of the rubber dome switches on most contemporary laptop and PC keyboards. Mechanical keyboards are less likely to jam or stick, which is a crucial consideration for pro gamers; professional *StarCraft II*'s tempo is so quick and the sequence of movements so complex that even one missed keystroke can spell the difference between winning and losing a match. Many pro gamers also modify their keyboards by removing keys that are irrelevant for competition, swapping in polychromatic keys to indicate those that are frequently used, and affixing textured stickers so that keys are distinguishable by touch, marginally increasing the speed with which they can execute the micro game.

The second sort of calibration involves the tempos programmed into the game's software. As in other digital games, StarCraft II's actions are not necessarily executed immediately upon a player's instruction but rather are delayed for a specified length of time. Each StarCraft II unit, structure, and technology has a "build time" that defines the duration between ordering the build and when it will be ready for use. There are also "cooldown" periods when commands are unavailable, which in turn determine the frequency with which certain actions and abilities can be utilized. Managing build times and cooldowns is the basis of the macro game and contributes to the overall tempo of a head-to-head match. Through practice, players develop a familiarity with these tempos for calibrating their play. To complicate matters, at the time of my fieldwork *StarCraft II* could be played at five different speeds; the pace of professional StarCraft II was standardized according to a tempo at which everything moved exactly 1.38 times faster than the "normal" game speed, producing what fans and players called "StarCraft minutes."8 In comparison to amateur play, then, professional StarCraft II was *literally* accelerated.

While the embodied calibrations with StarCraft II's tempos entailed in cultivating high APM rates are pivotal to the outcome of a given match, pro gamers must also make calibrations in e-sports' actual-world taskscapes. The best Korean players are signed to professional teams sponsored by Korean media and ICT companies, such as Samsung, SK Telecom, and CJ Entertainment & Media,⁹ and the players live together in dormitory-style apartments where they eat, sleep, and train. Practices typically consist of finger exercises for maintaining flexibility and dexterity, scouting upcoming opponents through film study, and head-to-head drills with teammates, all of which help players cultivate high APM rates, among other skills. A retired player told me that ten hours per day is the bare minimum needed to preserve one's conditioning. He estimated that taking even one week off from practice would translate into one month of lost time as far as physical upkeep and familiarity with the current macro game was concerned. The quickness of pro gamers' performances in matches is therefore predicated on endurance, repetitive practice, and anxieties about falling behind and losing their competitive edge. The fans who I spoke with revered pro gamers not only for their high APM rates but also for the endurance work that such rates indexed. When I asked Hyun-myung—a *StarCraft II* fan and aspiring e-sports commentator—why Hwang Kang-ho's play was so quick, he immediately cited the "ten hours per day" figure that Hwang spent practicing. However, he added that he did not envy pro gamers' lifestyles: "Besides eating and sleeping, they are only playing. Their eyes are so tired [*nun pigonhae*]!" (interview, March 17, 2013). For amateurs like Hyun-myung, then, the implications that calibrating with professional *StarCraft II*'s accelerated tempo had for players' bodies and health were both awe-inspiring and undesirable.

APM's combination of quickness and endurance demonstrates well how performances in professional StarCraft II's taskscape are calibrated with broader sociotemporal expectations vis-à-vis ppalli ppalli munhwa. Jin-soo-a liaison between professional Korean StarCraft II teams and the Korea e-Sports Association (KeSPA), the sport's institutional organization—told me, "Our kukminsong [national character] is very similar to StarCraft. Koreans are very fast, very intelligent, and want to talk with others." As further evidence of this complementarity, Jin-soo drew a comparison between what StarCraft has meant for Korea and the connections that he saw between Warcraft III-formerly the second-mostpopular e-sport in Korea and globally-and other national gaming contexts: "Warcraft III was very popular in Europe and China. Their cultural bases are different from Korea; they are not speedy like Koreans" (interview, March 22, 2013). His interpretation of *StarCraft*'s sociotemporality as well calibrated with Korean sociocultural values draws a connection between e-sports and an essentialized "Koreanness" that is consistent with the speed-up narrative.

NOGADA AND ENDURANCE

Bong-hyun first introduced me to *Lineage II*, a popular Korean MMORPG, about a week after our first meeting. On an ordinary day, we spent between six and eight hours at a PC bang playing various game scenarios and chatting with other players and the members of our gaming "clan" (*hyŏlmaeng*), a formal association of *Lineage II* players. Most of the time, however, we worked on "leveling up" our *Lineage II* characters by completing tasks to earn experience points and advance through the game's hierarchical structure. The instrumental tasks that we performed in order to level our characters were unlike other game activities like quests and battles, and this was reflected in the unofficial name that Korean gamers have given this type of play: *nogada*.

Derived from the Japanese *dokata*, meaning "unskilled manual laborer," nogada is most often used to reference construction work and workers, and to associate any activity with construction work's more onerous qualities. In Korean digital gaming culture, nogada is a common slang term that denotes long, sustained periods of repetitive play.¹⁰ "Doing nogada" in *Lineage II* usually involves a single character, alone in one of the virtual world's many hunting zones, fighting and killing automated enemy characters in order to earn

experience points needed to level up and in-game currency (*adena*) for purchasing items. As Korean MMORPGs' global popularity has grown, they have developed reputations as having exceedingly difficult leveling systems. Because of no-gada's centrality in their gameplay, MMORPGs like *Lineage II* are sometimes categorized as "Korean grindfests" in essentializing discourses connecting "Koreanness" with this style of play,¹¹ similar to how Jin-soo associated "Koreanness" with *StarCraft*, albeit for different reasons.

Nogada is one of the structuring tempos for participation in *Lineage II*'s virtual taskscapes, measured in keystroke sequences needed for a kill, the kills needed to level up, and the levels needed to reach a player's desired goal. Nogada's tempo is coproduced by the quickness with which a player can execute keystrokes and navigate the virtual world's hunting zones, and programmed variables such as enemies' attack and defense probabilities and "respawn" rates, or the frequency with which enemy characters repopulate the same zone shortly after they have been killed. As a character's level rises, it becomes exponentially more difficult to reach the next level because more experience points are needed, and, consequently, nogada takes up more of players' time. Players could theoretically do nogada for as long as they want because the game's design does not impose any temporal restrictions. Bong-hyun told me that when he was younger he used to do nogada for longer periods of time-boasting that he had once spent twenty-four hours straight doing nothing but hunting-but that now he could only endure a few hours at the most.

My Lineage II-playing interlocutors spoke about nogada as a taxing yet unavoidable aspect of playing the game. They took little pleasure in nogada, as it was a tedious activity that tested their patience. But it was also, ironically, the quickest way to level up. As they explained to me, leveling up enhanced their playing experiences by affording access to better weapons and armor, opening up new areas of the game's virtual world and new opportunities for socializing in the context of activities that were restricted to only high-level characters. At the same time, nogada also occupied players' attention during downtimes when they were waiting around for other players to join them in group activities. A retired man in his mid-sixties whom Bong-hyun and I often played alongside at our favorite PC bang and affectionately called "Mr. Legend" (Rechontu achossi) regularly performed nogada in this way. As he explained to us, his time at the PC bang was limited, so he could not afford to "waste time" waiting around without doing something productive. Moreover, nogada was not simply a means of leveling up or keeping busy for Mr. Legend but also provided him with a small source of revenue. He used the adena that he collected through nogada to purchase items in the Lineage II marketplace and then sold them on a third-party auction site called Itembay, a quasi-legal practice in many MMORPG communities known as "real-money trading" (see Castronova 2006). Mr. Legend put the money that he made through these sales toward paying for time at the PC bang.

Because nogada is characterized not only by repetition but also endurance, it comes to define players and their gaming behaviors sociotemporally. Fully leveling up a character necessitates hundreds of hours spent doing nogada; for instance, it took me only four days and a little more than twenty hours of playing time to level my character from 1 to 65, but another eight months and more than eight hundred hours to fully level up to 99. High-level characters confer elite social status on the players who control them, derived in part from their having endured hours of nogada. Nogada is also instrumental for training new players in how to calibrate their bodily performance with *Lineage II*'s mechanics and the hardware interface. Playing Lineage II can be disorienting and frustrating for those unaccustomed to digital gaming, as mouse and keyboard must be used together to move seamlessly through the game's virtual world while executing fighting commands. The slow, laborious repetition of keystrokes over time allows players to calibrate with both the game's programming, eventually developing a fluidity of actions that can be executed more quickly. Performing nogada can become so engrossing that sometimes players lose track of time's passage in the actual-world taskscapes around the game, similar to the sense of temporal distortion in "flow" experiences (Csikszentmihalyi 1990)¹² or the feeling that machine gamblers have of being in a "zone" while playing (Schüll 2012). Once, when Bong-hyun and I exited the PC bang after a particularly long nogada session, he turned to me and exclaimed with surprise that it was suddenly dark outside; we had spent eight hours playing *Lineage* II, but Bong-hyun confessed that it had only seemed like three or four hours to him.

By performing nogada, *Lineage II* players also learn to calibrate their playing schedules with the broader game community's sociotemporal expectations. For them, nogada is not just a constitutive aspect of the game's design but also is fundamental to what it means to participate in its taskscape. Nogada's slow pace contrasts sharply with other modes of play in Lineage II, especially "raiding" (collaborative activities in which parties of between seven and twenty-one players work together to defeat powerful computer-controlled enemy "bosses"). Whereas nogada can, for the most part, be done anytime, according to one's own preferences, and in relative isolation, raiding takes place in what are called "instanced zones" (insŭtontŭ chon, or inchon for short), "copies" of virtual-world areas that are created anew each time a raiding party enters them. For the duration of a given raid, only the party members' characters appear in the zone, along with the automated foes that populate the area. Players may only enter an instanced zone once within a specified time period that varies depending on the raid (e.g., once every four hours for some, once every three days for others), meaning that on any given day there are a limited number of raids that a player can attempt. For this reason, players were often preoccupied with completing raids quickly and efficiently, as those who were too slow during raids could be burdensome for their parties. Furthermore,

these sociotemporal expectations extended beyond the raids themselves. It was common for players to race one another to the staging areas outside of inchon, with the "winner" entering "first" (*chöt*, short for *chötpöntchae*) into the raiding party's text-chat channel. Those who were first to arrive also admonished stragglers to "hurry up" (*ppalli oseyo*), thereby reinforcing expectations about being and acting quickly as an obligatory form of social play. In accordance with community standards for etiquette, *Lineage II* players typically offered up only constructive criticisms of these shortcomings. However, my fellow clan members told me that they often complained about notoriously slow and inexperienced players through private, back-channel communications and in offline conversations.

While nogada is a means of calibrating with Lineage II's sociotemporality, becoming well calibrated with the game's taskscape could sometimes lead to miscalibrations with the rhythms and tempos in actual-world taskscapes around the game. While it is possible to separate these taskscapes analytically, in practice their boundaries are punctuated whenever obligations from one impact activities in the other. As Alex Golub has observed in the context of another MMORPG, "Compelling projects may have their origin in and be anchored to a particular virtual world, but this does not mean that the sociality, action, and cultural formations created by that project need to be confined to that world. Indeed, the more committed a group is to a project, the more likely that project is to spread to other parts of these people's lifeworlds" (2010, 40). Projects can just as easily spread from an actual-world taskscape into a virtual world as they can in the opposite direction. Once, during a multiraid itinerary, our raiding party failed on its first attempt at taking down one of the dungeon bosses, forcing us to wait for the inchon timer to reset before trying again. As we waited, one of the party members asked how long the delay would be, explaining that it was nearing dismissal time at their child's kindergarten and that they would need to leave soon to pick up the child. The party's leader replied that committing oneself to a raid entailed sticking around until it was completed, implying that this player ought to have known the schedule and possible risks beforehand. This incident demonstrated the potential for virtual- and actual-world taskscapes to fall out of sync and the sort of sociotemporal calibration required of Lineage II players in managing personal and social commitments that could sometimes conflict with one another.

CALIBRATING PLAY BEYOND DIGITAL GAMES

APM and nogada are constitutive of and constituted by sociotemporal expectations in their respective taskscapes and the paces and tempos of the digital gaming activities that they complement. *StarCraft II* pro gamers cultivate high APM rates in order to calibrate their embodied senses of timing with the demands of professional e-sports performance. By spending hours on end engaged in nogada, players calibrate with *Lineage II*'s temporal structure and their gaming communities' schedules. Both modes of calibrating play combine sociotemporal qualities that are shared with other ways of being and acting in contemporary Korean society, like navigating the irregular labor market or doing the yŏnsŭp needed for academic success. If APM represents an idealized quickness in embodied form, then nogada is its necessary complement: the plodding, tedious labor that must be endured in order to catch up, keep pace, and avoid falling behind. As such, APM and nogada are not only modes of calibrating play with sociotemporal expectations in digital gaming taskscapes but also are illustrative of how play itself is calibrated with and against the speed-up narrative and ppalli ppalli munhwa in contemporary Korean society. Calibrating play, then, is about more than just learning to master the particularities of a given digital gaming taskscape but more broadly about strategies for making do in unsettled circumstances.

Games researchers have long been interested in games and play for what they demonstrate about the human capacity to innovate in uncertain contexts. Thomas Malaby writes, "By being indeterminate in their outcomes, [games] encapsulate (albeit in a contrived fashion) the open-mindedness of everyday life" (2007, 207–8). Considering play as "a virtual simulation characterized by staged contingencies of variation, with opportunities for control engendered by either mastery or further chaos" (Sutton-Smith 1997, 231), it can be seen as a matter of calibrating skillful execution with a game's challenges, about making do with precarity and working toward reducing the indeterminacy of a game's outcome. McKenzie Wark argues, "Games are no longer a pastime, outside or alongside of life," and that, furthermore, "The reigning ideology imagines the world as a level playing field . . . Everything is evacuated from an empty space and time which now appears natural, neutral, and without qualities-a gamespace" (2009, 5-6). Digital gamers calibrate themselves and their play with the tempos programmed into games like StarCraft II and Lineage II, assured that these virtual taskscapes are, indeed, level playing fields, where endurance work and quickness will eventually turn the outcome in their favor. However, in so doing, they discover that "there is always a gap between the intuitively knowable algorithm of the game and the passing, uneven, unfair semblance of an algorithm in the everyday life of gamespace" (23), an assessment that resonates with Dr. Hong's comments about how digital games appear "fairer" than actual-world activities like studying and with Hyun-jae's appreciation of the certainty of rank in games' virtual-world taskscapes.

The incongruity between actions and expectations across taskscapes helps make sense of the pleasure that gamers like Bong-hyun take in playing and the frustrations that they sometimes feel with the demands of everyday life; while calibrating his play through performing nogada guaranteed Bong-hyun advancement in *Lineage II*, calibrating with sociotemporal expectations in the job market had not yet yielded him the same returns. This apparent miscalibration—not of gamers with taskscapes, but of taskscapes themselves—mirrors the discourse on Korea "slowing down" that Dong-ryul voiced in our conversation, representing gamers and gaming as fundamentally out of sync with the pace of high-speed Korean society. The slowness that he referenced was metaphorical, and one that is symptomatic of the most extreme aspect of Korean digital gaming: the issue of game "addiction." "It's a really big problem," Dong-ryul told me, "because of the jobless. Some of the jobless become game addicts." Hyun-jae agreed with his friend, adding, "The powerful people think that addiction is the problem, so they made laws that injured the game makers" (interview, February 15, 2013). Though the specifics of game addiction in Korea are far too complex to adequately explore here, the way that addiction is associated in this way with labor and the speed-up narrative demonstrates how digital gaming can simultaneously exemplify ppalli ppalli munhwa's quickness, as in e-sports, and at the same time be problematized as something that is slowing Korea's pace of development.

Against the backdrop of sociotemporal expectations for being and acting in actual-world taskscapes, digital gaming, like the Taiwanese men's mahjong games that Paul Festa analyzes, "carves out a parallel space-time and activates an imaginative interplay between game action and the wider sociopolitical universe" (2007, 101). This interplay can be well calibrated across taskscapes, as it is for pro gamers cultivating high APM in *StarCraft II*, and it can be problematic, as in cases of game addiction. Nogada, in this respect, is somewhat intermediate; within the context of Lineage II, it emulates the ethos of performing endurance work in order to advance that is idealized in life and work beyond digital gaming. Yet players would never confuse nogada with the quickness that characterizes ppalli ppalli munhwa, either. Instead, it affords a productive slowness, a means for players to take ownership over their own time and activities while simultaneously calibrating with prevailing sociotemporal expectations in a digital gaming community.

Extrapolating outward from Lineage II's narrow taskscape to Korean society at large, I want to conclude by suggesting that nogada as a mode for calibrating play represents an antidote of sorts to ppalli ppalli munhwa's relentless pace. Insofar as nogada affords players with opportunities to "slow down" relative to other gaming activities, it resembles some of the same desires that Jesook Song's informants express in her ethnographic portrait of life in post-1997 Korea. She introduces "Ms. Cha," a former student-activist, who tells Song that "her ideal world was a society that moved slowly and where there is room for people to be lazy" (2009a, 148). In the fast-paced, precarious context of neoliberal Korea's flexible labor market, Song writes that Ms. Cha and many like her "are uncertain about the benefits of industrial capitalism and think of going back to a pastoral or farming life in the countryside as a remedy for high-speed urban industrialization" (2009a, 149). In contrast to these dreams of returning to a romanticized time before ppalli ppalli munhwa, perhaps digital gaming taskscapes and calibrating play can offer an alternative strategy for making do in precarious circumstances without a full-scale rejection of sociotemporal expectations for being and acting. The contrast between quick and slow sociotemporalities, and the necessity of continual recalibration, is a source of unending stress and frustration for many Koreans. But at the same time, calibrating with sociotemporal expectations in digital gaming taskscapes affords players opportunities for "catching up" with and keeping pace with their peers in one context, even as they may appear to "fall behind" in another.

Stephen C. Rea Institute for Money, Technology and Financial Inclusion, University of California, Irvine, Irvine, CA 92697 USA; srea@uci.edu

NOTES

Acknowledgments. I thank *American Anthropologist*'s anonymous reviewers and editor-in-chief Deborah Thomas for their substantive comments and excellent feedback on earlier versions of this article. I also wish to thank Keith M. Murphy and Elizabeth Reddy for reading initial drafts and providing helpful suggestions for revision, and Gina Kim and Ho Yeon Park for their assistance. This research would not have been possible without generous support for fieldwork in South Korea between 2009 and 2013 from the National Science Foundation (BCS-1155399), the Korea Foundation, PaPR @ UCI, and the Department of Anthropology at the University of California, Irvine. Any errors or omissions are my own.

- "Ppalli" is the Korean word for "quickly," and "munhwa" means "culture." The rough translation of this phrase as "chop chop culture" retains the alliteration of the original Korean, which, I argue, is iconic of the quickness that it denotes (see Whorf 1956, 268).
- Jae Chung calls attention to a related discourse: "Koreans writing and speaking for Korean consumption . . . assert that Koreans are constantly rushing about, constantly cutting in line, constantly absorbed in the latest social trend (*yulpoong*, literally a typhoon), and constantly shedding the latest thing that has outlived its popularity" (2003, 4).
- 3. Source: http://news.chosun.com/svc/content_view/ content_view.html?contid=1995030570106, accessed June 16, 2016. My interlocutors often paraphrased this slogan in our conversations. To wit, Dr. Park, a sociologist who worked on the Informatization Promotion Committee during Kim Youngsam's presidency, summarized the informatization era as follows: "Korea, Japan, China: we're competing together, all the time. China is a really big country, and Japan—in terms of economy and technology—was higher than Korea. But Korean people understand that in terms of history they had been ahead of Korea only for less than one hundred years. So today Japan is richer than Korea, but Korean people think that, 'We were always ahead of you; still, we can do that.' We think that we were late in industrialization, but we can be ahead of Japan in information" (interview, October 22, 2012).
- The gendered dimensions of ppalli ppalli munhwa and their implications for digital gaming culture are deserving of their own

article. Although women comprise a sizable proportion of Korea's digital gaming market—62 percent of female respondents in a recent survey reported that they played games (KOCCA 2016, 19)—they are much more likely to participate in virtualrather than actual-world taskscapes; for example, in my observations at PC bang, women accounted for only 20 percent of all customers. The absence of their voices here represents a significant shortcoming in my data.

- 5. Jesook Song argues, "The information society campaign was used to kill two birds with one stone. It responded to the unemployment crisis by connecting public works programs and supporting startup costs for *innovative* and *risky* small businesses (i.e., venture businesses). It also acted on the decade-long, futuristic vision of saturating the nation with new technology and new markets for postindustrial capitalist competition" (2009b, 6).
- 6. As of October 2017, 50.1 percent of Korea's economically active population were employed in some form of irregular labor (KOSTAT 2017, 3).
- 7. M. Lee and Larson (2000, 251) cite an alternative phrasing— "pass with four, fail with five" (*sadang orak*)—but one of my students reports seeing posters in a Korean high school classroom with the *samdang sarak* slogan during fieldwork in the summer of 2016 (Ho Yeon Park, personal communication).
- 8. For an updated version of *StarCraft II* released in 2015, the "faster" tempo was synchronized with "real time," thereby obviating the category of "*StarCraft* minutes" for all intents and purposes.
- 9. The professional *StarCraft II* league that these corporate sponsors and their teams participated in disbanded in October 2016, but they were important institutional players during my fieldwork.
- 10. This is similar to what some North American MMORPG players call "grinding" (Taylor 2006).
- 11. Chinese MMORPGs and gamers are often framed similarly, informed by what Hanna Wirman (2016) calls "Sinological-orientalism."
- 12. Before fully developing the concept of "flow," Mihaly Csikszentmihalyi and Stith Bennett argued that play activities were defined by the same sort of ideal balance between challenge and competence that occurs "when our action 'resonates' with the environment; when 'feedback' provides sufficient possibilities for an uninterrupted flow of action" (1971, 46).

REFERENCES CITED

- Aizu, Izumi. 2002. "A Comparative Study of Broadband in Asia: Deployment and Policy." Paper presented at the Asian Economic Integration — Current Status and Prospects Symposium, Tokyo, Japan, April 22.
- Akamai Technologies, Inc. 2017. Akamai's State of the Internet: Q1 2017 Report (May). Cambridge, MA: Akamai.
- Amsden, Alice. 1989. Asia's Next Giant: South Korea and Late Industrialization. Oxford: Oxford University Press
- Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.

- Castronova, Edward. 2006. "A Cost-Benefit Analysis of Real-Money Trade in the Products of Synthetic Economies." Info 8 (6): 51– 68.
- Certeau, Michel de. 1984. *The Practice of Everyday Life*. Berkeley: University of California Press.
- Chang, Kyung-sup. 1999. "Compressed Modernity and Its Discontents: South Korean Society in Transition." *Economy and Society* 28 (1): 30–55.
- Chang, Kyung-sup. 2010. "The Second Modern Condition? Compressed Modernity as Internalized Reflexive Cosmopolitization." *The British Journal of Sociology* 61 (3): 444–64.
- Cho, Hae-joang Han. 2000. "'You Are Entrapped in an Imaginary Well': The Formation of Subjectivity within Compressed Development—A Feminist Critique of Modernity and Korean Culture." Inter-Asia Cultural Studies 1 (1): 49–69.
- Cho, Hae-joang Han. 2015. "The Spec Generation Who Can't Say 'No': Overeducated and Underemployed Youth in Contemporary South Korea." *Positions* 23 (3): 437–62.
- Chosŏn Ilbo. 1995. "Sanŏphwa-nŭn nŭjŏtchiman jŏngbohwa-nŭn apsŏcha" [Late to industrialize, but ahead in informatization]. Accessed June 16, 2016. http://news.chosun.com/svc/ content_view/content_view.html?contid=1995030570106.
- Chun, Jennifer Jihye. 2009. "Legal Liminality: The Gender and Labour Politics of Organising South Korea's Irregular Workforce." *Third World Quarterly* 30 (3): 535–50.
- Chung, Jae A. 2003. "The Cultural Tempo of Korean Modernity: Celerity in Venture Industry." PhD dissertation, Rice University.
- Cresswell, Tim. 2010. "Towards a Politics of Mobility." Environment and Planning D: Society and Space 28 (1): 17–31.
- Csikszentmihalyi, Mihaly. 1990. Flow: The Psychology of Optimal Experience. New York: Harper and Row.
- Csikszentmihalyi, Mihaly, and Stith Bennett. 1971. "An Exploratory Model of Play." *American Anthropologist* 73 (1): 45–58.
- Cumings, Bruce. 2005. Korea's Place in the Sun: A Modern History (Updated Edition). New York: W. W. Norton & Company.
- Desjarlais, Robert. 1997. Shelter Blues: Sanity and Selfhood among the Homeless. Philadelphia: University of Pennsylvania Press.
- Festa, Paul E. 2007. "Mahjong Agonistics and the Political Public in Taiwan: Fate, Mimesis, and the Martial Imaginary." *Anthropological Quarterly* 80 (1): 93–125.
- Golub, Alex. 2010. "Being in the World (of Warcraft): Raiding, Realism, and Knowledge Production in a Massively Multiplayer Online Game." *Anthropological Quarterly* 83 (1): 17–45.
- Harkness, Nicholas. 2013. Songs of Seoul: An Ethnography of Voice and Voicing in Christian South Korea. Berkeley: University of California Press.
- Ingold, Tim. 2000. "The Temporality of the Landscape." In The Perception of the Environment: Essays on Livelihood, Dwelling and Skill, 189–208. London: Routledge.
- Jin, Dal Yong. 2005. "Socioeconomic Implications of Broadband Services: Information Economy in Korea." Information, Community and Society 8 (4): 503–23.
- Jin, Dal Yong, and Florence Chee. 2008. "Age of New Media Empires: A Critical Interpretation of the Korean Online Game Industry." *Games and Culture* 3 (1): 38–58.

- Kang, Inkyu. 2014. "It All Started with a Bang: The Role of PC Bangs in South Korea's Cybercultures." In *The Korean Popular Culture Reader*, edited by Kyung Hyun Kim and Youngmin Choe, 55–75. Durham, NC: Duke University Press.
- Kendall, Laurel. 1996. "Korean Shamans and the Spirits of Capitalism." *American Anthropologist* 98 (3): 512–27.
- Kim, Kwang Suk, and Sung Duk Hong. 1997. Accounting for Rapid Economic Growth in Korea, 1963–1995. Seoul: Korea Development Institute.
- KOCCA (Korea Creative Content Agency). 2016. Keim iyongcha shiltaechosa bokosö; [Game users survey report]. Seoul: Korea Creative Content Agency.
- Koo, Hagen. 2007. "The Changing Faces of Inequality in South Korea in the Age of Globalization." Korean Studies 31 (1): 1–18.
- KOSTAT (Statistics Korea). 2017. Economically Active Population Survey in October 2017. Daejeon: Statistics Korea.
- Larkin, Brian. 2008. Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria. Durham, NC: Duke University Press.
- Lau, Tuen Yu, Si Wook Kim, and David Atkin. 2005. "An Examination of Factors Contributing to South Korea's Global Leadership in Broadband Adoption." *Telematics and Informatics* 22 (4): 349– 59.
- Lee, Doreen. 2015. "Absolute Traffic: Infrastructural Aptitude in Urban Indonesia." *International Journal of Urban and Regional Research* 39 (2): 234–50.
- Lee, Keun, and Chaisung Lim. 2001. "Technological Regimes, Catching-Up and Leapfrogging: Findings from the Korean Industries." *Research Policy* 30 (3): 459–83.
- Lee, Meery, and Reed Larson. 2000. "The Korean 'Examination Hell': Long Hours of Studying, Distress, and Depression." *Journal of Youth and Adolescence* 29 (2): 249–71.
- Lee, Sang M. 2003. "South Korea: From the Land of Morning Calm to ICT Hotbed." *The Academy of Management Executive* 17 (2): 7–18.
- Lukacs, Gabriella. 2015. "Labor Games: Youth, Work, and Politics in East Asia." *Positions* 23 (3): 381–409.
- Malaby, Thomas. 2007. "Beyond Play: A New Approach to Games." Games and Culture 2 (2): 95–113.
- Malaby, Thomas. 2009. "Anthropology and Play: The Contours of Playful Experience." *New Literary History* 40 (1): 205–18.
- Martin-Jones, David. 2007. "Decompressing Modernity: South Korean Time Travel Narratives and the IMF Crisis." *Cinema Journal* 46 (4): 45–67.
- Massey, Doreen. 1994. Space, Place and Gender. Minneapolis: University of Minnesota Press.
- Mauss, Marcel. 1973. "Techniques of the Body." *Economy and Society* 2 (1): 70–88.
- Mazmanian, Melissa, Ingrid Erickson, and Ellie Harmon. 2015. "Circumscribed Time and Porous Time: Logics as a Way of Studying Temporality." Paper presented at CSCW 2015, Vancouver, Canada, March 14–18.
- Munn, Nancy D. 2007. The Fame of Gawa: A Symbolic Study of Value Transformation in a Massim (Papua New Guinea) Society. Durham, NC: Duke University Press.

- Na, Eun-Yeong, and Jae-Ho Cha. 2000. "Changes in Values and the Generation Gap between the 1970s and 1990s in Korea." Korea Journal 40 (1): 285–324.
- NCA (National Computerization Agency). 1999. *Informatization White Paper*. Seoul: National Computerization Agency.
- Rosa, Hartmut. 2003. "Social Acceleration: Ethical and Political Consequences of a Desynchronized High-Speed Society." *Constellations* 10 (1): 3–33.
- Schüll, Natasha Dow. 2012. Addiction by Design: Machine Gambling in Las Vegas. Princeton, NJ: Princeton University Press.
- Seth, Michael. 2002. Education Fever: Society, Politics, and the Pursuit of Schooling in South Korea. Honolulu: University of Hawaii Press.
- Sharma, Sarah. 2017. "Speed Traps and the Temporal: Of Taxis, Truck Stops, and Task Rabbits." In *The Sociology of Speed: Digital,* Organizational, and Social Temporalities, edited by Judy Wajcman and Nigel Dodd, 131–51. Oxford: Oxford University Press.
- Shin, Kwang-Yeong. 2000. "The Discourse of Crisis and the Crisis of Discourse." Inter-Asia Cultural Studies 1 (3): 427–42.
- Shin, Kwang-Yeong. 2010. "Globalisation and the Working Class in South Korea: Contestation, Fragmentation and Renewal." *Journal of Contemporary Asia* 40 (2): 211–29.
- Song, Jesook. 2007. "'Venture Companies,' 'Flexible Labor,' and the 'New Intellectual': The Neoliberal Construction of Underemployed Youth in South Korea." *Journal of Youth Studies* 10 (3): 331–51.
- Song, Jesook. 2009a. "Between Flexible Life and Flexible Labor: The Inadvertent Convergence of Socialism and Neoliberalism in South Korea." *Critique of Anthropology* 29 (2): 139–59.
- Song, Jesook. 2009b. South Koreans in the Debt Crisis: The Creation of a Neoliberal Welfare Society. Durham, NC: Duke University Press.
- Sorensen, Clark W. 1994. "Success and Education in South Korea." Comparative Education Review 38 (1): 10–35.
- Stewart, Kym. 2004. "Informatization of a Nation: A Case Study of South Korea's Computer Gaming and PC-Bang Culture." Master's thesis, Simon Fraser University.
- Sutton-Smith, Brian. 1997. *The Ambiguity of Play*. Cambridge, MA: Harvard University Press.
- Taylor, T. L. 2006. *Play between Worlds: Exploring Online Game Culture*. Cambridge, MA: The MIT Press.
- Virilio, Paul. 2010. The Futurism of the Instant: Stop-Eject. Malden, MA: Polity Press.
- Wajcman, Judy. 2014. Pressed for Time: The Acceleration of Life in Digital Capitalism. Chicago: University of Chicago Press.
- Wark, McKenzie. 2009. *Gamer Theory*. Cambridge, MA: Harvard University Press.
- Weiss, Brad. 1996. The Making and Unmaking of the Haya Lived World: Consumption, Commoditization, and Everyday Practice. Durham, NC: Duke University Press.
- Whorf, Benjamin Lee. 1956. Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf. Cambridge, MA: MIT Press.
- Wirman, Hanna. 2016. "Sinological-Orientalism in Western News Media: Caricatures of Games Culture and Business." *Games and Culture* 11 (3): 298–315.
- Woo, Jung-en. 1991. Race to the Swift: State and Finance in Korean Industrialization. New York: Columbia University Press.