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Gig work platforms such as Lyft, Uber, Wolt, and Flink undertook intense efforts to make their work more 'fun,' with the aim of motivating their workers and making them more efficient. This paper looks at how platform capitalism intertwines the gamification and precarization of labor, leading to an increased blurring of work and leisure. Employing the video works Delivery Dancer's Sphere (2022) by Ayoung Kim and Platform (2022) by Johannes Büttner as case studies, the text examines how the gamification and precarization of labor through delivery platforms are addressed and critiqued in contemporary media art and how both Kim and Büttner utilize gaming aesthetics and mechanisms.

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Press Start to Work: Gamification and Precarisation of Gig Work in Contemporary Media Art

Introduction

As part of a trend to gamify the workplace in an effort to boost motivation and incentivize behavior that profits the platform, gig workers driving and delivering for companies such as Lyft, Uber, Wolt, and Flink have faced intense attempts to make their work more "fun." This paper looks at how labor platforms entangle the gamification and precarization of labor as tools of algorithmic management, resulting in an increased blurring of work and leisure. It also analyses how contemporary artworks have employed characteristics of cyberpunk and video games to investigate this issue.

Drawing upon literature by Nick Srnicek, McKenzie Wark, Yanis Varoufakis, Alessandro Gandini, Julieta Haidar, and Maarten Keune, I will first outline the historical events that have led to the rise of platforms as a business model and their impact on labor conditions. Based on this, I will examine the entanglement of the gamification[1] and precarization of labor, with a particular focus on platform-gig-work in the ride-hailing and delivery sector. Arguing that the way in which labor platforms offering such gig work lean into gamifying the workers experience causes an increased precarization as well as a blurring of work and leisure, I employ the research of Krishnan Vasudevan and Ngai Keung Chan, as well as Tae Wan Kim and Kevin Werbach, among others. Referencing Natasha Dow Schüll's research on gambling addiction and the notion of the "zone," the paper also draws parallels between mechanisms used by the gambling industry and the gamification features of labor platforms.

Employing the video works *Delivery Dancer's Sphere* (2022) by Ayoung Kim and *Platform* (2022) by Johannes Büttner and Steffen Köhn as case studies, I will then explore how these examples of contemporary media art address the gamification and precarization of work by labor platforms and use video game elements and both narrative and visual cyberpunk motifs to formulate a critique of these circumstances. I will give a quick rundown of cyberpunk's main characteristics, drawing on Scott Bukatman, Frances Bonner, and Frederic Jameson, to then look at video games and art. Referencing Domenico Quaranta's and John Sharp's research, I will argue that a new generation of contemporary art, including Büttner/Köhn's and Kim's films, echoes the genre of *game art*, which was prominent in the 1990s and early 2000s. On this basis, I will point out how the topics of platforms, gamification, video games, and cyberpunk manifest in *Delivery Dancer's Sphere* (2022) and *Platform* (2022) to critique the working conditions of gig workers.

Is This Still Capitalism as We Knew It?

The latest developments in how capitalists extract profits has probed a number of theorists to argue for a new terminology to describe the economic system at work in the developed world and—due to the borderless nature of its mode of extraction—most of the developing world, with Nick Srnicek announcing the rise of "platform capitalism" and Shoshana Zuboff declaring the dawn of "surveillance capitalism." What Paul Mason already suggests in *Post-Capitalism*, namely that this is no longer capitalism at all, several theorists then argue for employing new terminology that does away with the "modifier + capitalism" structure completely. In her book *Capital Is Dead,* McKenzie Wark probes the thesis that traditional capitalism has been superseded by a new socio-economic system built on the extraction of information as the new dominant way of generating profit, which Wark calls "vectoralism." Furthermore, she defines "vectoralists"

as the new dominant class which—instead of owning the means of production as capitalists would traditionally have—controls information vectors (i.e., data flows, communication, and intellectual property).[2] Similarly, introducing the term "technofeudalism," Yanis Varoufakis postulates that a new system is replacing capitalism, characterized by markets, competition, and wage labor. However, he argues that power dynamics have shifted toward a structure more reminiscent of feudalism, where a small elite controls vast amounts of wealth and power, primarily through digital platforms.[3]

What all these authors essentially describe is a focus on what some call "information" and other "data" as the most valuable resource to generate profits. Understood in most general terms as "digital infrastructures that enable two or more groups to interact,"[4] platforms have the ability to extract significant amounts of data from said users and emerged as a new business model with large monopolistic companies on the rise. Consequently, Srnicek terms the current economic system "platform capitalism" with the "digital economy" as its basis—referring to "businesses that increasingly rely upon information technology, data, and the internet for their business models."[5] Varoufakis and Srnicek both point to three historical events as key prerequisites for this current conjuncture and the rise of platforms: the response to the 1970s downturn of the manual industry in the Global North; the dot-com bubble's boom and bust in the 1990s, and the response to the 2008 crisis in the US and Europe.[6] These events are not only worth considering in the context of the emergence of platforms but also in that they have proved key to the development of the current labor market.

When the housing bubble burst in 2008 and banks started to fail, governments in Europe and the US took on massive amounts of debt. At the same time, authorities continuously lowered interest rates. The draining of government revenues due to large-

scale corporate tax evasion led to the exacerbation of austerity, which became the dominant ideology.[7] The impact the loose monetary policies in Europe and the US have had on labor was significant enough to persist to this day, since high rates of (long-term) unemployment caused by the collapse intensified longer standing trends toward deskilling, leaning, and outsourcing. Therefore, the growing reserve army of labor has not only put pressure on the remaining employed population but was also forced to take on any job, no matter how precarious or low-paying. It posed the ideal resource for gig work offered via platforms.

In the following chapters of this paper, I will primarily focus on the terms "platform," "gig work" and "algorithmic management," drawing on Nick Srnicek's book *Platform Capitalism* and Alessandro Gandini's influential paper "Labour Process Theory and the Gig Economy."

Platforms and their Precarious Gigs

Strictly speaking, unemployment has globally been in decline since 2009.[8] Yet, Srnicek points out that especially in the developed world the majority of job growth has been happening in the self-employment category, with 90 percent of business growth in the UK for example, involving "businesses with no employees."[9] This should not come as a surprise. While tech companies are leading in the stock market and in terms of corporate capital, they employ notoriously few people.[10] At the same time, technological change, globalization, and the Toyotist development to an ever-leaner production line have made a lot of mid-skill, middle-wage jobs in the Global North obsolete. They have been primarily replaced by "low-skill, low-wage jobs and (to a lesser degree) … high-skill, high-wage jobs."[11] Thus, while there may be jobs on the market, they are becoming increasingly more precarious and rarely entail a secure employment relation. Companies are framing this precarity in the spirit of

entrepreneurship, independence, and flexibility, with a lot of this precarious work coming in the form of "gigs," a term adopted from performing arts where artists are paid per performance.[12] However, the concept of gig work is nothing new. It is rather the descendant of the piece work and day work systems that were common until the 1950s. Likewise, rather than receiving an hourly or monthly wage, gig workers are paid per tasks and do not enjoy the benefits of an employee status, such as health insurance, paid sick days, vacation, or pension, since they fall under the self-employment category.[13]

Platforms constitute the dominant way in which such precarious gig work is offered. Srnicek distinguishes between five different types of platforms—advertising platforms, cloud platforms, industrial platforms, product platforms, and lean platforms—with ride hailing apps like Uber and delivery platforms like Wolt falling under the last category, which mostly comes in the form of mobile apps.[14] They make money by charging a commission for every transaction they facilitate, meanwhile outsourcing as much of their staff and material costs as possible, with workers having to take on the expense for insurance and devices like cars, bikes, and phones, all the while working for low wages and with no benefits. Thus, lean platforms have sparked controversy, because they play an arguably crucial role in providing work and income, yet the nature of the labor they offer proves precarious and exploitative. Even so, most lean platforms dot not make profits and only survive on venture capital investment.[15] Following the growth before profit principle prominent in the 1990s, they are successful only by leaping ahead of regulations and become increasingly less profitable as governments put in place the respective legislation and workers mobilize against the exploitative practices to secure better wages.[16]

While looking at these companies as lean platforms seems useful to understand how they operate on a business level, using

the term "labor platform"—coined by Julieta Haidar and Maarten Keune for "digital platforms that organize labor processes by matching labor providers (mainly self-employed workers) with clients and consumers"[17]—to describe the delivery platforms discussed in this paper shifts the focus onto what such a system means for workers, and will therefore be the preferred term going forward.[18]

Essential to the discussion of labor platforms in this paper is Alessandro Gandini's writing on algorithmic management,[19] a term originally coined by Min Kyung Lee, Daniel Kusbit, Evan Metsky, and Laura Dabbish to define "software algorithms that assume managerial functions and surrounding institutional devices that support algorithms."[20] In the context of labor platforms, algorithmic management serves to calculate rates, control performance, and allocate tasks. Such algorithms rely not only on the raw data they gather from workers' behavior tracked by the platform but also on customer feedbacks and ratings. The use of customer-generated data to monitor workers is derived from what sociologists Linda Fuller and Vicki Smith in 1991 termed "management by customers."[21] The practice had become popular in the 1980s with the service sector growing and companies trying to evaluate employee-customer interactions. Already in the early 1990s, Fuller and Smith pointed out the shortcomings of using consumer-generated data to discipline workers, as it tends to be heavily biased. Still, feedback, ranking, and rating systems that ensure "a set of consumer-generated or client-generated data are attached to each worker"[22] have become central to how labor platforms assess a worker's performance and therefore essential for algorithmic management.[23] The exact mechanism of the algorithm, i.e., information about which of the workers' actions affect which parameters in what way, is not accessible to workers.[24] They consequently revert to analyzing, discussing, and speculating

amongst themselves on online forums how certain behavior may influence how one is "treated by the algorithm."

Having outlined the relationship between platforms and labor, the following section looks at how algorithmic management utilizes gamification and the ways in which workers react to such mechanisms.

Algorithmic Management through Gamification

Platform workers are only paid when executing a gig. Thus, they have to invest unpaid time to monitor whether demand for work is rising and are constantly on standby, waiting for a new gig to come in. This standby mode combined with the fact that most platforms operate through apps, which workers have to install on their private mobile devices, evokes a state of limbo, blurring the line between labor and free time, as workers have to be alert and on their phones in order to secure paid work. It is in the platform's interest to have as many gig workers on standby as possible, even if that means less work for individual workers, because it means shorter waiting times for customers. This shows that the freedom and flexibility promised to gig/platform workers stands in conflict with platforms' promise of providing on-demand services to their customers. Therefore, algorithmic management has to incentivize gig workers to log on at specific times and in specific areas during/in which the platform anticipates rising customer demand, even if it may not comply with workers' preferred working hours.[25] Thus, it is not the work that is flexible, it is the workers who are expected to be flexible, adjusting to the platforms and its customers' demands.

However, because platforms do not employ their gig workers, they are not allowed to give their freelance "partners" direct orders. Therefore, they have to create incentives that nudge workers to behave in a way that is in the platform's interest,

while making it seem as if it was in the workers' best interest. Here, gamification comes into play.[26]

Gamification is the incorporation of elements and techniques from game design into non-game contexts. Playful tactics at work have a long history, with one of the first sociological studies on the topic being Donald F. Roy's 1959 analysis of techniques employed by factory workers to avoid "going nuts" while executing repetitive and monotonous tasks.[27] In the same vain, sociologist Michael Burawoy introduced the notion of "work games." In the 1970s, he investigated the way in which workers found means to manipulate the production process providing them with material and immaterial advantages as well as a sense of autonomy.[28] According to Burawoy, management intentionally structured the production process to prompt workers to engage in a game-like approach. However, the term "gamification"—coined by British-born computer programmer and game designer Nick Pelling in 2002—did not gain widespread recognition until around 2010 and has a close association with video games, leveraging their widespread appeal and the capabilities of connected digital platforms to facilitate interactivity and feedback.[29] In the decade since then, organizations in virtually every industry have started to employ gamified approaches, applying gamification in education, in customer-facing scenarios such as marketing and sales, and within firms to motivate employees.[30]

In the specific context of labor platforms, we can primarily consider gamification as a by-product of algorithmic management—a disguised method of indirect control over freelancers, which platforms are legally not allowed to exercise directly. While most gig work platforms have adopted techniques of gamification into their algorithmic management, these techniques become particularly close to video gaming experiences in ride hailing and delivery services, which this paper focuses on. Krishnan Vasudevan and Ngai Keung Chan have

compiled a comprehensive literature review on "Gamification as platform-initiated techniques of algorithmic management," which I draw on here. In general, gamification in this context packages tasks as "challenges" or "puzzles" through which workers can earn cash bonuses, points, and badges which count toward rankings, as well as virtual goods.[31] These rewards use dopamine triggers to influence worker behavior in the company's interest, for example influencing the workers' behavior to ensure a steady supply of labor during certain hours in spite of workers' alleged freedom to choose their own hours. Furthermore, the metrics collected about workers, which are used to categorize and rank them, promise more visibility and preferred treatment "by the algorithm" for those who do well. Moreover, they tie workers to the platform as they cannot transfer the merits collected on one platform to another and would have to start again from level one.[32] In this context, Sarah Mason's account of her experience as a Lyft driver depicts how drivers have to invest their own free time and personal resources in improving their ranking to chase after ostensibly better treatment by the algorithm for highly ranked workers.[33]

Tae Wan Kim and Kevin Werbach also point to the predatory potential of gamification on labor platforms,[34] since it harnesses some of the same methods and design patterns that gambling video games use to elicit addictive behavior. These include: "variable reward structures and multi sensorial, positive feedback that are designed to place players in a state of 'habituation' or 'the zone'."[35] Two accounts of drivers are interesting in this regard. First, Herb Croakley's description of "the zone":

> It gets to a point where the app sort of takes over your motor functions in a way. It becomes almost like a hypnotic experience. You can talk to drivers and you'll hear them say things like, I just drove a bunch of Uber pools for two hours,

> I probably picked up 30–40 people and I have no idea where I went. In that state, they are literally just listening to the sounds [of the driver's apps]. Stopping when they said stop, pick up when they say pick up, turn when they say turn. You get into a rhythm of that, and you begin to feel almost like an android.[36]

And second, Sarah Mason's account of her experience working as a Lyft driver:

> Every Sunday morning, I receive an algorithmically generated "challenge" from Lyft that goes something like this: "Complete 34 rides between the hours of 5am on Monday and 5am on Sunday to receive a $63 bonus." I scroll down, concerned about the declining value of my bonuses, which once hovered around $100-$220 per week, but have now dropped to less than half that. "Click here to accept this challenge." I tap the screen to accept. Now, whenever I log into driver mode, a stat meter will appear showing my progress: only 21 more rides before I hit my first bonus.[37]

Croakley and Mason underpin Kim and Werbach's finding, stating the unpredictability of bonuses and rewards, and the way in which the app's user experience aims to draw drivers into "the zone" in a kind of out of body experience.[38]

An important case study to look at in this context is Krishnan Vasudevan and Ngai Keung Chan's examination of drivers' responses to a 2018 redesign of Uber's worker-facing app, which intended to further gamify its algorithmic management. Ironically, this redesign resulted from mounting dissatisfaction among drivers regarding lack of autonomy, flexibility, and transparency.[39] In their study, Vasudevan and Chan found that workers were engaging in certain player modes and work games. The two distinctive player modes that they identified—grinding and oppositional play—show how drivers consent to and resist gamification.[40]

As introduced by Kim and Werbach, the term "grinding" has been adopted from video gaming literature, where it signifies the prolonged engagement in repetitive tasks by players as a prerequisite for an eventual reward.[41] In the context of platform work, it denotes a type of work where drivers willingly engage in and approve of gamification features, thereby aligning their interests with those of the platforms. According to Vasudevan and Chan's study, the grinding drivers mentioned entering into a specific emotional state in order to endure prolonged, strenuous shifts. This state, in which workers are encouraged to accelerate their speed and maximize their time logged into the platform's app, resembles what Natasha Dow Schüll defines as the "zone" in her study on machine gambling addiction.[42] One gambler in the study described the zone as follows: "It's like being in the eye of a storm, is how I'd describe it. Your vision is clear on the machine in front of you but the whole world is spinning around you, and you can't really hear anything. You aren't really there—you're with the machine and that's all you're with."[43] This notion of the zone will become particularly evident later on in the visual analysis of Kim's and Büttner/Köhn's films.

An interesting reference in Schüll that Vasudevan and Chan omit is how gambling designers actually took inspiration from time and energy management techniques employed in nineteenth- and twentieth-century factories to elicit gamblers getting into the "zone" in order to play more "productively," i.e., maximize the speed of play, the time of using the device, and the amount of money spent.[44] Thus, it seems ironic that platform apps have in turn reappropriated mechanisms from the gambling industry to manage their workforce, since gamification features such as rankings and weekly promotions are precisely designed to encourage getting into the zone and grinding.[45]

Conversely, the term "oppositional play" characterizes a working approach where drivers actively oppose the platform's

gamification, devising collaborative work games that lead to personalized rewards. Workers creatively repurpose the features of the platform's app in unexpected ways to resist algorithmic management.[46] For example, accepting gigs during high demand periods in such ways that workers earn more; using alternative routes that were faster or collected more mileage; or essentially hiding from customers and collecting a no-show penalty from them.[47] The necessity to devise their own tactics arises from a profound mistrust of the platforms and what Burawoy termed a "legitimation crisis," where there is either too much or too little unpredictability in winning a game. Echoing this sentiment, a driver in Vasudevan and Chan's study noted that "Uber screws us over every day and so we have to find creative ways to work around this to make it fairer for drivers."[48] In line with the "games of work" Burawoy had discovered in the 1970s, Vasudevan and Chan found that gig workers likewise engaged in "games of control, speed, and skills."[49]

Platform worker communities develop and share all of these tactics on online forums such as Reddit or on designated websites like uberpeople.net. Vasudevan and Chan use the term "sensemaking" to describe this collaborative approach to working against the unknown variable that is algorithmic management. The term underlines the vital role that online communities play for gig workers and "reveals the efforts of forum members to articulate and inform others about the rules within [a] … gamified environment" of platforms.[50] Since gig workers do not share a physical workplace in the way that factory workers did, online forums present an immaterial place for them to organize. Furthermore, research by Michael David Maffie has shown that workers who are active in online communities were also interested in unionizing or participating in a labor association.[51]

Thus, we have seen that platforms employ gamification as part of their algorithmic management to exert indirect control

over freelancers, nudging them to behave in the company's interest and engage in grinding. Is has also become clear that gamification features lead to a blending of labor and leisure in two ways: with workers having to perform unpaid labor in order to secure gigs and in emulating experiences from video gaming and gambling that release dopamine. However, workers' response to these mechanisms can also go against the companies' interest, which is when workers engage in oppositional play, using gamification features in ways different to what they were intended for. Having looked at the influence of (video) games on the workplace, the following section will focus on the genre of cyberpunk and its connection to video games as well as the impact of video games on contemporary art.

Art, Video Games, and Cyberpunk

Before the dot-com boom, when the internet was not yet widely accessible and only used by a handful of academics, cyberpunk emerged as a literary sub-genre of science fiction, with seminal novels like William Gibson's *Neuromancer* (1984) and Neal Stephenson's *Snow Crash* (1992). These novels, typically focusing on high-tech, dystopian futures, predicted and influenced much of what was to come in the following decades.

Cyberpunk narratives also manifested in cinema (Ridley Scott's 1982 *Blade Runner*), as well as in graphic novel and animation, where Japanese media became particularly influential (especially Masamune Shirow's 1989 manga *Ghost in the Shell* with its 1995 adaptation as anime by Mamoru Oshii; or Katsuhiro Otomo's 1982 manga *Akira* and its 1988 anime adaptation) and video games (*Cyberpunk 2077*, 2020).

The typical cyberpunk plot takes place in a not-so-distant future in which the government is either weak or non-existent. Private megacorporations, frequently with criminal tendencies, have taken over governing functions, controlling technology, media, and natural resources, giving rise to extreme

commercialization and an omnipresence of advertisements. The exploration of cybernetics, human augmentation, and artificial intelligence obscure and question the distinction between human and machine. In this context, "plugging-in," i.e., the act of connecting to a digital or virtual environment, emerges as a common trope, blurring the lines between physical reality and virtual or digital spaces.[52] The high-tech stands in contrast with the low-life, as a strong class hierarchy marks society. There is no equality and the majority of people represent a suffering underclass. The typically urban cyberpunk settings abound in sprawling, neon-lit cities that are overcrowded, polluted, and rife with crime. The architecture may frequently be crumbling or in ruins, except for corporate headquarters which will stand pristine.[53] Within these built environments, the theme of racing reoccurs. It can serve as a symbol of rebellion, a showcase of advanced technology, or as a catalyst within the plot, setting off a chain of events that lead to larger conflicts or adventures.

Since the 2000s, artists have increasingly incorporated science fiction tropes, themes, and methodologies in their practice, including cyberpunk. This may partially result from the exponential increase of the published science fiction media, but also from the fact that "it is a form capable of addressing politics, economics, social organization, subjectivity and climate change."[54] Fredric Jameson mentions cyberpunk on multiple occasions in his seminal text *Postmodernism, or The Cultural Logic of Late Capitalism* and in a footnote regrets to not have added a whole chapter on cyberpunk to the book, saying it was "the supreme literary expression if not of Postmodernism, then of late capitalism itself."[55] In his collection *The Seeds of Time*, Jameson discusses cyberpunk as a genre uniquely suited to exploring the complexities of the contemporary world, particularly through its use of speculative technology, urban environments, and the intersection of human and machine. Cyberpunk's narratives of alienation, technological control, and

corporate dominance resonate with Jameson's broader critique of the cultural logic of late capitalism.[56] Likewise, Benjamin Noys calls the quintessentially cyberpunk *Neuromancer* "a capitalist utopia in dystopian formulations, figuring the self literally as the 'entrepreneurial machine' that Foucault had already anatomized as the subjectivity of neoliberalism."[57] Thus, it seems very fitting that the artists, whose work I will discuss in the following two chapters, choose to reference cyberpunk in their depiction of platform-mediated gig work.

Video games serve as another, already mentioned medium that both influenced the cyberpunk aesthetic and took inspiration from it. In turn, they also had a significant influence on art. Already in 2006, Domenico Quaranta, one of the forerunners in researching and curating art in connection to computers, the internet, and new media in general, pointed to how video games were conditioning the aesthetics of other media, especially in contemporary art. He argues that the video gaming industry—which, being part of the digital economy, was also a product of the dot-com boom, just like platforms—and the economy it gave rise to played an important role in fostering the development of new media, thus critically impacting its history.[58] He specifically refers to how the video gaming industry stimulated and financed the development of photorealistic 3D interfaces and spaces.[59]

As artists started to interact with the new medium and to use it in their practice, the term "game art" was coined. Writing in 2012, John Sharp identified four categories of game art, which prove relevant in the context of the case studies discussed in this paper: "the use of game technologies to generate images (1); the appropriation of games to create works of art (2); the hacking and modification of games to create works (3); and the intervention into game spaces through artistic practices (4)." The use of video games in these different ways became possible because of id Software, the company who had created the

influential first-person shooter *Doom* (1993). In 1994, id Software developed the Doom Editing Utilities, a software tool which let users edit the game, publicly available for non-commercial use. It allowed users to create their own games and 3D digital worlds, and artists readily adopted the new possibilities into their practice.[60] Interestingly, the primary ways in which artists were utilizing the new medium in the 1990–2000s resembled what Vasudevan and Chan identify as oppositional play amongst gig workers. By creating video game modifications (or "mod") and "machinima," films made from video games, they were using games in ways they were not intended to, changing or hacking into their code, at times also to protest against a game's ideology.[61]

Still, according to Sharp, by 2006 game art was essentially dead. He outlines the medium's demise in a way that echoes what had also happened to net art: a steady demise due to lack of salability, eventually being subsumed by the term "new media art."[62] Alex Myers contests this alleged death of game art, listing several works which mainstream artists created after 2006.[63] Even so, Sharp does seem to have a point, in that at least the avid discussion on video games as art and video game art that had flourished at the beginning of the 2000s had fallen flat by the 2010s, shifting toward the discourse around internet and post-internet art instead. Nevertheless, game art has had a lasting influence on what kind of visuals we associate with new media art: a focus on the first-person perspective, computer-generated images, and the immersion of or even engagement with the viewer are the heritage of game art.

Quite recently, we have seen a rise of artists exhibiting in major institutions and doing something similar to game art, i.e., using game technologies and appropriating games to create works of art, thus falling into the first two of Sharp's categories. At the forefront of this generation are artists including Lu Yang, Lawrence Lek, Ed Atkins, and Ian Cheng, who work with gaming

engines such as Unity or Unreal Engine—originally used in the high-end gaming industry—to create video works as well as games which the audience can engage with.[64] While the work of these individual artists have been discussed in the context of video game aesthetics, to my knowledge, there has not been a collective discussion of such works in the lineage of game art or in respect to their distinctive use of video gaming engines as their main medium. An article by Tom Faber in the *Financial Times* serves as an exception here. While not mentioning game art, he suggests that these artists, who were all born around 1982, "grew up on a diet of video games and now deconstruct their themes and repurpose their visual language, … [showing] how games are expanding the horizons of fine art, not just in subject matter but also by providing new tools that radically increase the scope and scale of what a single artist can create."[65] This is certainly closely tied to the exponentially increasing influence that gaming has had on popular culture in general, constituting one of the fasted growing industries in recent years.[66]

In *Delivery Dancer's Sphere* (2022) by Ayoung Kim and *Platform* (2022) by Johannes Büttner and Steffen Köhn, cyberpunk and video games, the two topics of this chapter, come together to approach the themes outlined in the earlier chapters: gig work, labor platforms, and gamification. As Yang, Lek, Atkins, and Cheng, both Kim and Büttner/Köhn use footage created in video gaming engines in their works. However, they combine it with live-action footage shot on location. Still, they reference video games on multiple levels, as I will outline in the following sections, beginning with Büttner and Köhn's film.

Johannes Büttner and Steffen Köhn's *Platform* (2022)

Platform explores the precarious working conditions under platform capitalism, as well as the gamification strategies employed by these platforms to transform work into a competitive game. The film follows three gig workers who work for labor platforms in Berlin, Hong Kong, and LA, all unsatisfied with their working conditions. In their free time, they play a pizza delivery driver simulation game with a chat function, through which they have started connecting gig workers from all over the world to organize a general strike. As stated in the project description, the film "is based on extensive ethnographic research and interviews with freelancers on gig-economy platforms."[67]



Fig. 1a, 2a, 3a Johannes Büttner, Steffen Köhn *Platform* (2022)

Büttner and Köhn's film opens with a wide-angle, computer-generated view of a buzzing metropolis, with counter-lit skyscrapers creating a color scheme of black buildings dipped in pink hues at dusk and neon lights illuminating the dark center of the city at the onset of night (Figure 1a). The intro references the opening scenes of the classic cyberpunk anime, *Akira,* where we are introduced to Neo Tokyo with a tracking shot flying into the city and ultimately landing on the protagonists making their way through the traffic. As the camera zooms in for us to meet the first protagonist, Luis, we become aware of the mixing of gaming engine-generated footage—similar in style to *GTA*—and live-action footage. We follow the delivery driver through a chaotic downtown area (Figure 2a). Set in a pastiche of several cities and countries, Luis's ride seems like an absurd parkour, stressing

how physically strenuous and dangerous delivery jobs are: he gets hit by a car, has to climb a fence, and gets drenched in rain (Figure 3a). By using gaming engine footage to convey these scenes, Büttner and Köhn quite literally make it look like a game to be played. Thus, the problems that Luis faces appear as challenges in a video game that the player simply needs to master to get to the next level. Even though it is stated that Luis resides in Berlin, the urban environment setting of the computer-generated scenes bears characteristics of several global cities, a trope typical of the cyberpunk genre. In the context of gig work, this convergence of specific locations and a "generalized metropolis" effectively conveys gig workers' issues as local and global at the same time.

While he is out on a delivery, Luis constantly receives messages, notifications, and instructions through the delivery-worker-app on his phone. These are visualized as pop-up graphics layered on top of the scene (Figure 4a). As he waits for the next order to be prepared at the restaurant, he plays a delivery driver simulation game on his mobile phone (Figure 5a). Seeing Luis switch on his personal phone between the delivery app and the game already hints at the mixing of labor and leisure in gig work; the fact that he plays a pizza delivery simulator sarcastically heightens this.

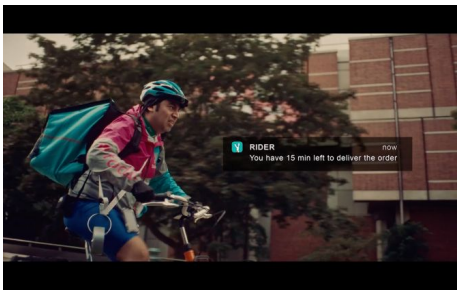


Fig. 4a, 5a, 6a, 7a Johannes Büttner, Steffen Köhn *Platform* (2022)

When Luis finally receives the food to be delivered, he becomes suspicious of the order: one portion of spring rolls to be delivered to the other side of the city. Luis calls the rider support hotline to cancel the order because he thinks it may be unsafe for him to deliver it. The scene switches to a woman in a call center who picks up his call. She sits with hundreds of other call center workers in a dark room illuminated only by hundreds of computer

screens (Figure 6a). In an annoyed tone, she tells him that she cannot help him, as cancelling the order would be against the company policy. All the while, notifications keep popping up on Luis's phone, reminding him that he is running out of time to deliver the spring rolls (Figure 7a). Continuously making the push notifications that Luis receives appear in the frame exemplifies both the gamification aspect of the platform's worker-facing app and the pressure this form of algorithmic management induces. This is further exacerbated when Luis tries to receive help from another human, the person on the phone in the call center, whose working conditions seem just as poor. When she says she cannot help him, he desperately shouts: "But I mean, it's your job to support me, right? You're the rider support team!"[68]

As Luis finally delivers the order, a man greets him. The man sits Luis down in front of a camera, wanting to interview him about his work for a film on digital slavery, thus referring to the meta level of how the film itself was made. Luis begins to explain how he and other riders plan to organize a strike. A second storytelling level opens as Luis starts to talk about Ramesh, a labor migrant from Tamil Nadu, working as a delivery driver in Hong Kong. The video begins to follow Ramesh through the streets of Hong Kong, the mise-en-scène heavily drawing on cyberpunk tropes, dominated by pink and turquoise neon lights, coincidentally the corporate colors of many delivery apps (Foodora, Deliveroo, Wolt, Baedal Minjok) (Figure 8a). Ramesh also receives a suspicious order and calls the rider support service for help, getting connected to the same call center worker as Luis, who says there is nothing she can do for him. Forced to abide by the platform's rules and deliver the order to avert a bad rating or one that could lead to suspension from the app, he ends up getting mugged in a dark



Fig. 8a, 9a, 10a Johannes Büttner, Steffen Köhn *Platform* (2022)

alley, with his scooter stolen. Back at his home, which consists of a tiny, crowded room with bunk beds that he shares with his wife and two children (Figure 9a), he plays the same delivery simulator game that Luis plays. We learn that it is through this game's chat function that the drivers are organizing (Figure 10a). This way of community building references the real-life online networks that gig workers have.

A third narrative layer opens as Ramesh starts to talk about his friend, Hiro, a fellow delivery driver and struggling actor based in LA who he met through the chat function of the pizza delivery simulator. His home, an overcrowded storage unit illuminated by pink and blue neon lights, looks like it is taken straight out of a cyberpunk novel—he even has a poster of *Ghost in the Shell* on the wall (Figure 11a). Indeed, his character references the main protagonist of Neal Stephenson's novel *Snow Crash*—Hiro Protagonist, a hacker who works as a delivery boy for Cosa Nostra Pizza and has to save the world from a hacker virus. Hiro in Büttner and Köhn's film simultaneously works for five labor platforms, among others, as a juicer for e-scooters and as an Amazon Flex delivery driver. One day he gets a notification through the Amazon Flex app calling him in for a casting for the role of the main character in what seems to be a movie adaptation of *Snow Crash* (Figure 14a). A Silicon Valley-type CEO persona over-excitedly pitches Hiro the plot, not realizing that he reiterates a perverted action movie version of his own lived reality to Hiro. The CEO then offers Hiro the acting gig through the Amazon Flex app (Figure 15a). The notification reads: "New Gig available. Accept it before it's gone." At the end of the film, the gig workers succeed in staging



Fig. 11a, 14a, 15a, 16a, 17a, 18a Johannes Büttner, Steffen Köhn *Platform* (2022)

the global strike, shouting slogans like "power to the people" and blocking traffic in every major metropolis (Figures 16a–18a). Yet, it seems that they fail to achieve any change to their condition.

Ayoung Kim's *Delivery Dancer's Sphere* (2022)

Compared to Büttner and Köhn's film, the plot of *Delivery Dancer's Sphere* is less dense. Instead, it lays out the poetic metaphor of the delivery dancers—as the platform's workers are called—as situated in between time and space. The anachronistic narration—which also hovers between time and space—follows Ernst Mo, a female driver working for the Delivery Dancer platform, on her motorcycle through a fictionalized version of Seoul as she completes orders. She keeps running into a doppelgänger of herself named En Strom (both names are anagrams of the word "monster"), who prevents her from completing her orders on time, pulling her into a "zone" where she loses track of time. Consequently, her ratings on the delivery app drop and she faces the consequences of the "Dance Master" algorithm's disciplinary management.

Kim uses two kinds of computer-generated footage in the film. The first are photogrammetric renderings of Seoul's streets and alleys, created using a lidar scanning app on an iPhone and later assembled in Maya.[69] The decision to opt for a lidar scanning app motivated by budget constrains ended up creating a visually interesting result: since the app could not scan the environment to the degree that a specialized company could have, the resulting visuals appear fragmented, almost ruin-like, thus giving this version of Seoul a dystopian look in line with cyberpunk descriptions and depictions of urban spaces (Figures 5b–6b). The second type of



Fig. 5b, 6b, 7b, 8b, 9b, 10b, 11b, 17b, Ayoung Kim, *Delivery Dancer's Sphere*, 2022

computer-generated footage are motorbike riding scenes made in Unity.[70] Like Büttner and Köhn's cityscapes, the environments in these scenes as well as the live-action footage heavily draw on cyberpunk with skyscrapers at dusk and at night, dipped in blue and pink neon lights (Figures 7b–11b, 17b).

Meanwhile, Kim's use of camera angles references video gaming aesthetics in different ways. In scenes using photogrammetry footage, the camera smoothly moves through alleys, defying the laws of gravity and mimicking the first-person perspective of a video game (Figures 2b–3b). Several of the live-action shots also play with this perspective, utilizing a camera attached to the main actress's motorbike helmet. Conversely, the scenes created in Unity heavily reference action-adventure games like *Grand Theft Auto*, with the camera abruptly switching between perspectives (Figures 7b–11b).



Fig 2b, 3b, Ayoung Kim, *Delivery Dancer's Sphere*, 2022

As in the case of Büttner and Köhn's film, Ayoung Kim—who is known to use science fiction references in her work—draws inspiration from cyberpunk in her fictitious renderings of Seoul. Furthermore, in a catalogue essay, Jinshil Lee makes a strong case outlining the parallels between Kim's film and *Snow Crash,* though Kim does not explicitly mention the novel as a reference.[71]

The film starts out with a close-up shot of Ernst Mo opening the delivery dancer app on her phone to start work, then immediately cuts to footage filmed with a fisheye lens attached to Ernst Mo's motorcycle helmet with the protagonist, explaining how the delivery dancers' sense of time falters when they log on



Fig. 1b, 12b, 13b, 14b, 15b, 16b, Ayoung Kim, *Delivery Dancer's Sphere*, 2022

to the app (Figure 1b). The scene changes to streetlights flashing past the first-person camera, turning into a computer-generated undertow of prismatic light (Figures 2b–3b). These textual and visual cues allude to what the studies mentioned in previous sections have identified as "the zone" and continue throughout the film. The highest level that Delivery Dancers can aspire to—the Ghost Dancers who "take invisible routes"[72] for their deliveries—seems to be the ultimate "zone." Ernst Mo explains: "We ride along topologically twisted pathways …, we become invisible. When time and space open out like that we call it the 'city in between.' … We ride over the building facade, sometimes through the invisible crevice of time, between the translucent interlocked space." The routes of the ghost dancers are visualized through a maze of circles that open up into more circles (Figure 4b). In the ghost dancer level, the workers can thus shed the physical contains of their human bodies, to achieve ultimate efficiency, alluding to the "plugging-in" prominent in cyberpunk. The notion of corporeality or lack thereof is further explored, through Ernst Mo primarily speaking as a disembodied off-screen voice. Reminiscent of the conversations gamers may have via headsets while playing together online, this stylistic choice thus evokes both associations with video gaming and themes of mind–body separation in cyberpunk. She stays in constant dialogue with a second off-screen voice which can resemble an in-app voice assistant. This voice takes on the role of the personified algorithm, ranging from cheering Ernst Mo on in an overly excited tone, through acting like somewhat of a counsellor, to disciplining her when her ratings starts to drop. This already hints at the strong focus in Kim's film on algorithmic management and its gamification features. On top of the constant interaction with and surveillance by the voice assistant, Ernst Mo continuously receives notifications. They promote new "challenges" she qualifies for, urge her to drive faster, and inform her about declining ratings (Figures 12b–16b). Upon Ernst Mo

starting her shift, the cheerful, artificial voice assistant announces: "Are you ready to have some fun dancing today?" It then goes on to promote several quests that Ernst Mo is eligible for: "evening peak time," "weather special deal," "heat wave surge: 10,000 won," while colorful graphics pop up, showing Ernst Mo's potential earnings, to conclude with the mildly threatening phrase: "ride along before it is too late!"[73] (Figures 13b–14b). Here, it becomes particularly apparent that the choice to euphemistically call the delivery workers "dancers" also points to the gamification of gig work, as do different quests that the voice assistant offers. The gamification aspect of algorithmic management is then extended into a hyperbole in the lines of the voice assistant as it shouts: "Life is a battle! Dancing Simulation in the real game! Easy, fun, and effective Serious Game to learn!" The film refers to such measurements of algorithmic management on several occasions. We witness Ernst Mo becoming increasingly distressed when her ratings drop, as her antagonist/doppelgänger En Strom pulls her into a different kind of zone where she loses track of time and is unable to complete her deliveries. All the while the app's voice assistant threatens: "Ghost Dancer, you were late for your delivery. You have added a penalty to your record. Your average rating has fallen under 4.8. You need to improve!"[74] (Figures 15b–16b). When she is not offered any gigs, Ernst Mo calls the Delivery Dancer control center, which informs her that her account has been suspended because of her bad ratings.[75] Similar to Luis and Ramesh, she experiences an interaction with a call center employee, themselves most likely also outsourced to a third party provider, who cannot help her but merely delivers the decision of the algorithmic management.[76] Ernst Mo ends up struggling as a Delivery Dancer. Unable to log off the platform since it is her means of income, she simultaneously fails to fulfil her job to the algorithm's demands and customer's expectations as she keeps getting lost in the alternative "zone" with En Strom.

Circling Back

Having analyzed Kim's and Büttner/Köhn's films individually now, it feels productive to return to and look more closely at how the two works reference cyberpunk and video games to formulate a critique of labor platforms and gig work. Kim's and Büttner/Köhn's works address cyberpunk motifs regarding the relationship between the human body and technology on multiple levels. The protagonists' bodies are at once portrayed through the combination of live actors and computer-generated images, thus already entering a liminal status between the avatar and the person.

Is his book *Terminal Identity: The Virtual Subject in Post-Modern Science Fiction*, Scott Bukatman points out a penetration of the human body via technology as a theme in cyberpunk fiction.[77]

This often manifests in the form of the cyborg. Bukatman argues that there is "an uneasy but consistent sense of human obsolescence [underlying these works], and at stake is the very definition of the human."[78] Kim's and Büttner/Köhn's protagonists are not quite yet cyborgs. Yes, the workers remain necessarily inseparable from their devices; they seem to have merged with their mobile phones, helmets, and vehicles—Ernst Mo's helmet is even equipped with a camera recording what is ahead of and behind her (Figure 1b). This entanglement of the body and the device also refers to the blurring of labor and leisure and is even ironically emphasized by the clothing the protagonists wear, which in Büttner and Köhn's case overflows with corporate logos (Figures 4a, 12a–13a), and in Kim's likens an astronaut's suit (Figures 14b–16b). Still, we are also made painfully aware of the



Fig. 12a, 13a Johannes Büttner, Steffen Köhn *Platform* (2022)

workers' human "flesh," the fact that they cannot escape the shell of their body. Because of their socio-economic class, they are forced to "plug-in" to work yet have to use their physical bodies to execute the gigs assigned to them. Therefore, it becomes clear that in Kim's and Büttner/Köhn's contemporary dystopias, the obsolescence of the human manifests on a managerial level, which algorithms are taking over, while humans still perform the dirty blue-collar work. Thus, Kim's and Büttner/Köhn's films use "plugging-in" as a trope to highlight the physically taxing labor which corporations try to dematerialize and make invisible for their customers. You do not want to think about the worker riding their bike through the rain for you to get your pizza on a cozy Friday night. Or the dangers of accidents which become particularly apparent in Büttner and Köhn's work and are heightened through the pressure to deliver as fast as possible, even if the worker is exhausted. Or the worker's "shift" forcefully prolonged by the nudges of the algorithmic management to work just a little longer for a little bit more money and a slightly better ranking.

Furthermore, the typical urban pastiche of the megacity is evident in both video works. As the drivers speed though the cityscape to deliver orders on time, the motif of racing also comes to mind. Both works evoke associations with racing video games, as both artists opt for gaming engine-generated footage for many of the driving scenes, using an animation style that draws attention to its origin in gaming and superimposing the layout of a video game's user interface onto the scenes to depict the gamification tools. However, the motif of racing—which usually means lower classes rallying against the authorities—does not symbolize authority in Kim's and Büttner/Köhn's films. Instead, the speeding delivery drivers constitute a symptom of the pressure put by algorithmic management through its gamification tools to be ever more

efficient. The symbol is thus turned on its head with workers being forced to "race" to make a living.

Looking at the labor platforms depicted as companies in both Büttner/Köhn's and Kim's works, they fit the archetype of the all-controlling corporations of the cyberpunk imaginary. In most cases, we can read the portrayal of these criminal megacorporations in cyberpunk as a critique of capitalism.[79] Therefore, it seems ironic that precisely cyberpunk has served many tech corporations as inspiration, with Gibson being credited to have coined the term "cyberspace," and Stephenson being accredited the phrase "meta verse" as well as the popularization of the term "avatar" in a computing context. In both of the works discussed, the labor platforms take on the role of the criminal corporation, though Büttner and Köhn's *Platform* presents this antagonistic dynamic much more evidently. However, as opposed to a single evil mastermind boss—who is mostly absent in gig workers' interaction with labor platforms—the algorithm that manages the workers and its gamification features functions as the direct antagonist in both videos. Lacking a clear opponent, the protagonists seem unsure as to who exactly they rebel against.[80] The workers in Büttner and Köhn's *Platform* may have succeeded in staging a global strike, but when the film cuts back to the interviewer, who asks "And, then?," the film ends. Meanwhile, Kim's protagonist Ernst Mo focuses her energy on her twisted relationship with En Strom, who provocatively challenges her to just log out of the delivery platform's app if she did not want to see her anymore, yet she cannot, and we witness her trapped in the endless labyrinth of the Dance Master. However, we can assume that even if she could find a way out of the system, her solitary rebellion against the platform would be just as futile as the global strike in *Platform*. The reality the workers are ultimately confronted with comes to show that the issue is so much bigger than the

platforms they work for. It is an entire economy that lives off of precarious work and has no interest in improving their situation. Thinking back to Srnicek's account of how the digital economy and its platforms came to be, this seems perhaps the only realistic ending for both films.

Conclusion

Having outlined the three historical events that laid the groundwork for the development of the digital economy as well as for the precarious working conditions exploited by labor platforms—the 1970s downturn, the 1990s dot-com boom and bust, and the 2008 crisis—I argued that gamification serves as algorithmic management's tool to indirectly control workers through incentives. Such indirect management is used as a loophole to ensure that freelancers act in the platforms' interest, since companies would only be allowed to give workers direct orders if they were properly employed. The use of gamification features to elicit this indirect control reinforces precarity since it has predatory tendencies and blurs the lines between labor and leisure.

Tying back into the developments that fostered the dot-com bubble, I outlined common characteristics and themes in cyberpunk narratives and how they connect to both the precarious working conditions bolstered by technological change and to video games. Furthermore, I identified a new generation of contemporary artists, to which Büttner, Köhn and Kim belong. This generation echoes the game art movement of the 1990s and early 2000s and uses gaming engines to create computer-generated footage for video works.

The analysis of the two case studies highlighted the references to cyberpunk in both Kim's and Büttner/Köhn's films. What seems interesting though is that they do not take place in the future. By employing the markers of a genre known for building dystopian future worlds to describe present circumstances, the artists

effectively draw parallels between the present we are living in and the dystopian futures which cyberpunk had "warned" us against. Both videos use gaming engines to produce computer-generated footage, combining it with life-action scenes, and thus highlighting how workers become entangled between work and the game, the digital and the analogue. Through this mixing of footage, their comments on the apps' gamification aspects also reference the cyberpunk aesthetic by rendering the protagonists as avatars.

At the substantive level, the main issue in which the two works diverge is how the respective workers react to their exploitative circumstances. Büttner and Köhn focus on the aspect of organized struggle through uniting gig workers. Singling out the lives of three exemplary workers, they shed light on both the individual and universal struggles of gig workers. Having them connect through the online community of a delivery simulator game simultaneously problematizes the blurring between labor and leisure and to an extent reclaims the gaming space as one if not of leisure, then at least one of resistance. In the end, the visibility of workers in urban infrastructure is used to draw attention to their cause and to strike.

Conversely, Kim decidedly concentrates on the isolating nature of gig work. Ernst Mo never seems to encounter other people apart from her ambiguous antagonist/lover En Storm, who looks identical to her. She never interacts with customers, only with the algorithmic management of the Delivery Dancer app; the Delivery Dancers' movements are described as invisible on multiple occasions as well.[81]

Still, in the open-ended or, in Kim's case, endless nature of the plot, both films ultimately make a similar point. The workers realize that their problems extend beyond their platforms to encompass an economy reliant on precarious work, with no desire to improve their situation. Aligning with Srnicek's analysis

of the digital economy's origins, the workers' continued struggle necessarily seems to be the only realistic end.

1 The "application of game elements and principles in a non-gaming environment" to encourage engagement. See John Dahl et al., "Gamification Equilibrium: The Fulcrum for Balanced Intrinsic Motivation and Extrinsic Rewards in Learning Systems: Immersive Gamification in Muhamad Khairulnizam Zaini Learning System," *International Journal of Serious Games* 10, no. 3 (2023): 83–116. https://doi.org/10.17083/ijsg.v10i3.633.

2 McKenzie Wark, *Capital Is Dead* (London: Verso, 2019), 1–19.

3 Yanis Varoufakis, *Technofeudalism: What Killed Capitalism* (London: Penguin Random House, 2023), xi–xiii.

4 Nick Srnicek, *Platform Capitalism* (Cambridge: Polity, 2017), 32.

5 Srnicek, *Platform Capitalism*, 4.

6 Srnicek, *Platform Capitalism*, 9.

7 Srnicek, *Platform Capitalism*, 33.

8 2020 being an exception with the outbreak of COVID-19.

9 Nick Srnicek and Alex Williams, "The Future Isn't Working," *Juncture* 22, no. 3 (2015): 244, https://doi.org/10.1111/j.2050-5876.2015.00868.x.

10 Nick Srnicek, *Platform Capitalism*, 4: "Google has 60,000 direct employees, Facebook has 12,000, while WhatsApp had 55 employees when it was sold to Facebook for $1 billion and Instagram had 13 when it was purchased for $1 billion. By comparison, in 1962 the most significant companies employed for larger numbers of workers: AT/T had 564,000 employees, Exxon had 150,000 workers, and GM had 605,000 employees."

11 Srnicek and Williams, "The Future Isn't Working," 244.

12 Abhishek Behl et al., "Gamifying the Gig: Transitioning the Dark Side to Bright Side of Online Engagement," *Australasian Journal of Information Systems* 25 (2021): 1, https://doi.org/10.3127/ajis.v25i0.2979.

13 This categorization has been frequently criticized as unjust, with some cities ruling in workers' favor. A review of the current legal status of gig workers on a global scale is

beyond the scope of this paper and I will therefore not go into further detail about individual cases of workers uniting against specific companies. You can refer to the Rutledge reader *The Gig Economy: Workers and Media in the Age of Convergence* edited by Brian Dolber, Michelle Rodino-Colocino, Chenjerai Kumanyika, and Todd Wolfson, as well as *Work and Labour Relations in Global Platform Capitalism* edited by Julieta Haidar and Maarten Keune for more in-depth research in this regard.

14 Srnicek, *Platform Capitalism*, 49.

15 Nick Srnicek, "The Challenges of Platform Capitalism: Understanding the Logic of a New Business Model," *Juncture* 23, no. 4 (2017): 256–7, https://doi.org/10.1111/newe.12023.

16 Srnicek predicts that "the sharing economy will be a short-lived phenomenon. Most of these firms will go bankrupt, or turn into luxury services for the rich, or transform themselves into a different type of business model altogether." Srnicek, *Platform Capitalism*, 1; Srnicek, "The Challenges of Platform Capitalism," 256–7. A quick look at Uber as the first and most emblematic lean platform proves insightful. In 2022, an investigative series from *The Guardian* titled *Uber Files* shed light on how Uber and its competitors disregard labor laws and lobby politicians to change existing regulations in order to gain market dominance, meanwhile working with an unprofitable system running purely on venture capital. Like many of its competitors, they burnt investment to offer workers unsustainably high rates and customers absurdly low prices, when entering into a new market until both sides had become dependent on the platform. They would then slowly lower workers rates and raise prices for customers to decrease corporate spending. Yet in 2023, to the surprise of many, Uber became profitable for the first time since its disastrous IPO in 2019. Fully in line with their prerogative as a lean platform, they did so by cutting costs in their white-collar workforce, laying off thousands of employees, and raising the share they take off of every transaction on the app. Travis Hoium, "The 1 Reason Uber Is Now Profitable," *The Motley Fool*, November 30, 2023, https://www.nasdaq.com/articles/the-1-reason-uber-is-now-profitable; Michelle Cheng, "Uber Turned a Profit Last Year—the First Time Since Its IPO," *Quartz*, February 7, 2024, https://qz.com/uber-first-annual-profit-ipo-public-1851234204; Jasper Jolly and Graeme Wearden, "Landmark Moment as Uber Unveils First Annual Profit as Limited Company," *The Guardian*, February 7, 2024, https://www.theguardian.com/technology/2024/feb/07/landmark-moment-as-uber-unveils-first-annual-profit-as-limited-company.

17 Julieta Haidar and Maarten Keune, "Introduction: Work and Labour Relations in Global Platform Capitalism", in *Work and Labour Relations in Global Platform Capitalism*, eds. Julieta Haidar and Maarten Keune (Cheltenham: Edward Elgar Publishing, 2021), 1.

18 Whenever I write about "platforms" in the following chapters, I refer to labor platforms.

19 Haidar and Keune, "Introduction", 1.

20 Min Kyung Lee et al., "Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers," in *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (April 2015): 1603–12, https://doi.org/10.1145/2702123.2702548.

21 Linda Fuller and Vicki Smith, "Consumers' Reports: Management by Customers in a Changing Economy," *Work, Employment & Society* 5, no. 1 (1991): 1–16, http://www.jstor.org/stable/23746045.

22 Alessandro Gandini, "Labour Process Theory and the Gig Economy," *Human Relations* 72, no. 6 (2019): 1047, https://doi.org/10.1177/0018726718790002.

23 Gandini, "Labour Process Theory," 1049.

24 Gandini, "Labour Process Theory," 1046. Both Varoufakis and Wark also point to this information imbalance as the main feature of a data-driven economy.

25 Krishnan Vasudevan and Ngai Keung Chan, "Gamification and Work Games: Examining Consent and Resistance among Uber Drivers," *New Media & Society* 24, no. 4 (2022): 869, https://doi.org/10.1177/14614448221079028.

26 Sarah Mason, "High Score Low Pay: Why the Gig Economy Loves Gamification," *The Guardian*, November 20, 2018, https://www.theguardian.com/business/2018/nov/20/high-score-low-pay-gamification-lyft-uber-drivers-ride-hailing-gig-economy. See Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven: Yale University Press, 2008).

27 Donald F. Roy, "Banana Time: Job Satisfaction and Informal Interaction," *Human Organization* 4, no. 18: 158.

28 Michael Burawoy, *Manufacturing Consent: Changes in the Labor Process Under Monopoly Capitalism* (Chicago: University of Chicago Press, 1997), 77–79.

29 Tae Wan Kim and Kevin Werbach, "More Than Just a Game: Ethical Issues in

Gamification," *Ethics and Information Technology* 18 (2016): 157, https://doi.org/10.1007/s10676-016-9401-5.

30 Kevin Werbach and Dan Hunter, *For the Win: How Game Thinking Can Revolutionize Your Business* (Philadelphia: Wharton Digital Press, 2012): 25–26.

31 Vasudevan and Chan, "Gamification and Work Games," 869.

32 Vasudevan and Chan, "Gamification and Work Games," 869.

33 Mason, "High Score Low Pay."

34 Kim and Werbach, "More Than Just a Game," 165.

35 Vasudevan and Chan, "Gamification and Work Games," 870.

36 Sara Mason, "High score, low pay: why the gig economy loves gamification," *The Guardian*, November 20, 2018, https://www.theguardian.com/business/2018/nov/20/high-score-low-pay-gamification-lyft-uber-drivers-ride-hailing-gig-economy.

37 Mason, "High Score Low Pay."

38 Mason, "High Score Low Pay."

39 Though rest assured that platforms have thus far only "improved" the experiences and conditions of workers when they were forced by high attrition rates, jeopardizing the promise of on-demand services they make to their customers, or by legal action taken against them.

40 While Vasudevan and Chan's study focused specifically on Uber, most ride hailing and delivery apps use the same gamification features. I thus assume that their findings can be relatively universally applied to platforms using the same mechanisms. Vasudevan and Chan, "Gamification and Work Games," 866.

41 Kim and Werbach, "More Than Just a Game," 162.

42 Vasudevan and Chan, "Gamification and Work Games," 875.

43 Natasha Dow Schüll, *Addiction by Design: Machine Gambling in Las Vegas* (New Jersey: Princeton University Press, 2012), 2.

44 Natasha Dow Schüll, *Addiction by Design: Machine Gambling in Las Vegas* (New Jersey: Princeton University Press, 2012), 53, 56–57.

45 Vasudevan and Chan, "Gamification and Work Games," 875.

46 Vasudevan and Chan, "Gamification and Work Games," 874.

47 For a detailed account of the different work games, see Vasudevan and Chan, "Gamification and Work Games," 874–881.

48 Vasudevan and Chan, "Gamification and Work Games," 876.

49 Vasudevan and Chan, "Gamification and Work Games," 878.

50 Vasudevan and Chan, "Gamification and Work Games," 881.

51 Michael David Maffie, "The Role of Digital Communities in Organizing Gig Workers," *Industrial Relations: A Journal of Economy and Society* 59, no. 1 (2020): 123–49, https://doi.org/10.1111/irel.12251; Jamie Woodcock, one of the editors of *Notes from Below*, has also extensively written about gig workers' unionization efforts more broadly in *The Fight Against Platform Capitalism: An Inquiry into the Global Struggles of the Gig Economy* (London: University of Westminster Press, 2021).

52 In *Snow Crash*, characters frequently "plug in" to the Metaverse, an immersive virtual reality that functions as an extension of the internet.

53 Frances Bonner, "Separate Development: Cyberpunk in Film and Television," in *Fiction 2000: Cyberpunk and the Future of Narrative*, eds. George Slusser and Tom Shippey (Athens, GA: The University of Georgia Press, 1992), 194–199.

54 Dan Byrne-Smith, "Introduction," in *Science Fiction: Documents of Contemporary Art*, ed. Dan Byrne-Smith (Cambridge, MA: The MIT Press, 2020), 12.

55 Frederic Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), 419.

56 Frederic Jameson, *The Seeds of Time* (New York: Columbia University Press, 1994), 146–157.

57 Benjamin Noys, "Cyberpunk Phuturism," in *Science Fiction: Documents of Contemporary Art*, ed. Dan Byrne-Smith (Cambridge, MA: The MIT Press, 2020), 126.

58 Domenico Quaranta, "Game Aesthetics: How Video Games Are Transforming Contemporary Art," in *GameScenes. Art in the Age of Videogames*, eds. Domenico Quaranta and Matteo Bittani (Milan: Johan & Levi, 2011), 299.

59 Quaranta, "Game Aesthetics," 299.

60 Quaranta, "Game Aesthetics," 302–303.

61 Rachel Price, "Games & Systems," *Frieze*, March 12, 2013, https://www.frieze.com/article/games-systems.

62 John Sharp, "A Curiously Short History of Game Art," in *Proceedings of the International Conference on the Foundations of Digital Games* (May 2012): 27, https://doi.org/10.1145/2282338.2282348.

63 Alex Myers, "Case Study #3: Fire in the Hole – The Obviously Non-Short History of Art Games," *Journal of the New Media Caucus* 10, no. 2 (Summer 2014): https://median.newmediacaucus.org/caa-edition/case-study-3-fire-in-the-hole-the-obviously-non-short-history-of-art-games/.

64 Tom Faber, "How Video Games Became a New Playground for Artists," *Financial Times*, November 8, 2022, https://www.ft.com/content/80c7c492-fc30-494b-9e64-3f94d0363d53.

65 Faber, "How Video Games Became a New Playground for Artists."

66 Marijam Did, *Everything to Play For: How Videogames Are Changing the World* (London: Verso, 2024), 1–2.

67 Artists' unpublished statement.

68 Johannes Büttner and Steffen Köhn, *Platform*, 2022: 2:00 min.

69 Ayoung Kim, "Invisible Journeys in a Fictitious World," interview by Hannah Bachl, *Ars Electronica Blog*, July 13, 2023, https://ars.electronica.art/aeblog/en/2023/07/13/invisible-journeys-in-a-fictitious-world/.

70 Kim, "Invisible Journeys in a Fictitious World."

71 Jinshil Lee, "Leaked World: The Silver Maze of Eternal Time," in *Syntax and Sorcery: Ayoung Kim*, ed. Minsoo Kim (Seoul: Gallery Hyundai, 2022), 74–75.

72 Ayoung Kim, *Delivery Dancer's Sphere*, 2022: 9:18 min.

73 Kim, *Delivery Dancer's Sphere*: 4:30–5:00 min.

74 Kim, *Delivery Dancer's Sphere*: 14:50–15:10 min.

75 Kim, *Delivery Dancer's Sphere*: 18:45 min.

76 Kim, *Delivery Dancer's Sphere*: 18:15–18:45 min.

77 Scott Bukatman, *Terminal Identity: The Virtual Subject in Post-Modern Science Fiction* (Durham: Duke University Press, 1994), 1–22.

78 Bukatman, *Terminal Identity*, 20.

79 Frances Bonner, "Separate Development: Cyberpunk in Film and Television," in *Fiction 2000: Cyberpunk and the Future of Narrative*, eds. George Slusser and Tom Shippey (Athens, GA: The University of Georgia Press, 1992), 194.

80 Without going into too much detail here, I also want to mention the theme of hacking, prominent in many cyberpunk narratives, as something disruptive that finds its analogies in the oppositional play and protests of delivery workers in real live and in Kim's and Butter's works.

81 The notion of delivery workers being invisible has its roots in the cultural context of South Korea, where customers generally do not receive orders personally. Since apartment buildings are accessed using number codes, delivery workers access the building without having to interact with the customer. Because most buildings in South Korea have CCTV, workers simply place orders in front of the customer's doorstep.

Bibliography

Behl, Abhishek, Pratima Sheorey, Kokil Jain, Meena Chavan, Isha Jajodia, and Zuopeng (Justin) Zhang. "Gamifying the Gig: Transitioning the Dark Side to Bright Side of Online Engagement." Australasian Journal of Information Systems 25 (2021): 1–34. https://doi.org/10.3127/ajis.v25i0.2979 .

Bonner, Frances. "Separate Development: Cyberpunk in Film and Television." In Fiction 2000: Cyberpunk and the Future of Narrative, edited by George Slusser and Tom Shippey, 191–207. Athens, GA: The University of Georgia Press, 1992.

Byrne-Smith, Dan. "Introduction." In Science Fiction: Documents of Contemporary Art, edited by Dan Byrne-Smith, 12-19. Cambridge, Massachusetts: The MIT Press, 2020.

Bukatman, Scott. Terminal Identity: The Virtual Subject in Post-Modern Science Fiction. Durham: Duke University Press, 1994.

Burawoy, Michael. Manufacturing Consent: Changes in the Labor Process Under Monopoly Capitalism. Chicago: University of Chicago Press, 1997.

Cheng, Michelle. "Uber Turned a Profit Last Year — the First Time Since its IPO." Quartz, February 7, 2024. https://qz.com/uber-first-annual-profit-ipo-public-1851234204.

Dah, John, Norhayati Hussin, Muhamad Khairulnizam Zaini, et al. "Gamification Equilibrium: The Fulcrum for Balanced Intrinsic Motivation and Extrinsic Rewards in Learning Systems." International Journal of Serious Games 10, no. 3 (2023): 83–116. https://doi.org/10.17083/ijsg.v10i3.633.

Did, Marijam. Everything to Play For: How Videogames Are Changing the World. London: Verso, 2024.

Faber, Tom. "How Video Games Became a New Playground for Artists." Financial Times, November 8, 2022. https://www.ft.com/content/80c7c492-fc30-494b-9e64-3f94d0363d53

.

Fuller, Linda, and Vicki Smith. “Consumers’ Reports: Management by Customers in a Changing Economy,” Work, Employment & Society 5, no. 1 (1991): 1–16. http://www.jstor.org/stable/23746045.

Gandini, Alessandro. “Labour Process Theory and the Gig Economy.” Human Relations 72, no. 6 (2019): 1039–56. https://doi.org/10.1177/0018726718790002.

Haidar, Julieta, and Maarten Keune. “Introduction: Work and Labour Relations in Global Platform Capitalism.” In Work and Labour Relations in Global Platform Capitalism, edited by Julieta Haidar and Maarten Keune, 1–27. Cheltenham: Edward Elgar Publishing, 2021.

Hoium, Travis. “The 1 Reason Uber Is Now Profitable.” The Motley Fool, November 30, 2023, https://www.nasdaq.com/articles/the-1-reason-uber-is-now-profitable.

Jolly, Jasper, and Graeme Wearden. "Landmark Moment as Uber Unveils First Annual Profit as Limited Company.” The Guardian, February 7, 2024. https://www.theguardian.com/technology/2024/feb/07/landmark-moment-as-uber-unveils-first-annual-profit-as-limited-company.

Kim, Ayoung. “Invisible Journeys in a Fictitious World.” Interview by Hannah Bachl. Ars Electronica Blog, July 13, 2023. https://ars.electronica.art/aeblog/en/2023/07/13/invisible-journeys-in-a-fictitious-world/.

---.Syntax and Sorcery. Seoul: Gallery Hyundai, 2022.

Kim, Tae Wan, and Kevin Werbach. “More Than Just a Game: Ethical Issues in Gamification.” Ethics and Information Technology 18 (2016): 157–73. https://doi.org/10.1007/s10676-016-9401-5.

Lee, Jinshil. “Leaked World: The Silver Maze of Eternal Time.” In Syntax and Sorcery: Ayoung Kim, edited by Minsoo Kim, 73–80. Seoul: Gallery Hyundai, 2022.

Lee, Min Kyung, Daniel Kusbit, Evan Metsky, and Laura Dabbish. “Working with

Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers." In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (April 2015): 1603–12. https://doi.org/10.1145/2702123.2702548.

Maffie, Michael David. "The Role of Digital Communities in Organizing Gig Workers." Industrial Relations: A Journal of Economy and Society 59, no. 1 (2020): 123–49.

Mason, Sarah. "High Score Low Pay: Why the Gig Economy Loves Gamification." The Guardian, November 20, 2018. https://www.theguardian.com/business/2018/nov/20/high-score-low-pay-gamification-lyft-uber-drivers-ride-hailing-gig-economy.

Myers, Alex. "Case Study #3: Fire in the Hole – The Obviously Non-Short History of Art Games." Journal of the New Media Caucus 10, no. 2 (Summer 2014): https://median.newmediacaucus.org/caa-edition/case-study-3-fire-in-the-hole-the-obviously-non-short-history-of-art-games/.

Noys, Benjamin. "Cyberpunk Phuturism." In Science Fiction: Documents of Contemporary Art, edited by Dan Byrne-Smith, 125-126. Cambridge, MA: The MIT Press, 2020.

Price, Rachel. "Games & Systems." Frieze, March 12, 2013. https://www.frieze.com/article/games-systems.

Quaranta, Domenico. "Game Aesthetics: How Video Games Are Transforming Contemporary Art." In GameScenes. Art in the Age of Videogames, edited by Domenico Quaranta and Matteo Bittani, 297–308. Milan: Johan &Levi, 2011.

Roy, Donald F. "Banana Time: Job Satisfaction and Informal Interaction." Human Organization 4, no. 18, 158–68.

Schüll, Natasha Dow. Addiction by Design: Machine Gambling in Las Vegas. New Jersey: Princeton University Press, 2012.

Sharp, John. "A Curiously Short History of Game Art." In Proceedings of the International Conference on the Foundations of Digital Games (May 2012): 26–32. https://doi.org/10.1145/2282338.2282348

.

Srnicek, Nick. Platform Capitalism. Cambridge: Polity, 2017.

---."The Challenges of Platform Capitalism: Understanding the Logic of a New Business Model." Juncture 23, no. 4 (2017): 254–7. https://doi.org/10.1111/newe.12023.

Srnicek, Nick, and Allex Williams. "The Future Isn't Working." Juncture 22, no. 3 (2015): 243–7. https://doi.org/10.1111/j.2050-5876.2015.00868.x.

Vasudevan, Krishnan, and Ngai Keung Chan. "Gamification and Work Games: Examining Consent and Resistance among Uber Drivers." New Media & Society 24, no. 4 (2022): 866–86. https://doi.org/10.1177/14614448221079028.

Varoufakis, Yanis. Technofeudalism: What Killed Capitalism. London: Penguin Random House, 2023.

Wark, McKenzie. Capital Is Dead. London: Verso, 2019.

Werbach, Kevin, and Dan Hunter. For the Win: How Game Thinking Can Revolutionize Your Business. Philadelphia: Wharton Digital Press, 2012.