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PLATFORM VISIONS AND INVASIONS: SPATIAL (RE)IMAGINATIONS IN BIG TECH DISCOURSE

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This panel analyzes the textual and audiovisual discourses in which big tech companies including Google and Amazon envision social spaces (i.e. domestic, urban, educational, natural) and the role that their “digital platforms” play in them. These tech-produced discourses range from product development to promotion, from manifestos to corporate blogs, and from online (learning) environments to statements on climate change. The panel asks: What are the visions of human life and technology that big tech companies narrate in relation to public and private spaces? And how do these tech-generated visions compare to current insights in and critiques of how these companies intervene in social spaces?

Our combined research situates itself within the growing corpus of critical platform studies, tackling the unchecked expansion through which these companies and their programmable architectures become large societal players, disrupting private and public spaces and institutions (Zuboff 2019; Van Dijck, Poell, and De Waal 2018). Platform companies expand by grafting onto pre-existing infrastructures and spaces, becoming vital to their functioning, while hoarding vaster and vaster amounts of user data: a process defined as “platformization” (Helmond 2015; Plantin et al. 2016). It is through platformization that these companies advance the rise of platform societies in which, as Nick Couldry and Ulises A. Mejias write: “Our everyday relations with data are becoming colonial in nature; that is, they cannot be understood except as an appropriation on a

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form and scale that bears comparison with the appropriations of historical colonialism.” In other words, big tech pushes frontiers—spatial, personal, and institutional—while using people’s experience as the fuel for its expansive strategies. This panel examines the textual and audiovisual discourses through which tech companies narrativize their expansion into urban space, education, domestic spaces, and also the natural environment.

Since these discourses, produced by tech companies, form an intervention into people’s relations to themselves, others, and their environments, tech companies stand to be analyzed as cultural producers. They do not merely address their users as consumers, but increasingly also as an audience representing a general “public” or even a caring “humanity.” In order to develop a critical understanding of the platform society, it is crucial to examine those discourses through which tech companies seek to generate a trusting user base, presenting themselves as democratic, almost state-like powers offering “public” services. Employing methods of textual and audiovisual analysis, this panel offers such perspective by focusing on the main US tech companies and their platforms, that form the infrastructural core of the platform ecosystem (Van Dijck et al. 2018).

In its analysis of tech visions, the panel focuses on (re)imaginings of space at different scales. The first paper analyzes how Amazon’s release of new services connected to its digital voice assistant Alexa expands platform infrastructures onto domestic spaces and familial bonds. The second paper analyzes discourses by Sidewalk Labs (a sister company of Google) in its attempt to reimagine urban public space. The third paper analyzes Google’s reimagining of educational space as well as the modes through which developers inhabit and create virtual spaces under the discourse of “democratic” AI. And the fourth paper analyzes how space companies, led by tech entrepreneurs Musk (Tesla) and Bezos (Amazon), imagine a future for humanity in extraterrestrial space.

Though each paper focuses on a different spatial scale and on different modes of inhabitation, a common ideological message appears: the expansion of corporate platforms and their infrastructures into these spaces is “empowering” to all its users, and a solution for all kinds of sociopolitical problems. The panel critiques this big tech narrative, situating its speech acts in the broader reality of its invasive logic. In sum, the panel analyzes how tech companies, as part of their space invasions, also seek to invade people’s very imaginations of space.

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Paper 1:

“EVEN IF YOU’RE NOT AROUND, YOU KNOW SOMEONE IS”— ALEXA AND PLATFORM DOMESTIC UBIQUITY

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The Digital Caregiving of Alexa

In December 2021, Amazon released a new paid subscription service connected to its digital voice assistant (DVA) Alexa, named “Alexa Together”. Targeted at caretakers of elderly and vulnerable family members, this subscription service allowed users to “provide support” to their “loved ones”, keeping families “together even when they’re apart” (“Alexa Together” 2021). This caring at a distance was made possible by installing several devices, sensors, and cameras, across the loved one’s home, all synced through Amazon’s infrastructure. Family members would be able to access these devices, track activities, send reminders, make calls, and receive alerts at any time. At the same time, as a voice-operated assistant, Alexa ensured elderly and vulnerable users could access devices through the intuitive medium of speech.

In this paper, I analyze how, in this new service, the saturation of domestic spaces by computational devices and platform infrastructures is narrativized as an act of care. I focus my analysis on the promotional materials – texts, images, audio, and video – created for the service’s release, hosted in Amazon’s website, and discussed in interviews with company speakers. These media, I claim, frame Alexa as a ubiquitous benevolent agent – mediating care between its users – while also framing users as precarious subjects – requiring surveillance and control at every moment. Human-machine interaction becomes a form of theater in which the domestic space becomes a stage where machines and humans perform specific *characters*. This performance, however, obfuscates the ongoing expansion of platform infrastructures into our private lives.

Digital Voice Assistants and Platform Domestic Ubiquity

Historical accounts of domestic media illustrate how machines occupying our home change our experience and interaction with domestic space, from television (Spigel 1992) to computers (Reeves and Nass 2015), smartphones (Turkle 2012), and now DVAs (Ostrowski et al. 2022). Two aspects set DVAs apart from the previous categories: firstly, DVAs, as software can be invisibly grafted onto any other object, with no need for any graphic interface or screen; secondly, DVAs are framed as digital *personae* able to engage in social interaction with its user. Starting as mobile device apps, these conversational agents can now be found in smart-speakers, car dashboards, refrigerators, and even smaller items such as rings and glasses. As more and more items become accessible via DVAs, our relationship with our environment shifts from tool use to socialization.

DVAs play a key role in what Google CEO Sundar Pichai described as the “fading away of the device” (Sundar Pichai 2016). They are part and parcel of the “third wave of ubiquitous computation” (Ekman et al. 2015) through which computational systems are ever more discretely integrated into the everyday lives of individuals. “Ubiquitous computation” is a vital step in the expansion of platform business models, dependent as tech companies are on the capturing and processing of ever larger data sets (Zuboff 2019). My analysis frames this ubiquity not only as expansion but as obfuscation – hiding the computational saturation of our environments – by focusing on how “platformization” operates in domestic spaces at the smaller scale of the human-machine relationship.

Alexa and other assistant sync a variety of computational devices and their data streams while narrativizing this process as a form of socialization. This socialization of platformization, however, is not merely a technical achievement but a result of the discourses surrounding the promotion of DVAs. Therefore, a cultural analysis of services, such as “Alexa Together” provides critical insights into the ongoing platform occupation of domestic spaces, and how it is made palatable for individuals.

Case study and Methodology

The core of my paper amounts to a close audiovisual and textual analysis of the promotional material created by Amazon for the launch of the “Alexa Together” in their product’s webpage. These promotional materials, I claim, only provide a partial representation of the service, the infrastructure on which it runs, and the many devices through which it can be accessed. I contextualize the promotion of “Alexa Together”, by turning to the DVA’s origins – its release and promotion in 2014 – and its competitors: Apple’s Siri, Microsoft’s Cortana, and Google’s “Assistant”.

I frame these DVAs and their promotion as a form of theatre, by turning to studies on theatricality (Peetz, 2019) and dramaturgical sociology (Goffman, 1956). As theatre, technological interaction assigns specific *character* roles to both humans and machines. In the case of “Alexa Together”, I focus on how humans are presented as precarious and vulnerable subjects for which Alexa becomes a sort of confidant and caretaker. This representation, I go on, obfuscates the ways in which domestic space is ever more invaded by devices and the infrastructures of platform companies. These promotional media, therefore, hide the technical reality of the “Alexa Together” service by portraying Alexa as a benevolent ubiquitous agent.

Voice, *Persona*, and Agency

In his “The Presentation of Self in Everyday Life”, Goffman understood humans as *performers* having to play out different *characters* in the spaces they occupied. In the same way, Amazon’s promotional materials frame domestic spaces as a stage where Alexa performs the *character* of personal assistant. This performance, however, puts into question the cultural fantasy of vocally commanding our environment used to sell DVAs.

The sense of increased control of our environments, relies on the expansion of platform infrastructures onto our everyday life and its spaces, giving access to ever more data of an ever more personal nature. Domestic spaces, in particular, are occupied by a series of surveillance devices and sensors, experienced as the agency of a ubiquitous *character* with a name such as Alexa. An analysis of how these infrastructures and devices are represented and obfuscated, through the promotion of DVAs, provides a critical perspective on the ongoing platformization of domestic spaces.

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Paper 2:

BLURRING “URBAN” SPACE WITH SIDEWALK TORONTO

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Quayside and Sidewalk Labs

This paper analyzes the texts and images through which Sidewalk Labs (a sister company of Google) presented Quayside, an urban development project in Toronto that was supposed to become the first neighborhood “built from the Internet up” (Doctoroff 2016). I focus on the promotional video “Introducing Sidewalk Toronto” (2017) and the project’s master plan *Toronto Tomorrow: A New Approach for Inclusive Growth* (2019). The paper shows how Sidewalk Labs in these discourses introduces the notions of “urban” space and “urban” data, blurring private and public spaces, allowing it to expand its datafying strategy.

Artist impressions of Quayside depict what life could have looked like in Toronto’s near future: timber high-rises, autonomous vehicles, and above all a rich pedestrian life in “intimate public spaces” and “people-first streets” (Sidewalk Labs 2019). This lively street scene would have been supported by invisible yet ubiquitous sensors feeding real-time data into an extensive digitized infrastructure: from smart traffic lights and modular pavements to “pay-as-you throw” garbage chutes.

Quayside was the pilot project for Sidewalk Toronto, an urban development initiative announced in 2017. Sidewalk Toronto was a collaboration between Waterfront Toronto (a public-private entity set up by the city, provincial, and national governments to redevelop the Quayside site) and Sidewalk Labs (part of Alphabet Inc., the holding company that also owns Google).

Quayside would have measured 5 hectares; the entire plan for Sidewalk Toronto would have ultimately concerned an area of 77 hectares. In 2019, however, under public pressure, the project was scaled back to the original Quayside area. In May 2020, Sidewalk Labs pulled the plug on its Toronto ambitions altogether, officially because of the Covid pandemic, but likely also because of the severe criticism Sidewalk Toronto garnered over the years. This criticism was not only voiced by activist groups (#BlockSidewalk), but also came from within the tech world itself. As venture capitalist Roger McNamee wrote in a letter to the Toronto City Council: “No matter what Google is offering, the value to Toronto cannot possibly approach the value your city is giving up. [Quayside] is a dystopian vision that has no place in a democratic society” (Cecco 2019).

Questions and Arguments

Quayside may have been abandoned, arguably its design still forms a blueprint for a city in which public space is permeated by a platform-capitalist logic according to which public space and private interests blur into a vaguely defined “urban” realm. Using methods of textual and visual analysis, the paper asks: What is the vision of human life that informed Quayside’s platformized city design? And how does this vision compare to the way Quayside sought to collect data, not just in public but also in private spaces? The paper articulates the discrepancy between, on the one hand, Quayside’s transhumanist narrative of a platform city where users are connected and in control, and, on the other hand, the project’s colonial logic. By “transhumanist” I refer to a vision of human life according to which technology *enhances* humanity. This vision is belied by Quayside’s logic, which in the terminology of Couldry and Mejas is “colonialist in nature,” extracting value from people’s interactions and invading their integrity of selves. My paper shows how this invasive logic also manifests itself in Sidewalk’s speech acts. Specifically I discuss Sidewalk’s use of the term “urban data,” a neologism in which the distinction between private and public disappears.

Part 1: Transhumanist Vision of Urban Life

In response to the first question, *What is the vision of human life informing Quayside?*, I analyze a number of textual and visual materials through which Sidewalk Labs presented Sidewalk Toronto, specifically the video “Introducing Sidewalk Toronto” (2017) and the project’s master plan *Toronto Tomorrow* (2019). I argue that in these materials Sidewalk Labs presents a transhumanist vision of city life. According to this vision, human life is *at once* inherently driven towards connection and inherently flawed, facing “barriers” that hinder the connection between people. The exact nature of those barriers (Toronto’s “design problem”) remain only vaguely defined by Sidewalk Labs, yet the proposed solution to the problem is very clear: more technology.

With reference to Sadowski and Bendor, I show that Sidewalk Labs presents city design as a convergence between technology and humanity. This convergence is the transhumanist dream of a humanity for whom technology is second nature. In the case of Sidewalk Toronto it would have been an urban community that is at once uniquely “Torontonians” and datafied.

Part 2: Blurring Boundaries

Second I discuss the question: *How does this vision compare to the way Quayside sought to collect data, not just in public but also in private spaces?* I here focus on Sidewalk’s proposed data policy. To many critical followers of Sidewalk Toronto these plans remained vague at best. As Goodman and Powles write: In broad strokes there are two kind of platform values, public and commercial, and “Sidewalk obscures just which version of platform its digital layer will be and what it will be optimized for.”

My paper argues that this vagueness around Sidewalk’s strategy manifested itself in its vague language and blurring of concepts, in particular the notions of “urban space” and “urban data.” Sidewalk Toronto was imagined as a platform city across the public-private

divide. Or as Sidewalk writes itself, the city would have eliminated “the divide between home, work, and play” (Sidewalk Labs 2017). This *unthinking* of divides culminates in the notion of “urban data,” defined as “information gathered in the city’s physical environment, including the public realm, publicly accessible spaces, and even some private buildings.” Sidewalk’s definition of “urban” thus exists across public and private space, collapsing both, much like its vocabulary collapses public and corporate interests.

My paper argues that it is important to be very critical of such blurring of concepts, and that it is important to be very critical of city-as-platform discourse in general, in which people are framed as “users” of “urban space” (Mattern 2021). Tech companies’ framing of the spaces they venture into is integral to their profit-driven strategies themselves. A critique of platform strategies therefore also has to involve a critique of their speech acts.

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Paper 3:

“DEMOCRATIC AI”: GOOGLE AS EDUCATOR IN THE AI INDUSTRY

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In 2018, Google released its *Machine Learning Crash Course* (Google Developers 2022) out of a belief that “AI will have the greatest impact when everyone can access it” (Google AI 2022a). This effort is in line with Google’s overall mission to make “AI work for everyone” (Pichai 2017). Following recent research around big tech’s discursive strategies around an apparent “democratization of AI” (Sudmann 2019), I argue that Google’s attempt to make AI and machine learning (ML) more accessible must be understood as part of its business strategy to further dominate the AI industry regarding ML research and development.

In my paper, I analyze how Google’s *Machine Learning Crash Course* needs to be embedded into the company’s endeavour to position itself in the field of AI education by offering a corporate educational environment with tools and resources freely available. I pursue a walkthrough and critical discourse analysis of the course to shed light not only on recurring narratives around AI and ML that find application, but also on the economic interests of the company in offering the course. I show how particular narratives support Google to uphold its power position by recruiting new AI talent and by securing their infrastructures and models to become the dominant ones, but also how the company is leaving a lasting mark on societal imaginaries of AI and its potential.

Extending Reach: Google as Educator and Provider of Open Infrastructures

Google profits from a tremendous position of power within the AI industry by means of its cloud computing and data resources (Dyer-Witheyford et al. 2019). But also in the field of AI-/ML-as-a-service, it belongs to the top in the market (Srnicsek 2019). As I argue, the discourse around the “democratization of AI” plays an important role in the company’s effort to advance its infrastructural power (Plantin et al. 2016). By taking over fields usually associated with the public sphere – such as the educational space and the provision of infrastructures – Google pictures itself as crucial player for the advancement of technologies that “benefit people and society” (Google AI 2022b). With its *Machine Learning Crash Course*, the company promises its users a cost-free opportunity to learn the key concepts of machine learning as well as their application using Google’s software library TensorFlow. With this corporate, but open-access learning environment, Google creates an educational space in which it can impose its AI vision on aspiring ML practitioners, as well as draw them into its infrastructural ML ecosystem. Against this background, this paper critically compares how the company addresses the subject of the course as well the promises it is made, with the actual possibilities of learning, creating and developing that the educational space itself

presents. This analysis allows for a more intricate view on the notion of “democratic AI”, the company puts forward and the economic benefits it draws from this discourse. Further, I show how Google not only influence greatly how ML is represented, but also how these representations in turn influence and direct current ML research and development, as well as the societal effects of its ML-infused products.

Methodology

Online courses are so far rarely studied in research on (ML) algorithms. Hence, for an analysis of Google’s course, I apply an adaption of the walkthrough method (Light et al. 2018) that has been developed for the analysis of digital platforms. Using this method, I trace the context of the online course drawing from the course environment and additional advertising material (i.e., concerning target user base, presented purpose, revenue sources, course design). Further, I conduct a technical walkthrough through the online environment which enables the identification of key narratives. For a further in-depth analysis, I apply a critical discourse analysis, asking what kinds of discourses are established around AI/ML and its users and what implications these narratives have on the dominant position of Google and the development of its technologies. Particularly the notions of “access” and the “inclusion of everyone” are invoked repeatedly throughout Google’s AI and online course webpages and need further interrogation: Who receives access, and to what? Who is being addressed with ‘everyone’? And how does this relate to the vision of a democratic development of AI? In turn, in what way is the learning platform (concerning its interface and the conveyance of knowledge) enabling or restrictive in its design?

Agency in Restricted Spaces: Imaginaries of Technologies and Subjects

With its course, Google appeals to users at all levels: from amateurs and non-experts to more experienced developers. The subject that the company addresses, is depicted as emancipated, creative agent, empowered by Google’s technologies. The tools and platforms themselves are described as offering this subject unlimited possibilities while at the same time being simple in their application and requiring no prior knowledge. Having a closer look at the ML course, this notion shifts: rather than the user being the emancipated agent, the agency is depicted with the technologies themselves. These are described as ‘doing everything for you’. Within the restricted teaching environment for instance, this means concretely that the subject can only execute the code that is already written. ‘Learning’ in this sense, does not entail a deeper understanding of or creative engagement with ML. The democratization of AI is rather to be understood as access to – and manifestation of – company-owned infrastructures. The notion to draw ‘everyone’ into Google’s AI ecosystem thus allows the company to exert influence in all areas of education, development and application, and in manifesting its AI vision.

This AI vision, secondly, is depicted first and foremost as centered around fair and democratic AI. This, however, stands in contrast to the directives of efficiency and performativity of Google’s ML infrastructures. At the same time, limitations that ML might entail are not acknowledged within the social context of their development, but rather regarded as technical errors to be fixed. A reflection on the processes of

marginalization and exclusion each ML model entails and the role the data scientists plays in this is not taken into account. What does it thus mean when Google not only enhances its dominant position within the industry, but also influences how AI and its potential is viewed and acted upon?

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Paper 4:**GREEN EXPANSIONISM: SPACE INVASION AS BIG TECH'S RESPONSE TO THE CLIMATE CRISIS**

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Space Explorations and Tech-on-Climate Discourse

This paper presents an analysis of the proposals for space exploration made by tech companies. The paper specifically focuses on tech entrepreneurs Elon Musk and Jeff Bezos and their space companies SpaceX and Blue Origin. Their projects — including travels to Mars and preparations for the habitation of outer space — are framed as long-term solution to the ongoing climate crisis, creating a narrative about the exploration of extraterrestrial space as form of “green expansionism”. The paper analyzes this narrative and asks: what vision on the role of technology in the climate crisis can be found in the tech-on-climate discourse about space exploration?

In recent years, tech companies have taken explicit positions as actors in the “fight” against the climate crisis. These companies invest in a tech-on-climate discourse: the ongoing production of keynotes, mission statements, ads and other texts and images that emphasize technological solutions to the climate crisis and obfuscate negative environmental impact. This discourse contains proposals that range from increasing recycling efforts and investing in solar and wind energy to plans such as moving industrial practices or entire communities into space. As Musk and Bezos hold prominent functions in space companies as well as tech companies (Tesla and Amazon), they are representative figures of the tech-on-climate discourse. This discourse presents a new kind of climate-friendly capitalism that provides moral legitimacy to tech companies’ business model (Goldstein 2018).

Analyzing Green Expansionism as Cultural Myth

The paper builds on the theoretical understanding that digital platforms operate as infrastructural companies, by initiating projects that extend their infrastructural reach and solidify their position as gatekeepers of (digital) services (Plantin et al. 2016). The exploration of outer space is such an infrastructural project, in which space is presented as a blank canvas from which tech companies can build a new society from “the ground up”. Through their space travel efforts, Musk and Bezos contribute to the spatial expansion of the “Cloud Empire” (Couldry & Mejias 2019). With space imagined as the new frontier, the discourse on space exploration presents an opportunity to better understand how tech companies defend new forms of expansion and what type of vision on the future, in times of climate crisis, this reflects.

The paper addresses its main question through two sub questions: 1) How is the narrative of “green expansionism” constructed by SpaceX and Blue Origin? 2) How does this narrative shape the discussion about solutions to the climate crisis? The paper approaches this narrative and the vision that lies behind it as a “cultural myth” that shapes how people think about the role of technology in the climate crisis (David 2001). The paper answers these questions through a critical discourse analysis that focuses on the texts and images of four case studies: the websites of SpaceX and Blue Origin (2021) and a keynote by Musk and Bezos on behalf of their company. As the analysis will show, the vision on the climate crisis becomes for example apparent in the mission statement of Blue Origin (2021), stating that the company was founded “with the vision of enabling a future where millions of people are living and working in space for the benefit of Earth”. However, the analysis also takes into account what remains unclear or hidden in the texts and images that both companies and their leaders share.

The Exclusive and Fictional Tendencies of Green Expansionism

The paper argues that the climate crisis is used as reason to legitimate space exploration, but that overall, projects are visually and textually presented as impressive entrepreneurial and engineering achievements. Within this narrative, Bezos and Musk figure as pioneers, fulfilling the role of genius or visionary (Taffel 2018). They represent what Goldstein (2018) describes as a “better” form of capitalism: they distance their mission from that of traditional space and tech companies by positioning themselves as pioneers in a “tech for earth” movement. To realize this, Musk and Bezos are presented as “cowboys” that want to conquer a new frontier. Green expansionism is thus not only an imperialist, but also a gendered project that promotes “ecomodern masculinity” (Dockstader & Bell 2020).

The paper further argues that, under the guise of green growth, space exploration can be presented as a daring project that is beneficial to all of humanity (Shammas & Holen 2019). However, this narrative can only be convincing by keeping some elements of the project deliberately vague: practical questions about living or working in space, environmental risks, feasibility and accessibility remain unanswered. While presented as the way to save humanity and planet Earth, the narrative of green expansionism does not present a feasible solution, but instead a perpetuation of a colonial logic of expansion and exploitation. Because of the many complications — that Musk and Bezos do not altogether deny, but formulate as a problem of future generations — the cultural myth of conquering outer space does not tell us much about how these companies want to realize their future visions. Instead, it says more about the way they want to be perceived in the present and the economic endeavors that interest them. As platform capitalism demands continuous expansion, space exploration serves as an “outer spatial fix”, with space technologies such as satellites offering new forms of surveillance and large-scale data collection (Dickens & Omrod 2007).

Despite its fictional elements, the narrative of green expansionism has concrete material consequences. It can lead to an overestimation of the impact of extraterrestrial projects and takes attention away from the negative environmental impact of tech companies, including space projects. It can also create a false sense of safety and undermine the

support for necessary climate actions that need to be taken. In sum, the myth of space invasion not only reveals the dream to conquer a new environment, but also the wish to steer debates about the climate crisis in a direction that is in the interest of platform companies.

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