Chinese Urbanism in Techwear

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Abstract

This thesis investigates contemporary Chinese urbanism by taking techwear as one of its mediums. Techwear is clothing and accessories whose aesthetics and functionality show a heavy investment in futuristic visions of city life. It spans from the mundane uniforms worn by app-based delivery workers to the spectacular fashions worn by A-list celebrities. This clothing-as-medium by which to bring about the future metropolis is made only from fabrics and textiles, containing no electronics. Yet the way people wear techwear inside the urban built environment of China is intimately linked to digital technologies like social media and smartphones. Because of its mediating position between older modes of real estate driven urban development and more recent models of tech industry driven urban development, techwear (机能服饰 in Chinese) provides a unique vantage point from which to examine Chinese urban transformation since the turn of the millennium. From this vantage point of techwear, this thesis seeks to add to the discussion in Chinese urban media studies by bridging architectural and film criticism focused on urban China from the 1980s to early 2000s, with infrastructural platform studies focused on urban China since the 2010s. My argument explicates in two chapters the political and infrastructural functions of techwear in urban China. In doing so, it provides an original media object and practice through which to study the spatial and temporal contours of contemporary Chinese urbanism.

Abrégé

Cette thèse explore l'urbanisme chinois contemporain en prenant le techwear comme l'un de ses médiums. Le Techwear (机能服饰 en chinois) englobe les vêtements et accessoires dont l'esthétique et la fonctionnalité témoignent d'un investissement important dans les visions futuristes de la vie urbaine. Il inclut les uniformes banals utilisés par les livreurs d'applications et même la mode spectaculaire portée par les célébrités. Ce vêtement-comme-médium duquel émergera la future métropole est fait uniquement de tissus et textiles, et ne contient pas d'électroniques. Pourtant, la façon dont les gens portent les habits techwear dans l'environnement urbain de la Chine est intimement liée aux technologies numériques comme les réseaux sociaux et les smartphones. En raison de sa position médiatique entre les anciens modes de développement urbain axés sur l'immobilier et ceux, plus récents, axés sur l'industrie technologique, le techwear offre un point de vue unique pour comprendre la transformation urbaine chinoise depuis le début du millénaire. Par le techwear, cette thèse cherche à contribuer à la discussion des études sur les médias urbains chinois en reliant la critique architecturale et cinématographique de la Chine urbaine des années 80 jusqu'au début des années 2000 aux études de plate-forme infrastructurelle de la Chine urbaine des années 2010 et au-delà. Mon étude explique en deux chapitres les fonctions politiques et infrastructurelles du techwear en Chine urbaine. Ce faisant, il fournit un objet et une pratique médiatiques originaux permettant d'étudier les contours spatiaux et temporels de l'urbanisme chinois contemporain.

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with whom I share my deepest sorrows and warmest joys.

Introduction

In 2018, pictures surfaced on the Chinese internet of a windbreaker uniform jacket that Nike supposedly designed in collaboration with SF Express, China's largest logistics and delivery company. Sporting the Nike and SF logos on each side of the chest, the "leaked" black jacket with white detailing predictably stirred up a small flurry of speculation and desire among fashion journalists and netizens on Chinese social media.[1] Many of these commentators noted that, in pursuing their cross-industry collaboration between fashion and logistics, SF and Nike were only following in the steps of 2017's much-buzzed-about looks that came from the collaboration between German logistics company DHL and French fashion brand Vetements. What is this unusual mutual interest, in the late 2010s, that has brought together the fashion and apparel industry—commonly seen as glamorous, exciting, and fickle—and the logistics and delivery industry—which on the other hand we usually imagine to be unglamorous, dependable, and boring? Pursuing this question, I intend to show in this thesis, can tell us much about how contemporary Chinese urbanism in the last decade has been developing in a science and technology-oriented way. State-corporate-led urban development in China has been turning since 2008 to tech-industry focused growth to realize long-held visions of the scientific and rationally planned metropolis.[2] In turn, the analog, stretchy, and intimate realm of clothing and dress has been mobilized by this developmental dynamic to mediate between the wireless, wave-speed circulations of the data-obsessed tech industry, and the vast, concrete forms that abound in real estate and architecture. The (re)orientation of contemporary Chinese urban growth towards tech can in my view hardly be understood without grasping the politically resonating and infrastructurally underlying role played by clothing as a mode of urban mediation.

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[1] See for example, https://fashion.qq.com/a/20180321/013131.htm

[2] Visser, Robin. Cities Surround the Countryside: Urban Aesthetics in Postsocialist China. Duke University Press, 2010: 30.

Conversely, understanding the orienting role played by technology and scientific rationalization in the contemporary development of Chinese cities is key to explaining the global fashion industry's recent fascination for the aesthetics of—among other curiously techy figures—the e-commerce delivery worker. SF's high-speed ascent to the top of the Chinese logistics industry, after all, came pretty much all on the back of the Chinese e-commerce industry's own incredible growth in the last two decades to become the world's biggest market for online consumption—a domineering trajectory arguably most exemplified by tech giant Alibaba.[3] As China has similarly, "for the first time in centuries overtake[n] the US as the world's largest fashion market," a robust understanding of contemporary Chinese urban space—the environment that fashion consumers are increasingly wearing their clothes in—becomes crucial to explaining the prevalence of certain aesthetics trends in global fashion.[4] This is to say, the use of (imaginaries of) science and technology to formulate and justify the production of the new, the novel, and the futuristic in contemporary fashion in China is linked to a longer history of relying on technology and scientific rationalism to envision futurity in urban planning and design.[5] In sum, the contemporary vision of the rational and technological Chinese metropolis both informs and relies on a particular type of clothing I call *techwear* to project and actualize itself. The following thesis investigates this intimacy between techwear clothing and the built environment as mediums for developing technological urbanism in China.

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[3] Luo, Xubei, Yue Wang, and Xiaobo Zhang. *E-Commerce development and household consumption growth in China*. The World Bank, 2019.

[4] Amed, Imran, A. Bergsara, S. Kappelmark, S. Hedrich, J. Andersson, R. Young, and M. Drageset. "The State of Fashion 2019." Business of Fashion, McKinsey & Company, 2018.

[5] The production of novelty for the purpose of urban social stratification is, for sociologist Georg Simmel, the raison d'etre of the fashion industry. Simmel, Georg. "Fashion." *American journal of sociology* 62, no. 6. 1957 (1904): 541-558.

Clothing includes fashion, but as a category it also exceeds fashion. Literature,[6] commercial films,[7] art films,[8] underground documentaries,[9] movie theatres,[10] photography,[11] DV videos,[12] video game machinima,[13] video art,[14] performance art,[15] theatre,[16] gallery installations,[17] urban planning exhibitions,[18] public loudspeakers,[19] architectural maquettes,[20] starchitect-designed buildings,[21] publicly-displayed planning diagrams,[22] smart city planning videos,[23] food delivery platform algorithms,[24] taxi app

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[6] Visser, Robin. "The Melancholic Urban Subject" and "Postsocialist Urban Ethics." in *Cities Surround the Countryside*.
[7] Palmer, Augusta. "Scaling the Skyscraper: Images of Cosmopolitan Consumption in Street Angel (1937) and Beautiful New World (1998)." in *The Urban Generation: Chinese Cinema and Society at the Turn of the Twenty-First Century* (2007): 181-204
[8] Zhang, Zhen. " Urban Dreamscape, Phantom Sisters, and the Identity of an Emergent Art Cinema." *The Urban Generation*.
[9] Pickowicz, Paul, and Yingjin Zhang, eds. From underground to independent: Alternative film culture in contemporary China. Rowman & Littlefield, 2006.
[10] Bao, Weihong. Fiery cinema: The Emergence of an Affective Medium in China, 1915–1945. University of Minnesota Press, 2015.
[11] Lu, Sheldon H. "Tear down the city: Reconstructing urban space in contemporary Chinese popular cinema and avant-garde art." *The Urban Generation*.
[12] Zhang, Zhen, and Angela Zito, eds. DV-made China: Digital subjects and social transformations after independent film. University of Hawaii Press, 2015.
[13] Braester, Yomi. "The Day Trip of Your Dreams: Globalizing Beijing and the Postspatial City." in *Painting the city red: Chinese cinema and the urban contract*. Duke University Press, 2010.
[14] Visser, Robin. "Designing the Postsocialist City: Urban Planning and its Discontents." *Cities Surround the Countryside*.
[15] Ibid.
[16] Braester, Yomi. "New China, New Beijing: Staging the Socialist City of the Future." *Painting the city red.*
[17] Braester, Yomi. "Traces of the Future: Beijing's Politics of Emergence." *Ghost Protocol: Development and Displacement in Global China,* eds. Carlos Rojas and Ralph A. Litzinger (Duke University Press, 2016).
[18] Ibid.
[19] Li, Jie. "Revolutionary Echoes: Radios and Loudspeakers in the Mao Era." *Twentieth-Century China* 45, no. 1 (2020): 25-45.
[20] Ibid.
[21] Ong, Aihwa. "Hyperbuilding: spectacle, speculation, and the hyperspace of sovereignty." *Worlding cities: Asian experiments and the art of being global* (2011): 205-226.
[22] Neves, Joshua. "Rendering the City: Between Ruins and Blueprints." *Underglobalization: Beijing's Media Urbanism and the Chimera of Legitimacy*. Duke University Press, 2020.
[23] Pan, Weixian. "Smart Urbanism in Shenzhen: Southern Lands, Distributed Intelligence, and Everyday Practices." *China Southern: Digital Environments as Geopolitical Contact Zones*, PhD Dissertation, 2019.
[24] 孙萍 (Ping, Sun). "如何理解算法的物质属性 — 基于平台经济和数字劳动的物质性研究" (Ruhe Lijie Suanfa De Wuzhi Shuxing--Jiyu Pingtai Jingji He Shuxue Laodong De Wuzhixing Yanjiu; How to Understand the Materiality of Algorithm—An exploration of platform economy and digital labor) *科学与社会* (*Science and Society*) 9, no. 3 (2019).

screen-interfaces,[25] road-side real estate advertisements,[26] ruin graffiti,[27] billboard graffiti,[28] ambient television,[29] pirate DVD distribution[30]—these are all objects and practices that scholars of Chinese urban media studies have closely examined as modes of urban Chinese mediation. Adding *clothing* to this long and growing list of urban media is, methodologically, what this thesis proposes to contribute to urban and media studies of China. The payoff of this methodological innovation, I intend to demonstrate to readers, is an understanding of how analog, mobile, "low-tech" media (practices) like clothing and dress are being mobilized by state-corporate-led urban development to build out the Chinese metropolis as a rational and technological inhabitation in the early 21st century. This, as we might expect, has implications for the contemporary exercise of biopolitical governance in China. Before going deeper to unpack this claim, let us first look at how clothing can be understood as a type of urban media.

Clothing as Urban Chinese Media

The city and its built environment have long been a subject of inquiry for Chinese urban and media studies. Film scholars like Zhen Zhang, Chris Berry, Ackbar Abbas, Weihong Bao, and Laikwan Pang have examined not only film texts, but also how the Chinese film industry (on the mainland) has sharpened and re-presented the various political, economic, social, psychic, and aesthetic forces that have arisen from urban transformation in China since 1896.[31] On the other hand, critics and thinkers of architecture and urban planning, like Rem Koolhaas, Aihwa Ong, Max Hirsch, Winnie Wong, Mary Ann O'Donnell, and Jonathan Bach, have commented extensively on how

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[25] Chen, Julie Yujie. "Thrown under the bus and outrunning it! The logic of Didi and taxi drivers' labour and activism in the on-demand economy." *New Media & Society* 20, no. 8 (2018): 2691-2711.
[26] Neves, Joshua. "Rendering the City: Between Ruins and Blueprints." *Underglobalization*.
[27] Ibid.
[28] Ibid.
[29] Neves, Joshua. "Beijing en Abyme: Television and the Unhomely Social." *Underglobalization*
[30] Neves, Joshua. "People as Media Infrastructure: Illicit Culture and the Pornographies of Globalization." *Underglobalization*.
[31] See for example, Zhen, Zhang. *An amorous history of the silver screen: Shanghai cinema, 1896-1937*. University of Chicago Press, 2005. Also Abbas, M. Ackbar. "Cosmopolitan De-scriptions: Shanghai and Hong Kong." *Public Culture* 12, no. 3 (2000): 769-786.

urban designs and typologies have exemplified and addressed—like film has—these same issues of life in the city, since the reform era began in 1978.[32] Taking part in examining *both* film *and* the urban built environment, urban media scholars with a multi-object focus like Bao, Abbas, Robin Visser, Yomi Braester, and Joshua Neves have persuasively explained how screen-media like film and television are architectural (e.g. movie theatre architecture, metro station TVs), and how built media like urban planning and architecture are photographic and cinematic (e.g. billboard ads for new real estate developments, anti-demolition documentaries).[33] My work in the two following chapters is built upon and engages with this intermedial line of inquiry in Chinese urban media studies, which has paid sustained attention to the built environment of Chinese cities and its proliferation in/as visual culture. I will return to summarize this body of work in the literature review below. The important point for now is that *clothing* can be studied as an urban Chinese medium in relation to (visual cultures of) the built environment: planning, architecture, and infrastructures.

Whether or not they count as fashion, clothing and habits of dress have always been contiguous with architecture and modes of inhabiting the built environment. In his classic *Understanding Media*, Marshall McLuhan put the two chapters on "Clothing" and "Housing" together, noting that,

> Clothing, as an extension of the skin, can be seen both as a heat-control mechanism and as a means of defining the self socially. In these respects, *clothing and housing are near twins*, though clothing is both nearer and elder; for housing extends the inner heat-control mechanisms of our organism, while clothing is a more direct extension of the outer surface of the body.[34]

For McLuhan, housing works through the same convection-based principles as the human metabolic and circulatory system in controlling body heat. On the other hand,

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[32] For Ong, see note 19. Koolhaas, Rem. "How China Will Inhabit Its Future." *New Perspectives Quarterly* 2, no. 31 (2014): 100-102. Hirsh, Max. *Airport urbanism: infrastructure and mobility in Asia*. University of Minnesota Press, 2016. O'Donnell, Mary Ann, Winnie Wong, and Jonathan Bach, eds. *Learning from Shenzhen: China's post-Mao experiment from special zone to model city*. University of Chicago Press, 2017.
[33] Bao, Weihong. *Fiery cinema.* Abbas, M. Ackbar. "Cosmopolitan De-scriptions." Visser, Robin. *Cities Surround the Countryside.* Braester, Yomi. *Painting the city red.* Neves, Joshua. *Underglobalization*.
[34] McLuhan, Marshall. *Understanding Media: The Extensions of Man*, Gingko Press, 2013: 87. Emphasis mine.

clothing covers the surface of the body to prevent heat escape—or conversely, to promote cooling through sweating. This ability to mediate between the human body and its environment through changing their thermal interactions is what make clothing and housing contiguously connected to one another in their mediation between humans and their environments, a relationship that McLuhan notably extends beyond housing to cities.[35]

Besides helping us regulate temperature and the surrounding environment, clothing and housing are also for McLuhan both means of "defining the self socially." As modes of social expression and stratification, clothing and housing—unlike speaking and writing—does not use language. Yet dressing oneself and others--called *styling* when done professionally--can arguably communicate more meaning than any spoken or written language. "There is an eloquence no words can catch in rivals wrestling, lovers nestling, or mother nursing child…Actors, vocalists, and *stylists* [emphasis mine] own this vast realm of nonlinguistic expression," J.D. Peters has noted.[36] I would add set designers, architects, and planners to this list. Without needing any words, the designs of temples and churches, for example, can tell of those things that a people hold most closely. Similarly for architectural historian Gottfried Semper, the weaving of plant fibers produced both the first fences of enclosure and body coverings.[37] As much as they regulated heat by blocking cold breezes, these wickerwork textiles also regulated vision, by blocking something from the sight of other people. Unlike later walls made of stone that could carry the weight of a roof, woven textiles used to demarcate space were not the sturdiest enclosures, only somewhat able to prevent bodies from pushing past or climbing over them.[38] Instead, the enclosure being *seen* by others was enough for it to function as a mode of marking and dividing space. Built environments and clothing both function to demarcate and express social belonging.

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[35] Ibid.
[36] Peters, John Durham. *The marvelous clouds: Toward a philosophy of elemental media*. University of Chicago Press, 2015: 272.
[37] Semper, Gottfried. *The Four Elements of Architecture and Other Writings*, trans. Mallgrave and Herrmann. [1851] 1989: 103.
[38] Ibid.

This thesis on understanding contemporary Chinese urbanism through clothing focuses on this visual aspect of clothing—as something to see others wearing, and as something to be seen by others wearing. This means that the fascinating topic of urban Chinese clothing as a medium of individualized, micro-climate regulation, which McLuhan has pointed our way towards, must await another investigation. Like with urban design and architecture, whose visuality can take form as both buildings and as visual culture (e.g. maps), the visuality of wearing clothes and seeing clothes worn by others partakes in both sides of the divide between material and discourse—between tactile and ocular, and between utility and adornment. Our focus in the following chapters will be on *techwear*, as both product of the global fashion industry (chapter one) and as delivery workers' uniforms (chapter two). I use this term *techwear* to help us zoom in on that subset of clothing, fashionable or otherwise, which actively partakes in the contemporary production and distribution of urban technological futurity.[39]

Techwear Beyond Cyberpunk Fashion

Techwear is a term that first emerged around the late 2000s to describe the then-nascent wave of sci-fi-inspired, functionally (designed and) marketed products coming out of the sportswear, outdoorswear, and streetwear corners of the fashion industry.[40] Speaking in terms of marketing and design, early examples of techwear fashion combined the durability and the elemental protection functionality of outdoorswear, the physiological profile of human bodies in movement in sportswear, and the skateboarding and hip-hop

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[39] On the changing importance of distribution over production in global capitalism, see Cowen, Deborah. "The Revolution in Logistics." *The deadly life of logistics: Mapping violence in global trade*. U of Minnesota Press, 2014.

[40] For fashion press coverage of the techwear trend in English, see Brady, Keegan. "How Crunchy Technical Gear Took Over Fashion." *GQ*. February 25th, 2020. URL: https://www.gq.com/story/techwear-big-wave. Schaer, Cathrin. "Where Streetwear Meets Sustainability — and Survives." *Womens Wear Daily*. January 9th, 2020. URL: https://wwd.com/fashion-news/fashion-trends/where-streetwear-meets-sustainability-and-survives-1203409829/. Hine, Samuel. "The Future of Fashion Might Come From Vancouver." *GQ*. September 24th, 2019. URL: https://www.gq.com/story/arcteryx-veilance-taka-kasuga-profile. Johnson, Rebecca May. "A Survivalist Streak in Menswear." *Business of Fashion*. February 6th, 2015. For similar coverage in Chinese, see Yvette. "穿上"机能风"，下一秒就能加入复仇者联盟." (Chuan Shang Ji Neng Feng, Xia Yi Miao Jiu Neng Jia Ru Fu Chou Zhe Lian Meng) *时尚芭莎. (Harper's Bazaar)* June 6th, 2019.

influenced aesthetics of streetwear. The way the clothes themselves looked ranged from the scientifically marketed, thin insulating undergarments (heattech, AIRism) that Japanese apparel giant Uniqlo (and chemistry conglomerate Toray Industries) has been producing for salarymen and salarywomen to wear daily under their office clothes, in order to provide warmth or coolness without adding much bulk—to the marrying of avant-garde minimalism and pre-modern East-Asian silhouettes through sportswear items and fabrics that has been the signature style of Y-3, a brand jointly produced by famed Japanese couturier Yohji Yamamoto and German sportswear company Adidas. More than a decade later, techwear has entered the fashion mainstream to become simply its most technophilic and sci-fi wing. Through this assimilation, it has been exerting a corresponding stylistic influence on the rest of the fashion industry: industry stalwarts like Prada and Dior have put out their own techwear lines or collections, while celebrities across the Pacific—from Kylie Jenner (of the Kardashian family) to Yang Mi (杨幂), a highly prolific Chinese actress—have taken to styling themselves in techwear apparel.[41] During the last few years in China, one might scroll through a techwear look styled by a social media influencer, or "wanghong" (网红), on one's smartphone during the day, and later spot it on a young hip-hop loving bargoer in the evening.[42]

In both English- and Chinese-language discourse, fashion journalists, bloggers, consumers, and indeed companies and brands themselves, have highlighted techwear fashion—called *机能风* (Ji Neng Feng) in Chinese—'s futuristic and sci-fi aesthetics. This futuristic style commentators almost universally attribute to the aesthetics of cyberpunk literature, film, and animation.[43] Although I briefly discuss cyberpunk below, and read

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[41] Brady, Keegan. "How Crunchy Technical Gear Took Over Fashion." *GQ*.

[42] For "wanghong", see Zhang, Ge, and Gabriele de Seta. "Being "Red" on the Internet." In *Microcelebrity Around the Globe*. Emerald Publishing Limited, 2018.

[43] For fashion journalism, see SuperElle. "#SuperStyle# 潮 boy 冬季如何扮酷😎?." Weibo image post, December 16th, 2019. https://m.weibo.cn/status/4450205791699074; Yvette. "穿上"机能风"，下一秒就能加入复仇者联盟." (Chuan Shang Ji Neng Feng, Xia Yi Miao Jiu Neng Jia Ru Fu Chou Zhe Lian Meng). *时尚芭莎 (Harper's Bazaar)*, Wechat public account article. June 6th, 2019. For style blogs, see Spinx & Berry. "作

techwear fashion's cyberpunk aesthetics in chapter one, my inquiry into techwear as both leisure commodity and work uniform in this thesis aims to quickly part ways with the journalistic, marketing, and consumer discourse of techwear as cyberpunk fashion. For this there are reasons both methodological and theoretical.

Not all techwear fashion looks cyberpunk. A set of all-white, geometrically fluffy jacket and pants from C2H4, one of the most commercially and critically successful techwear fashion brands, for example, look like they would fit better in a floating 60s space sci-fi film like *2001: A Space Odyssey* (1968), than a gore-y 80s cyberpunk animation like *Megazone 23* (1985). Even though the earliest and still most popular designs in techwear fashion do at least look (if not act) cyberpunk, to define all techwear fashion as such does a disservice to all the designers and marketers who have (and continue to) expand this fashion style beyond the cyberpunk formula. Outside of looks, few techwear brands and designs can realistically claim to stand for an anti-establishment punk ethos, sold as they are by major industry players like Nike and Louis Vuitton.

Besides aesthetic openness and industry composition, there are also theoretical reasons behind my choice to depart from cyberpunk in my investigation of techwear (fashion). The way cyberpunk imagines urban futurity through widespread technological transformation has been much discussed before in cultural and film studies (of Asia), and this corpus of work tends to make two equivalences that are unhelpful for our current

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为妹纸最爱的男生穿搭，机能风到底怎么穿？| 教你穿" (Zuo Wei Mei Zi Zu Ai De Nan Sheng Chuan Da, Ji Neng Feng Dao Di Ze Me Chuan | Jiao Ni Chuan) *潮流有货 (Chao Liu You Huo)*, Wechat public account article. March 2nd, 2019. https://mp.weixin.qq.com/s/nq2eIwel6p6I0UQ89IIOJg; 潮帮先生 (Chao Bang Xian Sheng) "穿搭指南丨今年超流行的机能风，掌握三个技巧，纸片男也能镇得住." (Chuan Da Zhi Nan | Jin Nian Chao Liu Xing De Ji Neng Feng, Chang Wo San Ge Ji Qiao, Zhi Pian Nan Ye Neng Zhen De Zhu). Baidu Baijiahao blog post. September 10th, 2018. https://baijiahao.baidu.com/s?id=1618818749948076368; 你最爱看的 (Ni Zui Ai Kan De). "连女生都喜欢的「机能风」，你不品品吗?" (Lian Nü Sheng Dou Xi Huan De 'Ji Neng Feng', Ni Bu Pin Pin Ma ?). *1626 潮流精选 (1626 Chao Liu Jing Xuan)*, Wechat public account article. November 16th, 2018. https://mp.weixin.qq.com/s/DRROdDJ-XNed7i1RVAryZQ. For apparel brands, see 李宁运动时尚 (Li-Ning Sportswear). "女生如何玩转'机能风?." Weibo image post, April 8th, 2020. https://m.weibo.cn/5133232345/4491497879132737; Timberland China. "Timberland X RAEBURN Fall 2019" Weibo video post, October 16th, 2019. https://m.weibo.cn/1977283792/4428306491022658.

investigation.[44] In very 1990s fashion, both cyberpunk visual culture and critical commentary on it equate *technology* with *computers* and *the internet*.[45] While this thesis aims to interrogate digital urbanism, one of the aims of chapter two is to demystify and de-fetishize exactly this excessive attention paid to *computers* and *information networking* in technology-focused accounts of urban development.[46] On top of this, cyberpunk studies—because it has largely relied on the concept of *techno-orientalism* from postcolonial theory to explain cyberpunk's mashup of Asian urban environments and proliferating computing and networking technologies—tends to link technology to either national or racial subjectivity.[47] Technology ultimately gets decoded by such studies, against the norm of a white (American) organic humanity, as an Asian computerized environment/cyborg.[48] This theoretical suturing has the effect of overstating the importance of inter-national or inter-racial dynamics, and consequently obscuring the importance of internal dynamics within a national or racial body. Finally and crucially, studies of cyberpunk have kept well within the bounds of literary and cultural studies, analyzing technology only as a theme or object that appears in texts. The non-signifying, material operations of technology, which have been of central concern to media studies since McLuhan, are completely elided in this textualist framework. For these reasons, my account of techwear in China as both fashion

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[44] For Asian and Asian American studies of cyberpunk, see Morley, David, and Kevin Robins. *Spaces of identity: Global media, electronic landscapes and cultural boundaries*. Routledge, 2002. Ueno, Toshiya. "Techno-Orientalism and media-tribalism: On Japanese animation and rave culture." *Third text* 13, no. 47 (1999): 95-106. Ueno, Toshiya. "Japanimation and Techno-Orientalism." *The Uncanny: Experiments in Cyborg Culture*. Exhibition Catalogue. Arsenal Pulp Press, Vancouver, 2001: 223-231. Yuen, Wong Kin. "On the Edge of Spaces:" Blade Runner"," Ghost in the Shell", and Hong Kong's Cityscape." *Science Fiction Studies* (2000): 1-21. Sato, Kumiko. "How information technology has (not) changed feminism and Japanism: cyberpunk in the Japanese context." *Comparative Literature Studies* 41, no. 3 (2004): 335-355. Chun, Wendy Hui Kyong. "Orienting the Future." *Control and freedom: Power and paranoia in the age of fiber optics*. MIT Press, 2008. For cyberpunk studies that do not, for better or for worse, focus on Asia and Asianness, see for example Nixon, Nicola. "Cyberpunk: preparing the ground for revolution or keeping the boys satisfied?" *Science Fiction Studies* (1992): 219-235. Featherstone, Mike, and Roger Burrows, eds. *Cyberspace/cyberbodies/cyberpunk: Cultures of technological embodiment*. Sage, 1996.

[45] For example, see Chun, Wendy Hui Kyong. "Orienting the Future."

[46] It gets meta because besides cities, media studies scholars also like to read media theory itself through cyberpunk. For example, see Young on Kittler in Winthrop-Young, Geoffrey, and Eva Horn. "Machine Learning: Friedrich Kittler (1943–2011)." *Artforum*. September 2012. Accessed at: https://www.artforum.com/print/201207/geoffrey-winthrop-young-and-eva-horn-31954

[47] For example, see Ueno, Toshiya. "Japanimation and Techno-Orientalism."

[48] For example, see Yuen, Wong Kin. "On the Edge of Spaces."

product and work uniform avoids the framework of cyberpunk in favour of a visual cultural analysis of intra-Chinese biopolitical contestation through techwear fashion and urban design in chapter one, and a platform and infrastructural analysis of techwear uniforms as an interface for urban logistics in chapter two. Before moving onto my literature review and elaborating more on this methodology, let me first make clear why our analysis of techwear should encompass more than contemporary fashion—to include the use of clothing in the everyday functioning and expansion of the platform economy.

The Two Sides of Techwear and the Urban Built Environment

Even though it holds hegemonic sway over the economics and aesthetics of designing, producing, and distributing clothing, the fashion industry is not the only sector of society that uses clothes to advance visions of technological futurity.[49] Engineers and logisticians—as the spacesuits of astronauts, cosmonauts, and taikonauts have dramatically demonstrated—can also find plenty of uses for clothing in their scientific, technological, and commercial projects. [50] To not reify the fashion industry's economic and discursive hold over the power to define clothing, our investigation of clothing and dress practice as a mode of urban Chinese media must look beyond the fashion industry—and beyond adjacent cultural industries like film and architecture.

Outside of state-market driven architecture and urban planning, the tech industry and its platform economy have become arguably the other biggest force in pushing contemporary urban development in China towards a techno-modernist future.[51] Since many various kinds of media (including clothing) can be analyzed as technological, let me be clear that my invocation of "tech industry" follows popular use of the term in referring to companies like Baidu, Alibaba, Tencent, Huawei, Meituan, Amazon, Google, IBM, Cisco, Ericsson, and so on, whose core activities are in the internet and

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[49] On the fashion industry's hegemonic economic and aesthetic structure, see for example, Kawamura, Yuniya. *Fashion-ology: an introduction to fashion studies*. Bloomsbury Publishing, 2018.
[50] De Monchaux, Nicholas. *Spacesuit: Fashioning Apollo*. MIT press, 2011.
[51] See for example, Lin, Yanliu. "E-urbanism: E-commerce, migration, and the transformation of Taobao villages in urban China." *Cities* 91 (2019): 202-212.

telecommunications sectors. In contrast with the fashion industry, which has been expanding into technological urbanism from its base in the "soft and feminine" realm of textiles and clothing design, the tech industry—crucially backed and encouraged by the Chinese government—has been moving towards a very similar horizon of technological urbanism from the other direction: by expanding beyond its base in "hard and masculine" ICT hardware and software, to the more embodied and built modes of interaction that compose life every day in the (larger) urban environment.[52] The emergence of smartphone-enabled, urban logistics platforms like Meituan, whose business is to deliver delicate and perishable goods like takeout, groceries, and medicine, captures precisely this expansion of hard, computational tech into soft and analog urban lifeworlds. Techwear clothing for delivery workers, as this thesis will demonstrate, has played a crucial mediating role in this expansion of the tech industry into urban logistics.

Each side of techwear that the two chapters of this thesis will examine in turn corresponds to one of two aspects of the Chinese urban built environment, mapped along the spectrum of spectacular to mundane. Unsurprisingly, mundane work techwear worn as uniforms by young migrant delivery riders is most often seen interacting with "boring" and barely-noticed infrastructure—specifically the security and access control systems of middle-class and wealthy residential microdistricts. On the other hand, expensive and flashy fashion techwear worn by consumers and influencers on social media is most often seen interacting with spectacular architecture and architectural visual culture—specifically the decadent post-demolition ruins and dazzling starchitect-designed buildings that have become a sensually significant part of the Chinese urban texture, since at least the turn of the millennium. The Chinese built environment, in other words, is examined separately in this thesis as architecture on in chapter one, and as infrastructure in chapter two, with urban planning playing a role in both chapters. Because of this two-part structure, the first chapter engages more heavily with Chinese urban history, urban film studies, and visual studies of other urban screen media. In contrast, the second chapter engages more heavily

[52] For pro-tech developmental policy from the Chinese government, see Yu, Hong. *Networking China: The Digital Transformation of the Chinese Economy*. University of Illinois Press, 2017

with smart city criticism, platform studies, and urban infrastructure studies. Let me provide an overview of the literature in these fields below.

Literature Review

Urban studies of China is a vast interdisciplinary field, with methodologies ranging from sociological to literary,[53] time periods ranging from late Qing to contemporary,[54] and geographic foci ranging from one single city on the mainland to comparison between multiple inter-Asian sites.[55] In order for chapter one to situate techwear fashion as a form of contemporary *visual* urban media that works alongside state-commercial architecture in publicly projecting visions of technological futurity, my focus is on those visual studies of the urban that deal with mainland cities after reform (*gaige kaifang)* in 1978.

To build a foundational historical understanding of Chinese urbanism in visual culture since reform, I take three books in urban media studies as pillars. First is the influential volume *The Urban Generation,* edited by Zhen Zhang.[56] The essays in this volume chronicle the cinematic traces and concerns that bear witness to the turbulent contours of Chinese city life from the late 1980s to the early 2000s, times of historically unprecedented demolition and urban redevelopment. Two monographs form the other pillars: Robin Visser's *Cities Surround the Countryside* and Yomi Braester's *Painting the City Red*. I chose these two books because—unlike other urban film studies works that focus solely on cinema, like the "New Documentary Movement" —Visser and Braester's accounts of Chinese urbanism since reform have been produced alongside studies of other

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[53] Sociological: Tang, Wenfang, and William L. Parish. *Chinese urban life under reform: The changing social contract*. Cambridge University Press, 2000. Literary: Visser, Robin. "The Melancholic Urban Subject" and "Postsocialist Urban Ethics." *Cities Surround the Countryside*.

[54] Late Qing: Wang, Di. *Street culture in Chengdu: public space, urban commoners, and local politics, 1870-1930*. Stanford University Press, 2003. Contemporary: Caprotti, Federico, and Dong Liu. "Emerging platform urbanism in China: Reconfigurations of data, citizenship and materialities." *Technological Forecasting and Social Change* 151, 119690. (2020).

[55] Single city: Zhu, Jieming. *The transition of China's urban development: from plan-controlled to market-led*. Greenwood Publishing Group, 1999. Inter-Asian comparison: Lin, Zhongjie. "Ecological urbanism in East Asia: A comparative assessment of two eco-cities in Japan and China." *Landscape and Urban Planning* 179 (2018): 90-102.

[56] Ed. Zhang, Zhen. The Urban Generation: Chinese Cinema and Society at the Turn of the Twenty-First Century. Duke University Press, 2007.

non-cinematic visual media, including architectural models, photography, video game machinima, and installations.[57] These scholars' openness to visual cultures outside of cinema comes closer to my own methodology, and indeed my analysis in chapter one engages in dialogue with their commentary on these above media forms. Additionally, Yomi Braester's chapters in the edited volumes *Spectacle and the City* and *Ghost Protocol* provide a bridge from this foundational historical and aesthetic context to my analysis of techwear and urban *futurity*, as he departs from the prevalent temporal focus on past trauma and present witnessing in other accounts of post-reform urban media to analyse what he calls "the politics of emergence."[58]

My most important interlocutor in chapter one is Joshua Neves, in his book *Underglobalization: Beijing's Media Urbanism and the Chimera of Legitimacy*. In the first two chapters of this book, Neves significantly expands on Braester's analysis of future temporality in Beijing, both methodologically and theoretically. Methodologically, Neves expands the purview of what counts as urban visual culture to *mobile* and *ephemeral* forms, such as billboard graffiti and thumb drive file sharing. This precedent allows me to study techwear fashion photos—most of them taken on-location in assorted architectural settings—as mobile and ephemeral forms of future-oriented urban media. Theoretically, Neves explicitly situates the various temporal operations of post-reform urban Chinese media within a biopolitical/necropolitical framework. My own analysis of the political functions of techwear fashion in China, as readers will see, is very much indebted to this framework.

From urban history and visual studies of urban Chinese media, chapter two shifts sub-fields slightly (within media studies) to engage with the current discussion in smart city criticism, platform studies, and infrastructure studies. Because smart city criticism is an extensive discussion that has taken place across architecture, planning, media studies, and urban geography, I selectively engage with that subset of this discussion from scholars like Yuriko Furuhata, Orit Halpern, Clemens Apprich, and Jennifer Gabrys—which has

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[57] For example, see Berry, Chris, Lu Xinyu, and Lisa Rofel, eds. *The new Chinese documentary film movement: For the public record*. Vol. 1. Hong Kong University Press, 2010.
[58] Braester, Yomi. "Traces of the Future: Beijing's Politics of Emergence."

focused critical attention on historicizing digital urbanist visions, and on analyzing how these visions are concretized in built environment design.[59] Methodological attention to history and to design are crucial for my argument in chapter two, as it draws on these foci to open up Chinese platform and infrastructure studies to clothing—as a type of urban media that is used by delivery platforms in their expansion into urban logistics infrastructure.

Perhaps because of the global size of the Chinese tech industry and its platforms, platform studies of China is itself a sub-field that has seen intense interest from media scholars like Jingying Li, Wilfred Yang Wang, Ramon Lobato, Jereon De Kloet, Thomas Poell, Guohua Zeng, Yiu Fai Chow, Ge Zhang, and Gabriel de Seta.[60] Since not all platforms are directly involved in urbanism, my main interlocutors in platform studies will be the three scholars who have studied urban logistics and transportation platforms in China: Jack Linchuan Qiu, Julie Yujie Chen, and Ping Sun. Sun and Chen in particular are the only scholars to have written about food delivery platforms in China—with a strong focus on labour and algorithms, which I will attempt to decenter and open up with my analysis of techwear uniforms as a platform interface.[61]

In contrast to platform studies, infrastructure studies of China is a smaller subfield, with scholars like Jonathan Bach and Max Hirsch analyzing large contemporary infrastructures, Ned Rossiter examining the logistics of e-waste, and Jie Li studying

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[59] For an example of smart city criticism in planning, see Hollands, Robert G. "Will the real smart city please stand up? Intelligent, progressive or entrepreneurial?." *City* 12, no. 3 (2008): 303-320. For the same from urban geography, see Shelton, Taylor, Matthew Zook, and Alan Wiig. "The 'actually existing smart city'." *Cambridge Journal of Regions, Economy and Society* 8, no. 1 (2015): 13-25. For the same from media studies, see Mattern, Shannon. *Code and clay, data and dirt: Five thousand years of urban media*. University of Minnesota Press, 2017. Specifically, see Halpern, Orit. *Beautiful data: A history of vision and reason since 1945*. Duke University Press, 2015. Gabrys, Jennifer. *Program earth: Environmental sensing technology and the making of a computational planet*. Vol. 49. U of Minnesota Press, 2016. Apprich, Clemens. "FCJ-213 Babylonian Dreams: From Info-Cities to Smart Cities to Experimental Collectivism." *The Fibreculture Journal* 29: Computing the City (2017). Furuhata, Yuriko. "Architecture as Atmospheric Media: Tange Lab and Cybernetics." *Media Theory in Japan*. Duke University Press, 2017: 52-79.

[60] Most of these commentators came together in one place for recent a special issue of the *Chinese Journal of Communication* on platforms. For the issue intro, see de Kloet, Jeroen, Thomas Poell, Zeng Guohua, and Chow Yiu Fai. "The platformization of Chinese Society: infrastructure, governance, and practice." *Chinese Journal of Communication* 12, no. 3 (2019): 249-256.

[61] For example, Chen, J.Y. & Sun, SP. (2020). "Temporal Arbitrage, the Fragmented Rush, and Opportunistic Behaviors: The labor politics of time in the platform economy." *New Media & Society* (forthcoming): 1-19.

historical infrastructures like the Manchurian Railway.[62] Since my focus is on those urban infrastructures that are being taken over by tech platforms, my interlocutors will be those platform scholars who have crossed over to infrastructure studies, and vice versa. In addition to de Seta, Qiu, Chen, and Sun, they would be Jean-Christophe Plantin and Lin Zhang.[63] Although my geographic focus remains on mainland China, I draw methodologically on theories of *platform*, *form*, *insulation, interface*, and *platformization* developed through analyses of Asian platform regionalism,[64] Nigerian radio,[65] transoceanic cable networks,[66] U.S. airplane cockpits,[67] and Facebook[68]—by scholars like Marc Steinberg, Jingying Li, Nicole Starosielski, Branden Hookway, Brian Larkin, and Anne Helmond, among others—in order to bring conceptual breadth and nuance to what I see as the overly narrow focus on algorithms, screens, and labour in urban platform studies of China.

Finally, both chapters of this thesis are supplemented by relevant (media) studies of fashion and clothing. Most prominent among these are Georg Simmel's foundational study of fashion as visual medium of social stratification,[69] Minh Ha T. Pham's study of elite Asian fashion consumer-bloggers,[70] and Carrie Hertz's overview of academic studies of the uniform.[71]

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[62] Bach, Jonathan. "China's Infrastructural Fix." *Limn Issue 7: Public Infrastructures and Infrastructural Publics*. 2016. Online at: https://limn.it/articles/chinas-infrastructural-fix/. Hirsh, Max. *Airport Urbanism*. Rossiter, Ned. *Software, infrastructure, labor: a media theory of logistical nightmares*. Routledge, 2016. Li, Jie. "Phantasmagoric Manchukuo: Documentaries Produced by the South Manchurian Railway Company, 1932–1940." *positions: east asia cultures critique* 22, no. 2 (2014): 329-369.

[63] Plantin, Jean-Christophe, and Gabriele de Seta. "WeChat as infrastructure: the techno-nationalist shaping of Chinese digital platforms." *Chinese Journal of Communication* 12, no. 3 (2019): 257-271. Zhang, Lin. "When Platform Capitalism Meets Petty Capitalism in China: Alibaba and an Integrated Approach to Platformization." *International Journal of Communication* 14 (2020): 114-134.

[64] Steinberg, Marc, and Jinying Li. "Introduction: Regional platforms." *Asiascape: Digital Asia* 4, no. 3 (2017).

[65] Larkin, Brian. "The politics and poetics of infrastructure." *Annual review of anthropology* 42 (2013)

[66] Starosielski, Nicole. *The Undersea Network*. Duke University Press, 2015.

[67] Hookway, Branden. *Interface*. MIT Press, 2014.

[68] Helmond, Anne. "The platformization of the web: Making web data platform ready." *Social Media+ Society* 1, no. 2 (2015).

[69] Simmel, Georg. "Fashion." *American journal of sociology* 62, no. 6 (1957) [1904]: 541-558.

[70] Pham, Minh-Ha T. Asians wear clothes on the Internet: Race, gender, and the work of personal style blogging. Duke University Press, 2015.

[71] Hertz, Carrie. "The uniform: As material, as symbol, as negotiated object." *Midwestern Folklore* 32, no. 1/2 (2007): 43-56.

Methodology

Because this thesis centrally rests on the methodological innovation that takes clothing—specifically techwear—as a form of urban media, I have already had to explain up front in the previous sections my methodology for grasping techwear as a form of *visual* urban media. Here, I continue to unpack my approach from our previous discussion that techwear must be analyzed in relation to the organization of urban space and the built environment via planning, architecture, and infrastructure.

In chapter one, I employ a method of visual cultural analysis of photographs taken on-location in the city and posted on social media. These photos capture and further circulate on screens the coupling of fashionable bodies and urban environment that Simmel, among other commentators, have identified as being quintessential to fashion as a form of embodied mediation and image production in the city. I scrutinize not only how the clothes and poses are put into dialogue with urban environments via photographic techniques, but also design considerations like choice of fabric, construction, colour, and so on. Special attention will be paid to how fashion design and fashion photography is mobilized to produce imaginaries of futurity—imaginaries that are then read against Chinese urban history and visual culture.

In chapter two, I employ a method of platform and infrastructural analysis of techwear uniforms as the *interface* that delivery platforms use to negotiate with existing security infrastructure in the city. On top of studying the design, fabric, construction, etc. of a Meituan Waimai summer uniform, I mobilize a wide array of journalistic reports of uniform usage in platform delivery work, mostly from the late 2010s. These are calibrated against recent ethnographic studies of food delivery platforms by some of the aforementioned scholars. This method allows me to avoid the idealist tendency in existing studies of smart cities, to grasp not how delivery uniforms are designed to be used, but how they have actually been used (as techwear). I contextualize this interface analysis of techwear with brief histories of urban planning and platform capitalism in China.

My epistemic position in both chapters was bolstered by field observations in the city of Shenzhen, totalling a duration of three and a half months, over two visits in 2018

and 2019. During these field visits, I did not approach or engage with delivery workers, due to their vulnerable status as migrant workers, and the short time-frame of this project.[72] Instead, I observed platform delivery workers in public, visited architectural and infrastructural sites, and spoke with fashion influencers who were taking photos while styled in techwear outfits.

Organization of Chapters

Chapter one has five sections. It begins with an overview of the developmental history, polarized aesthetic, and temporal media logic of the Chinese metropolis since 1978. I then turn to three modalities through which fashion has existed in/as the media city, to prepare for the analysis. In section three, I read techwear fashion photography on social media to see how the practice brings techwear fashion into dialogue with urban planning and architecture. Section four provides a brief tour of how various sub-styles in techwear fashion have articulated futuristic and technological (life)styles for middle class consumers in response to the industry and consumers' own interpretations of the technological future city as presented in Chinese urban planning and architecture. The final section zooms in on the most popular sub-style, Militarized Futurist style, to unpack how it sartorially articulates a third biopolitical position distinct from, yet in dialogue with state-market led urban redevelopment and its opponents.

Chapter two has four sections. The first two sections synthesize smart city criticism, media and geographic studies of platform urbanism, and platform and infrastructure studies—using the notions of *form* and *interface* as a throughline across this literature—to distill out the concept of an outside-the-screen interface that mediates between platforms and infrastructures. Section three prepares for a reading of workers' uniforms as platform interface, via a brief political economic history of platform capitalism in China, and via a theory of the uniform as disciplinary medium that I produce by drawing on Gilles

[72] Usually, ethnographic projects involving participant observation require a research period of at least one year.

Deleuze's *Postscript on the Societies of Control*.[73] Finally, in section four, I demonstrate how workers' uniforms are used to *insulate* the logistical channels of Meituan, one of China's largest and most highly valued tech platforms, as it operations come into daily contact and friction with the urban form known as *microdistricts*.

Let us turn now to this analysis of techwear fashion and techwear uniforms in relation to Chinese urbanism.

[73] Deleuze, Gilles. "Postscript on the Societies of Control." *October* 59 (1992).

Chapter 1: Techwear Fashion

"红线列车已准备启程," declares the very first line in a Prada advertisement on social media. "THE RED LINE TRAIN IS READY TO DEPART," the ad follows in English, and then other languages. Overlaid in front of the text without depth, a model wears a uniform-like outfit consisting of a shiny black down jacket over a yellow turtleneck that has the eponymous "red line" of this Prada sub-brand running prominently up its front. Swiping through the other photos in the ad, we see another model who looks like he might be a soldier stationed on an Arctic planet in an intergalactic sci-fi film, sporting an all-black outfit of ski helmet and goggles over another black down jacket, ominous red lenses on the goggles matching the Prada "red line" on his jacket.

"Metropolitan clothing, advanced and forward-thinking fabrics in military and neon hues: discover the new #PradaLineaRossa FW19 Collection." In 2019, Prada resurrected its 1990s Linea Rossa ("Red Line") sub-brand in order to target the fashion market, focusing—as the copy accompanying the ad quoted above proclaims—on producing "forward-thinking" clothes and accessories for an urban milieu.[74] Yet in fashion as in most other industries, new market segments and products have often been long in the brewing at the lower levels before they evoke a response from major established players like Prada. Prada's resurrection of its 1990s sportswear line Linea Rossea is thus both recognition and appropriation of an early 21st century, technically inclined fashion design sensibility that has been growing in the last 10 years in the fashion industry.[75] I call this trend *techwear fashion*.

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[74] https://www.highsnobiety.com/p/prada-linea-rossa-relaunch/

[75] For fashion press coverage of the techwear trend in English, see Schaer, Cathrin. "Where Streetwear Meets Sustainability — and Survives." *Womens Wear Daily*. January 9th, 2020. URL: https://wwd.com/fashion-news/fashion-trends/where-streetwear-meets-sustainability-and-survives-1203409829/. Hine, Samuel. "The Future of Fashion Might Come From Vancouver." *GQ*. September 24th, 2019. URL: https://www.gq.com/story/arcteryx-veilance-taka-kasuga-profile. Johnson, Rebecca May. "A Survivalist Streak in Menswear." *Business of Fashion*. February 6th, 2015. For similar coverage in Chinese, see Yvette. "穿上"机能风"，下一秒就能加入复仇者联盟." (Chuan Shang Ji Neng Feng, Xia Yi Miao Jiu Neng Jia Ru Fu Chou Zhe Lian Meng) *时尚芭莎. (Harper's Bazaar)* June 6th, 2019.

In this chapter, I aim to situate techwear fashion in China, where it is called 机能风 (Ji Nengfeng), or more commonly just denoted by the adjective "机能-" (*Ji Neng*-).[76] 机能 fashion is both a parallel development alongside and a response to real estate-driven Chinese urban development in the early 21st century. Via a close reading of 机能 fashion photographs on social media, my account in this chapter will use visual cultural analysis to grasp Chinese urbanism at the intersection of clothing and built environment. If the scholarly consensus in Chinese urban studies and media studies is that in the first two decades of the 21st century, the Chinese urban built environment has mostly operated as a technology of temporality that constantly displaces the present into the past in service of the production of a globalized future—one that Ackbar Abbas and Aihwa Ong have characterized as "the urban spectacular"—then my chief argument in this chapter is that *Ji Neng* fashion has gained aesthetic currency in the fashion world at this particular moment[77] because it has both drawn from and elaborated—via the "soft technology" of clothing—the temporalizing environmental apparatus already at work in urban planning and architecture.[78] *Ji Neng* fashion should be understood, I argue, as the becoming ephemeral and becoming wearable of architectural futurity.

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[76] For Chinese usage of the term"机能风", see Yvette. "穿上"机能风"，下一秒就能加入复仇者联盟." 淡蓝 d 调. "别挑了，秋冬就走户外机能风吧." (Bie Tiao Le, Qiu Dong Jiu Zou Hu Wai Ji Neng Feng Ba) Douban.com. Published October 7th, 2015. Accessed July 23rd, 2019. URL: https://site.douban.com/240025/widget/notes/16898496/note/519678785/. 穿搭指南丨今年超流行的机能风，掌握三个技巧，纸片男也能镇得住." (Chuan Da Zhi Nan | Jin Nian Chao Liu Xing De Ji Neng Feng, Chang Wo San Ge Ji Qiao, Zhi Pian Nan Ye Neng Zhen De Zhu) URL: https://baijiahao.baidu.com/s?id=1618818749948076368.

[77] "This moment" being the end of the 2010s and the beginning of the 2020s, when "Greater China will for the first time in centuries overtake the US as the world's largest fashion market." See Business of Fashion and McKinsey&Company. *The State of Fashion 2019*. Business of Fashion: 7. The timing of this decennial transition roughly coincides with *the end* of what Joshua Neves calls "the Olympic era." See Neves, Joshua. *Underglobalization: Beijing's Media Urbanism and the Chimera of Legitimacy*. Duke University Press, 2020: 3.

[78] Abbas, Ackbar. "Speed and Spectacle in Chinese Cities." *Spectacle and the city: Chinese urbanities in art and popular culture*. Amsterdam University Press, 2015: 21; Ong, Aihwa. "Hyperbuilding: spectacle, speculation, and the hyperspace of sovereignty." *Worlding cities: Asian experiments and the art of being global*, 2011: 205.

This chapter is divided into five sections. The first section briefly introduces the visual form and operational logic of the built environment of major coastal cities in mainland China, via an overview of the Chinese urban and media studies scholarship. This is the context that puts the trend of 机能 (Ji Neng) fashion into a geographically and historically informed perspective. Coming after this contextualization is a discussion of how fashion, especially as it is produced in fashion shows and fashion photography, is linked to the urban built environment. The following sections perform close readings of 机能 fashion images that popularly circulate among Chinese audiences. Section three analyzes the use of urban sites and environments as backgrounds in 机能 fashion images, putting them into aesthetic dialogue with urban plans and videos, contemporary architecture, and architectural renderings, all of which produce the city as an image of futurity. Section four briefly covers three prominent sub-styles of 机能 fashion, demonstrating how fashion companies and consumer-influencers hone in on different aspects of the Chinese urban experience, responding to it with related but distinct lifestyles that are articulated through outfits. Finally, section five unpacks the most popular sub-style—what I call Militarized Futurist style—to establish exactly what response to the experience of contemporary Chinese urbanism 机能 fashion's middle and upper class consumers are articulating.

Section I. Chinese Urban Development 1978-2022

The Visual Culture of Unprecedented Modernization

There is an extensive body of urban studies scholarship on the development and transformation of cities in the People's Republic of China since the reform (*gaige kaifang*) era. Scholars from geography like Wu Fulong and Hsing You-tien have produced accounts of the 30 years since *gaige kaifang* that detail the changes in political economy, institutional history, and demography that have accompanied the development of cities on

the mainland.[79] Others from the urban design and planning disciplines, like Thomas J. Campenella, have laid out the transformations in architectural and infrastructural typology, while their critical counterparts in architectural history and theory, like Aihwa Ong and Max Hirsch, have drawn links between such changes in built form to reconfigurations in more abstract spatial logics like sovereignty or mobility.[80] Still others writing in Chinese film and media studies—Ackbar Abbas, Yomi Braester, Sheldon Lu, Joshua Neves, Robin Visser, and Zhang Zhen—have constructed compelling histories and arguments about how cinema and other visual media have not only continued their long history of reflecting the urban condition in China, but actively participated in the transformation of cities.[81] Despite their disciplinary and epistemological differences, these authors all converge when it comes to empirical description: the Chinese city since the beginning of *gaike kaifang* in 1978 has been characterized by demolition and construction happening at a historically unprecedented scale and speed—a "building frenzy" of the urban that has as its horizon "limitless modernization."[82]

This extremely rapid transformation of the urban built environment in the PRC has been a co-production between a directing state apparatus and the capital flows it has been eager to nurture.[83] As Wu has pointed out, "marketization [did] not reduce or eliminate

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[79] Hsing, You-Tien. *The Great Urban Transformation: Politics of land and property in China.* Oxford University Press: 2010. Wu Fulong, Jiang Xu, and Anthony Gar-On Yeh. *Urban development in post-reform China: State, market, and space*. Routledge, 2006.

[80] Campanella, Thomas. *Concrete Dragon: China's Urban Revolution and What It Means for the World*. New York: Princeton Architectural, 2008. Ong, Aihwa. "Hyperbuilding: spectacle, speculation, and the hyperspace of sovereignty." *Worlding cities: Asian experiments and the art of being global*, 2011: 205-226. Hirsh, Max. *Airport urbanism: infrastructure and mobility in Asia*. U of Minnesota Press, 2016.

[81] Abbas, Ackbar. "Speed and Spectacle in Chinese Cities." *Spectacle and the city: Chinese urbanities in art and popular culture*. Amsterdam University Press, 2015: 21-26. Braester, Yomi. *Painting the city red: Chinese cinema and the urban contract*. Duke University Press, 2010. Lu, Sheldon H. "Tear down the city: Reconstructing urban space in contemporary Chinese popular cinema and avant-garde art." *The Urban Generation: Chinese cinema and society at the turn of the twenty-first century*, 2007: 137-160. Neves, Joshua. *Underglobalization: Beijing's Media Urbanism and the Chimera of Legitimacy*. Duke University Press, 2020. Visser, Robin. *Cities Surround the Countryside: Urban aesthetics in postsocialist China*. Duke University Press, 2010. Zhen, Zhang. "Bearing Witness: Chinese Urban Cinema in the Era of ''Transformation'' (Zhuanxing)" *The Urban Generation: Chinese Cinema and Society at the turn of the Twenty-First Century,* Duke University Press*,* 2007.

[82] Respectively: Ong, Aihwa "Hyperbuilding.": 206. and Neves, Joshua. *Underglobalization*: 25.

[83] Braester, Yomi. *Painting the City Red: 283.*

the state's functionality."[84] After reform, the state apparatus—specifically municipal governments—has turned to large scale projects (at first funded by global capital) that initiate physical change in the built environment as a "developmental medium" to conduct modernization and accumulation.[85] Instead of displacing government power (like end-of-history liberals thought it would), channeling global capital flows through and as the Chinese built environment turn out to be a means for the Party bureaucracy to strengthen its governing power, and to articulate its vision of a global China.[86] The 2008 Beijing Olympics and the 2010 Shanghai World Expo are perhaps the most spectacular examples of this market-socialism-orchestrated developmental transformation, with global media events planned to coincide with 城市改造 ("*chengshi gaizao*") or urban redevelopment: demolition, population displacement, infrastructural investment, and real estate construction and marketing.

This destroy-and-rebuild series of transformative maneuvers operating on the urban built environment gave the post-reform Chinese metropolis two complementary visual aesthetic qualities that each temporally displace the present in apparently opposite directions. As Joshua Neves put it poetically, "*ruins* render the present past while *blueprints* defer the present into the future."[87] Bulldozers that collapse a structure to ruin push it over the edge of memory into forgetting, while construction cranes that build out blueprints raise stone back into stele, polished to gleam as futurity. Ruins and blueprints, this chapter argues, have been the visual mediums by means of which techwear fashion has put clothing design into dialogue with contemporary Chinese urban design.

By ruins, Neves means buildings, neighbourhoods, and social space in the city that have been made derelict by demolition. Demolition of pre-socialist architecture like *hutongs*, courtyard houses *("四合院"), shikumen ("石库门")* —as well as dormitories and apartments built in the socialist era--began in the 1980s in the Pearl River Delta,

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[84] Wu, Jiang and Yeh. *Urban development in post-reform China*: 306.
[85] Neves, Joshua. *Underglobalization:* 26.
[86] For "end-of-history" discourse during the 1990s apotheosis of world capitalist globalization, see of course Fukuyama, Francis. *The End of History and the last man*. Simon and Schuster, 2006 [1992].
[87] Neves, Joshua. *Underglobalization:* 46.

accelerating in the 1990s to other major cities like Beijing and Shanghai, and reached its peak around the early 2000s.[88] By the turn of the millennium, "in many Chinese cities radical demolition has continued for more than a decade, keeping metropolises like Beijing in a state of perpetual destruction and disruption."[89] Because this demolition has been orchestrated by the state to prepare the urban fabric for the construction of central business districts, new commodity housing, industrial parks, and so on—in order to attract investment capital and grow the private economy—accounts of its destructive effects on both the visual face of the city and the residents who were dispossessed have been absent from official media like television programs and "leitmotif" ("主旋律") films. Yet as scholars like Neves, Braester, Visser, Zhen, and Lu have shown, visions of existing urban structures turned to ruin—old town districts being demolished (*Jiucheng Yiyun,* 1997), courtyard houses being demolished for a mall (*I Love Beijing*, 2000), courtyard houses being demolished for karaoke bars (*For Fun*, 1992), karaoke bars being demolished (*Xiao Wu,* 1997), remains of demolished *hutongs* (*Ruins,* 1997), the widespread proliferation of the Chinese character for demolition ("拆") (*Chai Beijing,* 1990-2000), among many others—have been a predominant part of public consciousness in the 1990s to the early 2000s, appearing outside official media across underground and independent cinema, photography, video art, and graffiti. Demolition and its afterimage were ubiquitous.

While ruins are the afterimage of demolition, blueprints are the pre-vision of construction.[90] If the 1990s to early 2000s was a period in which the "image and experience" of the city in China was dominated by ruins and demolition, then the period after—from 2008 to 2022 (what Neves calls the Olympic era, bracketed by the two Beijing Olympic games)—increasingly sees ruins overtaken by blueprints.[91] By *blueprints*, Neves means "plans, models, renderings and digital design" used by city governments, urban planners, architects, and real estate developers to visualize future buildings,

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[88] For hutong and courtyard houses in Beijing, see Neves, Joshua. *Underglobalization*: 40. For shikumen and socialist housing in Shanghai, see Visser, Robin *Cities Surround the Countryside:* 140.
[89] Visser, Robin. *Cities Surround the Countryside:* 140.
[90] Neves, Joshua. *Underglobalization:* 46.
[91] Ibid: 34.

neighbourhoods, and whole cities.[92] They showcase to various publics, from pedestrians to investors, what fruits demolition and construction are intended to bear.[93] Coming from governments and real estate developers, such visions of urban futurity have been "uncompromisingly upbeat."[94] As we will see in sections three and four, the production of "digital lifeworlds" in the same futurist aesthetics as official and commercial architectural visions is what puts techwear fashion designers and brands in dialogue—some more intentionally than others—with the historical trajectory of Chinese urbanism since the turn of the millennium.[95]

Like ruins, blueprints are both images of urban architecture and actual architectural elements. They operate in the latter mode when they are deployed in public as advertisements for a future building/neighbourhood/city displayed on billboards, outdoor screens, and real estate showrooms—or wrapped around construction sites for "beautification". This is in addition to their more traditional, less-public function as a visual medium of professional communication between architect and client, or between designer and constructor. For both Braester and Neves, the vinyl real estate ad panels installed on construction site fences (that display printed images of the building(s) that will be constructed to replace a demolished site) are a key visual technique of manipulating urban space that "fashions the present as a placeholder for things to come."[96] In other words, these printed panels wrapped around construction site fencing announce that *now* is unavailable at this location; it is busy at work transforming into a *better later*.

Even though demolition's destructive force configures targeted urban spaces and memories as "past," this "past" is not meant to stay. This is how demolition differs in its temporal logic from preservation, even as both operations mark locations as no longer belonging to the present.[97] The "past" of demolished buildings turned to ruin is

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[92] Neves, Joshua. *Underglobalization:* 47.
[93] Ibid*:* 53.
[94] For official, utopian architectural visions, see Braester, Yomi. "The architecture of utopia.": 68.
[95] Neves, Joshua. *Underglobalization:* 34.
[96] Braester, Yomi. "Traces of the Future: Beijing's Politics of Emergence." *Ghost Protocol: Development and Displacement in Global China*. Duke University Press, 2016: 17. Neves, *Underglobalization:* 33-93.
[97] Yomi Braester has influentially argued that Urban Cinema and the New Documentary Movement in Chinese cinema are modes of preservation developed in response to widespread urban redevelopment. Here

anticipatory in its temporal logic: this "past" is marked for geophysical growth into the "future." As Braester and Neves have shown in their reading of "graphic-printed walls to enclose construction sites" in the Qianmen area of Beijing, sometimes the future neighbourhood/street/building to-come shows up as image on these "soft" real estate billboards *before* demolition of the existing structures even commences.[98] Under this visio-temporal cocoon of anticipation, demolition and its results become preparatory formatting for the urban futurity that will sprout in their wake, serving alongside their blueprint counterparts to cultivate present space for growth. As we will see in sections four and five, marketing photography in Ji Neng fashion utilizes the archi-temporal effect of both ruins and blueprints as a mobile and ephemeral form of this preparatory formatting. Unlike similarly mobile and emepheral ruin and billboard graffiti, it is worn.

Urban Critique from Melancholic Subjectivity to Pirate Citizenship

Media scholars of urban China have produced a substantial body of criticism accounting for the after-effects of this post-reform urban transformation, as well as the manifold responses by filmmakers, artists, and residents. Most canonically, Robin Visser, alongside with many of the authors in the influential *The Urban Generation* volume edited by Zhang Zhen, has probed the new subjectivities produced by urban (re-)development. For Visser, cities have their own identities and at the same time produce certain human subjectivities. From her reading of films like *Frozen* (1997) and *Suzhou River* (2001), Visser finds Beijing inhabiting an organic, unitary relation to imperial history. In contrast, Shanghai harbours a hybrid cosmopolitan identity, existing as a "world city" as much as a Chinese one. Cities like Shenzhen, as Visser reads from multiple 1990s novels, are also environments through which "urban history, memory, and space induce melancholy and loss, figured in relation to the gendered categories of the feminine, the homosexual, and the narcissist."[99]

I want to make clear the difference between the demolition of architecture and the responses it evokes in cinema, including site-specific interventions like documentary production and exhibition.

[98] Neves, Joshua. *Underglobalization:* 80. See also Braester, Yomi. "Traces of the Future.": 23-32.

[99] Visser, Robin. *Cities Surround the Countryside:* 22.

Extending the more psychoanalytic work of Visser, Zhen, and others, Yomi Braester's urban criticism of post-reform urban development has drawn attention to the register of the *perceptual* in cinematic and post-cinematic urban cultural productions. For Braester, theatre, film, urban planning exhibits, and roadside images are technologies of ordering time that alter how viewers perceive the relationship between past, present, and future. Government actors and real estate developers shorten the temporal duration of development (as the process of moving earth and moving through time in order to produce the new) by wrapping construction sites with printed vinyl images of the building-, street-, or district-to-come, proliferating the "finished product" as image prior to its materialization as built environment. Braester has called this and similar techniques of public visual intervention in favor of a designated future "the politics of emergence" and "real estate temporality."[100] In opposition to this shortening of the duration between present and future, documentary makers have used the capacity of the realist lens to indexically record and store lived actuality ("纪实主义") to "slow down the events [of demolition and displacement] to lived time and turn the spectator into an eyewitness who moves through the city and records the change."[101] Other cinematic responses—sometimes coming from the same filmmakers producing oppositional documentary work—range from oblique satires that employ mainstream-friendly, fictional narratives set in actual urban locations that have undergone re-development, to directly collaborating with real estate developers to produce films promoting new apartment complexes.[102]

Notably, Braester is the critic who has most explicitly used the term "utopia" and its antonyms— "dystopia" and "anti-topia" [103]—to respectively characterize official and commercial visions on one hand, like Rem Koolhaas' model of the CCTV tower, and on the other hand critical visions of architectural futurity (produced by means of the same modeling and rendering techniques), like Zhong Kangjun's *City* (2008) and Cao Fei's *RMB*

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[100] Braester, Yomi. "Traces of the Future.": 23. And Braester, Yomi. *Painting the City Red: 285.*
[101] Braester, Yomi. *Painting the City Red: 226.*
[102] Ibid: 281-303.
[103] Braester, Yomi. "The architecture of utopia.": 17, 67-71.

City (2008-2011).[104] Braester's highlighting of artists' dark tone and their distance from official discourse is highly relevant for our discussion of techwear fashion, because Ji Neng brands have also taken up anti-utopian positions in order to distance themselves from architectural and planning visual culture—even as they replicate the same urban environments in their marketing.

Building on the work of Zhen, Lu, and others on the archival function of urban cinema, and on the work of Braester on the futurity-producing visual techniques of real estate-driven urban development, Joshua Neves has expanded Braester's critique of architectural futurity in two significant ways. The first was to situate previous scholarly discussion of ruins and scars as one side of a developmental process that also produces public images of architectural and urban futurity as its other side. This complementary quality between ruins and blueprints I have already noted earlier in this section. On top of this first point, Neves has convincingly argued that scholars, when discussing responses to conditions of relentless demolition and reconstruction in Chinese cities, need to look beyond preservational or ironic critiques coming from the high arts—to everyday contestations over and appropriations of precisely those new urban surfaces produced by redevelopment—from ruins to roadside billboards alike.[105] Instead of just reacting post hoc to demolition and real estate marketing via established media forms, people's responses to this urban transformation have also come from their daily and mundane claims (like billboard graffiti job ads) over how the city may be used—by whom, and to live what kind of lives. For Neves, informal pressuring practices of making claims on urban media infrastructure like construction site graffiti, thumb drive film sharing, and parodic use of architectural rendering techniques (e.g. *RMB City*) are practices that reclaim the temporally displace city for the present. All these processes of past-, present-, and future-making, Neves has summed up as *rendering the city*. Rendering is "the process of using computer programs to generate images and models," but is also etymologically linked to (al)chemical processes like the purification of fatty tissues into lard (the rendering of fat).[106]

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[104] Ibid: 67-73.
[105] Neves, Joshua. *Underglobalization:* 44-45.
[106] Ibid: 33-34.

Rendering is thus a technique of material transformation, one that is also used by the 机能 fashion industry.

Following the thread of these everyday claims to the city by marginal residents like migrant workers, Neves has ambitiously and persuasively argued that issues of temporality and aesthetics in post-reform Chinese urban development should be understood and critiqued as the consequences of a globalized system of biopolitical governance he calls *underglobalization*. Underglobalization is the illegality, grey economy, and policed life necessarily produced by globalization as its shadow double.[107] Since China's re-entry into the world economy, globalization has played out as the modernizing push to universalize dominant (i.e. Westphalian techno-capitalist) "models for development and futurity."[108] This push for a convergent mode of "legitimate" future-making operates through a system of adjudicating lifeworlds, promoting some modes of living while denigrating others along temporal-aesthetic lines.[109] It is at work in governing regimes both local and international, "from district governments to the World Trade Organization," producing dutiful *citizens* on one hand and "lagging" *pirates* needing to be improved on the other.[110] Pirates are those whose ways of life do not follow the dominant vision of "proper" modernity and futurity, and are thus deemed by dominant narratives and visions of globalization to be backwards, illicit, or fake. Temporality becomes the operational site of inclusion/exclusion, and pirate life that has been deemed backwards must be taken out, re-modeled, or otherwise improved. Pirate life, in other words, can be legitimately demolished in operations of urban sacrifice in order to seed the birth of the globalized future city.

Neves' discussion of how globalization operates as a biopolitical system of legitimacy-making that aims to create a temporally-instantiated (future vs. present; future vs. past) differential between desirable and undesirable modes of living in the city is crucial to our discussion of 机能 fashion in China. This is because 机能 fashion—as the

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[107] Ibid: 3.
[108] Ibid.
[109] Ibid: 36.
[110] Ibid: 70.

most technophilic and sci-fi inspired wing of the global fashion industry—has, in my view, been articulating the position of a third "character" in the drama that Neves, Braester, Visser, and many others have hitherto analyzed as a two-sided contestation between state-market forces bent on urban redevelopment on the one hand, and residents and artists witnessing, resisting, and re-claiming the city on the other. How, I ask in this chapter, do the middle and upper class "citizens" who have been (and stand to continue) benefiting from state-market led urban transformation see themselves and the other parties in this contestation? This question is what an analysis of 机能 fashion—the majority of whose consumers come from the aforementioned "citizen" classes—can answer. We will return to a discussion of this issue at the end of section five and the conclusion. In the next section, I lay out fashion's relationship to the built environment to prepare for the analysis.

Section II. Fashion In/As the Mediatized City

This section outlines how contemporary fashion can be used as an illuminating visual form for urban media studies of China. Most obviously, fashion has been a topic of scholarly discussion in the design, marketing, and museological disciplines.[111] When fashion has been discussed in visual and media studies, it has mostly been linked to photography, print culture, drama, and cinema. Laikwan Pang, for example, has written about how *dan* performers (playing female roles) in 1920s Peking opera were early icons of the modern, fashionable Chinese woman.[112] While these varied visual and artistic forms adjacent to fashion have always constituted key aspects of the urban experience, there has been no discussion in Chinese media studies of fashion and clothing in relation to the *built* forms that most fundamentally constitute the urban—i.e. architecture and infrastructure. I have already noted in the introduction to this thesis that clothing and built environments, as modes of (human) mediation, are near and dear to one another. In this section, I move

[111] See Granata, Francesca. "Fashion studies in-between: A methodological case study and an inquiry into the state of fashion studies." *Fashion Theory* 16, no. 1 (2012): 67-82.
[112] Pang, Laikwan. "Photography, Performance, and the Making of Female Images." *The distorting mirror: Visual modernity in China*. University of Hawaii Press, 2007.

from discussing the built environment in relation to clothing in general, to a discussion of it in relation to fashion in particular.

"Fashion" is a signifier that refers to both a particular subset of clothing and the institutionalized system that publicly valorizes such clothing to be "fashionable."[113] It is both designs of apparel and accessories, as well as the industry of designers, models, celebrities, photographers, journalists, marketers, influencers, retailers, reviewers, and fans—among other industry roles—that distribute the designs as products and as discourse around what counts as fashionable. Predicated on producing and distributing images, this discursive aspect of fashion as a visual culture of the fashionable is what I will focus on in this chapter. As this section will explain, the contemporary production of fashion visual culture relies heavily on the use of urban built environments as background or stage (either captured through location shooting, or produced via computer rendering), which brings this visual culture into dialogue with that of architecture and infrastructure. On top of this, fashionable pedestrians and public fashion images (on billboards, for example) have long been considered a core part of the modern urban experience. It is to these two historically distinct but now-converging modes of encountering urban fashion that I will now turn.

Fashion Shows in the City

Since its 19th century invention by the couturier Charles Worth, the fashion show with live mannequins has become perhaps the most canonical mode of disseminating fashionable clothing as image in a performance.[114] A quick sampling of images in fashion magazines like *Vogue* or fashion academic journals like *Fashion Theory* will show that at its most basic, the fashion show is a staged performances where models wearing a designer's pieces emerge one-by-one from curtains and walk down a T-shaped runway, showcasing the new designs for a sitting audience of buyers, clients, journalists, and

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[113] Kawamura, Yuniya. *Fashion-ology: an introduction to fashion studies*. Bloomsbury Publishing, 2018: 39.
[114] On history of the fashion show, see Kawamura, Yuniya. *Fashion-ology:* 81. English separates live, human mannequins as *models*, and the unliving dolls found in store displays as *mannequins*. In French, both are simply *mannequin*.

celebrities positioned on either side of the runway. Understood through the configuration of its apparatus, the fashion show is very much like *theatre*. Indeed, as fashion scholar Silvano Mendes has pointed out, "the desire for visual impact often leads designers and brands to borrow aesthetic features from the performing arts—particularly theatre."[115] Most importantly for this chapter, fashion shows have been set in particular locations in the city, blurring the line between the stage and its outside. "In 1984, Katherine Hamnett presented a collection in a West London car park, while in 1989 Issey Miyake took over a Paris metro station, and Jean-Paul Gaultier presented his collection in a boxing ring."[116] Since the 1980s, the city itself has become a fashion show stage. At times, fashion brands have even commissioned whole urban set designs from architects. Rem Koolhaas, perhaps the architect most associated with early 21st century Chinese urbanism, and designer of Beijing's CCTV headquarters building, has long been a collaborator of Prada's, producing among other constructions for the brand a pavilion located in central Seoul consisting of "four basic geometric shapes—a circle, a cross, a hexagon, a rectangle—leaning together and wrapped in a translucent membrane."[117]

Fashion Photography in the City

In addition to fashion shows, another prominent mode of production and distribution through which fashion's visual culture is made to circulate has been fashion photography—including photography of fashion shows. While much of this photography takes place in studios, location shooting outdoors in the city is also heavily used by prestige print publications like *Vogue* and *Harper's Bazaar*, as well as more subcultural publications like *FRUiTS* and *Popeye*—which cover counter-cultural Japanese street styles that I will return to in section five. With the proliferation of fashion blogs in the early 2000s and smartphones in the late 2000s, non-professionals acquired the affordances to act as their own photographer, model, and online distributor in the production of fashion

[115] Mendes, Silvano. "The Instagrammability of the Runway: Architecture, Scenography, and the Spatial Turn in Fashion Communications." *Fashion Theory*, 2019: 1-28.
[116] Mendes, Silvano. "The Instagrammability of the Runway": 6.
[117] This pavilion is called the Prada Transformer. See https://oma.eu/projects/prada-transformer.

photography. This drove the emergence of a class of micro-celebrities called social media influencers, and gave small fashion designers and brands the means to market their products outside of closely-guarded prestige fashion media like *Vogue*.[118]

As Minh Ha T Pham has shown, fashion influencers have mostly staged their photography "in everyday spaces and public nonplaces," like the influencer's apartment balcony, or on the street below.[119] But the same competitive pressure that have driven fashion designers to stage their shows in found environments have also driven fashion influencers out into the city, in search of titillating backgrounds for their photos. Para-professional fashion influencers, who produce arguably most of the fashion images that are circulating online today, use location shooting in the city almost exclusively. These influencer images are then circulated online, to be viewed on the many mobile smartphone screens that themselves move alongside bodies in the city. It is at this juncture of media, fashion, and built environment that we can locate the visual culture of 机能 (*Ji Neng)* fashion.

Fashionable Pedestrians as the City

Besides publicly-aimed mediums like fashion shows and fashion photography, even anonymous pedestrians dressed fashionably and simply going about their lives in the city has been considered a key part of the urban experience of modernity. Without any further mediation by performance or image culture, fashion has always already been an urban medium. This is why Georg Simmel, a seminal commentator on the metropolitan experience, published one of the first scholarly commentaries on fashion in 1904—the very next year after his *The Metropolis and Mental Life,* a well-known sociological study of

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[118] Influencers "work to generate a form of "celebrity" capital by cultivating as much attention as possible and crafting an authentic "personal brand" via social [media] networks, which can subsequently be used by companies and advertisers for consumer outreach." See Hearn, Alison, and Stephanie Schoenhoff. "From celebrity to influencer." *A companion to celebrity*. *Wiley: London* (2016): 194-212. For photography on fashion blogs, see Rocamora, Agnès. "Mediatization and digital media in the field of fashion." *Fashion Theory* 21, no. 5 (2017): 505-522.

[119] Pham, Minh-Ha T. *Asians wear clothes on the Internet: Race, gender, and the work of personal style blogging*. Duke University Press, 2015: 141.

urban life.[120] Using colonial terminology, Simmel noted that fashion as a visual regime of social differentiation only exists in "highly civilized" modern societies where people of different classes regularly mingle in the same (urban) space, and hierarchy is not established and maintained via open force or legal code.[121] There is no need for fashion as medium of distinction in hunter-gatherer societies, because groups that live different lives simply do not meet in the same spaces. In other words, the public nature of urban built environments—especially infrastructures like roads, squares, and bridges that are legally accessible to all classes—begets the need for fashion as a means of visual differentiation within the class system. In the next sections, we will see how Ji Neng fashion, in order to do work as a medium of social differentiation, has interpreted particular aspects of the contemporary Chinese built environment in order to tailor designs for lifestyles that aesthetically fit into these environments.

In architectural renderings of spectacular urban architecture like the Beijing "Watercube" National Aquatics Center, computer generated avatars of pedestrians and tourists populate the image, walking and going about life in inconspicuous yet uncanny banality.[122] Even though the avatars appear in front of the architectural structure, they are more like the setting or mise-en-scene; the real star of the show is the designed structure. The visual culture of *Ji Neng* fashion features the same avatars and structures as the visual culture of architecture, planning, and real estate in China, except with the roles reversed. Architectural structures become the background, while avatar-like models and influencers clad in futuristic *Ji Neng* fashion take center stage. In the rest of this chapter, I closely read 机能 fashion images that circulate on Chinese social media to grasp how they both replicate and update architectural futurity.

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[120] Simmel, Georg. "Fashion." *American journal of sociology* 62, no. 6. 1957 (1904): 541-558.
[121] Ibid: 546.
[122] Neves, Joshua. *Underglobalization:* 54.

Section III. Urban Planning and Architecture in 机能 Fashion

My aim in this section is to persuade readers that 机能 fashion is in aesthetic dialogue with futurity-obsessed early 21st century Chinese urban design. At the most simple level, this trans-disciplinary reference has been produced by Ji Neng fashion brands staging marketing photoshoots for their products in locations that look very much like the rationalized and gleaming metropolis sold in contemporary urban planning exhibitions and real estate advertisements. Just as important as the locations are the clothes themselves, which translate into apparel design the formal qualities of digitally rendered urban futurity. The connection will become even clearer to readers, I contend, when we see that some designers and marketers in the industry have actually produced Ji Neng fashion photoshoots backgrounded by "starchitectural" set-piece buildings designed by the likes of MAD and Zaha Hadid Architects—practioners whom critics like Neves and Yomi Braester have previously associated with futurist Chinese urbanism.[123] For evidence, we will look at two sets of photographs posted on social media, the first by Reindee Lusion—a typical mainland-based, small fashion brand specializing in Ji Neng designs, and secondly by Jennifer Bin—a prominent Chinese-diasporic 机能 fashion photographer and influencer well-known in both the Chinese and international scene. Before any discussion of how Ji Neng fashion might *elaborate on* the aesthetics of Chinese urban futurity first promoted in architecture and urban planning (and how this futurity is constructed and experienced by the Chinese middle class consumers and influencers of Ji Neng fashion), these photographs will show us how Ji Neng fashion entered into dialogue with architecture and planning in the first place.

In 2020, fashion images circulate in China mainly on three social media platforms: Weibo, Xiaohongshu (also known as RED), and Instagram. Instagram is blocked in China by the Great Fire Wall, but as Jingying Li has noted, *fanqiang* ("wall-scaling") protocols

[123] For Neves on MAD, see Neves, Joshua. *Underglobalization:* 85-87. For Braester on Zaha Hadid, see Braester, Yomi. *Painting the City Red:* 290.

proliferate among elite who are tech-savvy and/or have been educated overseas.[124] Many in fashion circles count themselves in this group.[125] There is also the spread of 搬图 *bantu*, or "transporting pictures", where content from one social media network like Instagram is copied and reuploaded onto another network like RED. On top of the fact that many fashion influencers have accounts on all of these three platforms, this *bantu* work means that images circulate between platforms both within and across the Great Fire Wall, engendering a certain amount of cross-pollination between each platform's visual culture.

Cold Geometry in Urban Plans, Fashion Photographs, and Jacket Panels

Many 机能 fashion photos and videos that circulate on Chinese social media platforms are taken in mundane settings like the bedroom or the closest street corner. (See Figure 1) This is mostly the case with users and influencers for whom 机能 fashion is but one aesthetic among the many that they style themselves in. But among 机能 fashion brands and influencers who specialize in 机能 fashion, a well-developed style can be found: models/influencers clad in black and grey outfits pose against highly geometric silver and blue-toned built environments. In 机能 fashion image production, urban China is presented in a style very much in congruence with the futuristic visions of official planning culture. Joshua Neves, drawing on planner Daniel Abramson, notes that urban planning diagrams and blueprints "from on high reproduce the city as a series of geometric relationships that transform redevelopment into a series of technical problem."[126] For Neves, the long, clear sightlines of the abstract geometric city produces an urban texture that is too universalizing and smooth, a Haussmann-esque spatialization which "depoliticize the destruction of neighborhoods, relocation of residents, influx of migrant workers, and privatization of collective space."[127] This planning aesthetic of long

[124] Li, Jingying. "China: Techno-Politics of the Wall." *Geoblocking and Global Video Culture*. Institute of Network Cultures, Amsterdam, 2016.
[125] See Suen, Zoey and Hall, Case. "Instagram Does Matter in China. Here's How Brands Can Use It." *Business of Fashion*, September 19, 2019.
[126] Neves, Joshua. *Underglobalization:* 51.
[127] Ibid: 52

sightlines traversing geometrically abstracted space creates the expectation of moving smoothly and without impedance"—one imagines steering a floating avatar in a digital world."[128]

Not coincidentally, we find in 机能 fashion photographs that circulate on social media the same contemporary Chinese planning aesthetic: high modernist skyscrapers paired with concrete and steel infrastructural elements, all composing the formal properties of cool blue and silver tones, high gloss and reflectivity, and smooth, straight geometric lines spanning width, height, and depth. Take for example two photoshoots conducted by the Guangzhou-based 机能 brand Reindee Lusion, both showcasing the same outfit and published in the last month of 2019 on Weibo. (See Figures 2.1 and 2.2) In the first photoshoot with the long-haired model, walls and walkways covered by large grey rectilinear stone tiles feature in the background of every photo except one. While a long mirror-like metallic pathway structures the geometric perspectival rendering of depth, cold teal-blue glass windows shimmer in the background. Looming behind all this is a highrise with a copper-tan façade of dense vertical stripes. In the second photoshoot with the short-haired model, a multi-story white-tiled parking lot with cars nowhere to be seen forms the setting of every photo except one. Rectilinear shapes once again proliferate in the background composition, with openings in the parking lot structure lit up by thin slits of sunlight, rectangular yellow-and-black warning strips taped to protruding corners, and fire sprinkler pipes joining at 90-degree angles on the ceiling. Photographed wandering the parking lot in hooded aloofness, the model's only shot outside the carless carpark captures her getting onto an escalator on an equally anodyne floor, surrounded only by transportation and water infrastructure. Reproducing the smoothly geometric, abstractly designed environments found in planning diagrams, blueprints, and videos, 机能 fashion grounds its clothing design and lifestyle marketing in environments Yomi Braester has

[128] Ibid: 49.

called "the real-estate speculation-driven Chinese city."[129] It is these kinds of cooly rational built environments, the photographs say, that Ji Neng clothes are designed for.

Garment and accessory design in the 机能 style very often reproduce this smoothly abstracted, geometric look of contemporary Chinese architecture and architectural visual culture. Let us examine the jacket in the Reindee Lusion photoshoots. (See Figure 2.3) This waterproof shell jacket is fronted by a large pyramidal navy blue panel at the chest, which is braced on two sides from shoulder to armpit by two smaller, inverse-pyramid panels in purplish grey. At the base of the chest panel is a wide rectangular pocket flap in the same grey as the shoulder panels, the three of them together framing the triangular chest at each of its sides. Also accented in grey are two large utility pockets, diagonally appearing on each side below the central pocket flap. Both the sleeves and hem are navy blue and extra-long, the hem reaching past the models' waists to form a rectangular front flap. The seams attaching one panel to another are folded in and hidden, or otherwise covered over with black waterproof tape. Finally, because the jacket's fabric is a polyester that has been treated with a water-repellant coating (and lined with 3M's Thinsulate[130]), it retains a fair amount of rigidity when deforming: long pressure lines sweep across the jacket, and folds collapse upon one another in conchoidal fractures, like those found on Lithic Age flint and obsidian tools. The jacket's design emphasizes geometric shapes and muted, moon-blue tones. To become part of the rendered city, it seems to say, one ought to look like they have also been sculpted from digital polygons. Only one among many Ji Neng fashion brands that produce color-blocked waterproof jackets, Reindee Lusion's geometric designs and paneling match Joshua Neves' description of an urban planning aesthetics that abstracts districts and buildings into geometric shapes, placing them along straight, long, and clear sightlines. On the other hand, hidden seams and rubberized waterproof zippers lend themselves to the imaginary locomotion of seamless gliding, floating above puddles

[129] Braester, Yomi. "The architecture of utopia: From Rem Koolhaas' scale models to RMB city." *Spectacle and the City: Chinese Urbanities in Art and Popular Culture*, 2013: 71.
[130] For "Thinsulate", see https://www.3m.com/3M/en_US/thinsulate-us/.

and grime. As if avatars in an architectural rendering, models wearing 机能 fashion are to traverse the city in a smooth orderly flow.

Starchitect Buildings as the 机能 City

If at the larger scale of planning, the built environments in 机能 fashion marketing formally reproduce the aesthetics of diagrams, masterplans, and museum exhibits, then at the smaller scale of architecture, the buildings in 机能 fashion are often the very same structures that critics have identified with Chinese architectural futurity. Exemplary of this is the monumental urban photography of Jennifer Bin, a Chinese-Canadian influencer on Instagram who mostly shoots on location in Chinese cities, and who has thousands of Chinese followers. Having produced sponsored content for Apple, Nike, *Elle*, Lufthansa, and the Hollywood remake of *Ghost in the Shell* (2017), Bin fits the global creative class definition of what Minh Ha T Pham calls "the Asian fashion superblogger."[131] Like filmmakers (such as Bernardo Bertolucci and Feng Xiaogang) whose location shooting for blockbuster cinema turn national symbols like Tiananmen Square into commercial backdrops, Bin has been highly adept at using location shooting to turn the many spectacular starchitectural designs that proliferate in China into 机能 fashion social media influence.[132] Spectacular post-Olympic (i.e. new and grandiose) structures that have appeared in her photos include the CCTV headquarters in Beijing, Galaxy SOHO Beijing, Lingkong SOHO Shanghai, Jumeirah Himalayas Hotel Shanghai, Shanghai Poly Grand Theatre, Nanjing Poly Grand Theatre, Shanghai Natural History Museum, Shanghai Oriental Sports Centre, Shenzhen Bay Sports Centre, Harbin Opera House, Guangzhou Opera House, Tianjin Binhai Library, among many others. In turn, these gleaming monuments to the return of China on the global stage (after socialist hermeticism) have been designed by internationally renowned firms with a keen history of investment in

[131] Pham, Minh-Ha T. *Asians wear clothes on the Internet:* 6.
[132] Braester, Yomi. *Painting the City Red:* 284-295.

contemporary Chinese urbanism, like OMA, Zaha Hadid Architects, MAD, Arata Isozaki & Associates, Tadao Ando Architects, MVRDV, and gmp Architects.

Take for example a series of 机能 fashion photos that Bin took in, around, and outside Galaxy SOHO Beijing, a hybrid mall/office complex in the city's Chaoyang district designed by Zaha Hadid Architects. (See Figure 3) Yomi Braester has already noted how the real estate developer SOHO China and its co-founder 潘石屹 (*Pan Shiyi*) have been very adept at at using art world approved figures, like New Documentary Movement director Ning Ying and starchitect Zaha Hadid, to elevate the cultural prestige of their developments.[133] Performing a very similar move—without having to commission Zaha Hadid for a multi-million dollar project—Bin elevated the urbanist cachet of Ji Neng fashion by using the Galaxy SOHO complex as the location and backdrop for a photoshoot with Errolson Hugh, a prominent 机能 fashion designer and marketer. Styled in a white camouflage jacket and black drop-crotch pants of his own design, Hugh is captured in one of the photos from a low angle, standing atop a glass-reinforced geodesic dome. From behind, he is framed by one of the complex's concave walls. This gleaming curvilinear surface—in what Patrick Schumacher (the late Zaha Hadid's successor at ZHA) has controversially coined "Parametricist" design—spreads out in the frame as horizontally alternating tracks of cold white gypsum and glass windows that curve parabolically towards the camera, each strip intersecting with Hugh's looming figure at the center of the photo.[134] This framing of fore- and background amplifies Hugh's energy, like sound originating from the narrow end of a megaphone or loudspeaker. The designer's slightly relaxed, Ji Neng-styled figure casts his look from above the camera, assessing, inviting, and adjudicating the viewer, as if incumbent upon challenger in a bout of combat. His mustache and bald head giving him the air of a Shaolin master, Hugh stands and looks from a position that says he has already successfully perfected a Chineseness that is both grounded and global—one that is anchored to the (ancient

[133] Ibid*:* 290.
[134] Schumacher, Patrik. "Parametricism: A new global style for architecture and urban design." *Architectural Design* 79, no. 4 (2009): 14-23.

martial) body yet channels out through the waves and wires of "the technologized future city."[135] This technologized future city manifests in the everyday as the invisible cloud of microwave communications sent from cell towers and wifi routers to smartphones and laptops. But sometimes, it also manifests more visibly and concretely as technophilic parametric urban design in China that *looks like* waves broadcasting atop a globe. Holding court on the geodesic dome, Hugh's pose addresses viewing urban denizen-consumers—like Maoist loudspeakers once addressed the revolutionary masses[136]—as if to say, "Can you master urban futurity like I have?" If proliferating architectural futurity engenders subjective anxiety, then 机能 fashion has emerged to amplify this *and* to offer as remedy fashionable designs that signify a mastery of digital global Chineseness.

My point is, this kind of photographic framing and modeling in these architectural urbanscape to produce aspirational lifestyles is what gives Ji Neng fashion ads their consumer appeal to its mainly middle-class and wealthy consumers. In the case of many of these ads, the built urban environment—down to the level of specific buildings—plays an essential role in the process of producing visual marketing content. Location shooting has thus become a way for 机能 fashion designers and marketers to anchor their work to the developmental forces shaping the contemporary Chinese city. Unlike preservational documentary cinema that aims to extend urban memory "against the [real estate] developers' shortening of duration," 机能 fashion photography as a mode of visual production affirms the real estate temporality of *future-now*.[137]

Rendered City Overflow

Explaining the proliferation of urban screens—like TVs mounted on buildings façades, or smartphones playing real estate ads—Yomi Braester has said that "the metropolis is getting overstretched, and video media are following suit, expanding their

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[135] Neves, Joshua. *Underglobalization:* 26.
[136] For loudspeakers as Mao-era public architecture, see Li, Jie. "Revolutionary Echoes: Radios and Loudspeakers in the Mao Era." *Twentieth-Century China* 45, no. 1 (2020): 25-45.
[137] Braester, Yomi. *Painting the City Red:* 226.

physical and social boundaries."[138] The surface of (elite fashionista) urbanites' bodies, I argue, is a plane onto which the metropolis as visual culture has expanded. To this we should not be surprised. If screen and visual real estate in contemporary urban China has been overflowing with projections of architectural futures, some of this overflow will spill intermedially onto adjacent surfaces, like those of fashion magazines and fashion social media—both of which share "real estate" on billboards and smartphones with architectural images. And as fashion images—especially long-shot photographs and videos taken with a high depth-of field—assemble the rendered city and model/influencers' bodies together as one flattened plane, this overflow has moved from building to clothing, remaking the aesthetics of fashion. In turn, fashion designs have been mimetically reinforcing the "address from the future" of contemporary architecture and urban planning—a spatialized attempt to order time that Braester has called "the politics of emergence" and that Neves has called "the future-function of culture."[139]

Using post-production imaging techniques like cooling the color tone, decreasing color saturation, turning up the highlights, and increasing black-and-white contrast, Bin and other 机能 fashion influencers "turn up" the sci-fi futurism of Chinese urbanscapes. In other words, their photography does more than just *find* and *re-affirm* already built sites of architectural futurity; when grasped together with post-production tuning, it is a transformative process that participates in *rendering* urban sites as futuristic. In the next section, we will see how the visual culture of Ji Neng fashion has moved past simply establishing an aesthetic correspondence with urban Chinese architectural futurity, to expand upon and respond to this aesthetics of the built environment with its own practices of fashion design and marketing. To do so, I will examine prominent sub-styles within Ji Neng fashion.

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[138] Braester, Yomi. "Traces of the Future.": 23.
[139] Ibid: 16. And Neves, Joshua. *Underglobalization:* 36.

Section IV. Infrastructural Transformation, Astronauts, and Cyborg Soldiers: The Many Styles of 机能 Fashion

Unfortunately, it is beyond the scope this thesis chapter to comprehensively catalogue and interpret all the various sub-styles of 机能 fashion that proliferate on Chinese social media. In lieu of such an account, I will in this section provide readers with the briefest of overviews on three relatively prominent sub-styles that I have encountered in the course of my research on the subject of Ji Neng fashion. These are what I call the Infrastructural Transformation style, the Avatar Astonaut style, and the Militarized Futurist style—the last of which we will investigate closely in section five. My aim with this short summary of three sub-styles is to show not only the breadth of Ji Neng fashion as it is being integrated into practices of the mainstream, elite fashion industry. It is also to demonstrate how Ji Neng fashion designers, marketers, and middle-class consumer-influencers have drawn on and responded to different aspects of the transforming built environment—the neon colour palette of construction and infrastructure workers wearing hi-visibility vests, the spaceship looks of ZHA and MAD architecture, and the war-torn atmosphere of demolished buildings—to elaborate a sense of sartorial futurity that is linked to architectural futurity and urban transformation.

Infrastructural Transformation

The first sub-style I want to introduce readers to is what I call *Infrastructural Transformation* 机能 fashion. More abstract than the next two styles--which draw their inspirations from specific figures like the astronaut or the cyborg soldier (that are linked to particular environments, like space or war)—Infrastructural Transformation style takes its designs from the aesthetics shared by built infrastructures and the people whose job it is to maintain, renew, demolish, or otherwise transform them. Arguably, this is less a style—with its own signature apparel items—than a shared set of fabric patterns and colour palettes. An example of this Infrastructural Transformation style is the widespread proliferation of neon-colored reflective fabrics in 机能 (and increasingly, also much of

mainstream) fashion.[140] Another is the trend of adapting checkered patterns and cuts from motocross, which is motocycle racing on unpaved dirt roads. Infrastructural Transformation style 机能 fashion has incorporated into apparel and accessory design the hi-visibility, light-reflective visual grammar of road, traffic, and construction management, which can be found not only on clothing worn by police, construction workers, firefighters, and sanitation workers, but also adorn infrastructures like road medians, highway exits, and traffic cones—as well as construction machinery like backhoes, excavators, and demolishers. Though fashion journalists have dated the spread of light-reflective neon fabrics in fashion to the early 2010s, the link between this 机能 style and infrastructural transformation is in my view better demonstrated by a 2008 ad. In a public interest campaign for the French government's road safety program, Chanel designer Karl Lagerfeld donned a (now infamous) yellow safety vest over his signature tuxedo and sunglasses look. A new French law was coming into place in 2008 that mandated all motorists keep a yellow safety vest in their vehicles to wear in case of an accident, so they can be visible to other motorists when stepping outside of their vehicles. In other words, the outfits of motorists were to be mobilized as traffic management infrastructure if existing traffic management technology (lights and reflective strips on a vehicle) were to fail.

Akhil Gupta has argued that infrastructure should be understood processually as *infrastructure-ing*. Seeing infrastructure as durable large provisioning systems occludes the labour, materials, and energy required to maintain and perpetuate them, while seeing infrastructure as inherently decaying and headed for ruin foregrounds this ongoing maintenance work of making infrastructures function. Also brought to the fore are the transformational dynamics of infrastructure as they decay and are subsequently repaired, or are replaced by something else entirely.[141] By stylizing the neon yellow and orange colour palette shared by both built infrastructure and infrastructure workers when the

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[140] For English journalism, see https://www.theguardian.com/fashion/2018/sep/13/time-to-reflect-why-the-fashion-for-high-vis-is-everywhere. For Chinese, see https://mp.weixin.qq.com/s/iCEyn0X8zIDl1U5o8bxnRA

[141] See Gupta, Akhil. "The future in ruins: Thoughts on the temporality of infrastructure." *The promise of infrastructure* (2018): 62-79.

latter are working to repair, destroy, or otherwise transform the former, Infrastructural Transformation 机能 fashion seems to be, in my view, both documenting and further distributing the dynamic force of urban transformation itself.[142]

Avatar Astronauts

The second sub-style in 机能 fashion I want to briefly touch on is what I call Avatar Astronaut style. This style seems to be designed for life at the gleaming "finish" of the urban transformation process, in contrast with construction and infrastructure workers who proliferate in the "beginning." Avatars who populate architectural renderings of the future city become astronauts when fashion designers dress them up in space suits. Unnoticed by fashion journalists and social media commentators preoccupied with tracing 机能 fashion to its supposed origins in cyberpunk film and animation, Avatar Astronaut style draws from an older sci-fi lineage—that of the Cold War Space Age—to anchor the vision of futurity found in contemporary Chinese cities to the specific milieu of *space*. Posing models in front of rendered backgrounds of flight control rooms, ship interiors, airlocks, and toroidal space habitats, Avatar Astronaut Ji Neng fashion seems to have taken seriously and developed a whole style around the vernacular interpretation that some starchitect-designed buildings in China—like the Harbin Opera House by MAD or the National Grand Theatre by Paul Andreu—look like spaceships that have landed in the middle of the city.[143] The most commercially and critically successful brand in this style, C2H4, has directly cited *2001: A Space Odyssey* (1968) as a visual inspiration on social media. Others, like Heron Preston and Fearom, have branded their apparel with the logos of space agencies like the US's NASA and China's CNSA.[144] Brands either dabbling

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[142] Neves makes a similar argument about the mediatic operations (documenting and further distributing) through the film *Meishi Street* (2006). See Neves, Joshua. *Underglobalization:* 72-78. To be clear, Infrastructural Transformation 机能 fashion is much less (if at all) critical of Chinese urban development than *Meishi Street*.

[143] See for example https://www.elledecor.com/design-decorate/a8113/this-chinese-opera-house-is-a-sci-fi-dream/

[144] For Heron Preston, see https://www.ssense.com/en-us/editorial/fashion/heron-preston-x-nasa-streetwear-for-outer-space.

or fully invested in this spacey style—which include C2H4, Heron Preston, Isaora, Veilance, and Fearom, among others—use iconic apparel pieces like the puffer scarf,[145] the astronaut suit, and the flight engineer's vest to build out a vision of urban futurity that has decidedly become extra-terrestrial, even as they reproduce the cold-toned blue, grey, black, and white colour palette of more earth-bound Ji Neng designs.

For Joshua Neves, the pseudonymous Weibo blogger E2MAN's photographic journeys--documenting him wandering Beijing in a silver alien suit--capture the alienating effects of relentless urban transformation on city residents: "E2MAN's urban forays insist not only on traumatic changes in the material world, but also on how these shifts transform even local and longtime inhabitants into aliens, outsiders, peasants, migrants, illegals, and other subjects to be improved, surveilled, or disciplined."[146] If for E2MAN, the only way to inhabit a city made alien by proliferating demolition and architectural modeling is to don a silver alien suit, making his body look as alienating as the environment it must traverse through, then a similar extra-terrestrializing response can be found in Ji Neng fashion. Less concerned with critique than with marketing products that help elite urban youth "improve themselves" by smoothening out the sensual shock of living in what Neves has called "the rendered city," Avatar Astronaut Ji Neng fashion has proposed that, instead of looking like an alien to fit in, young urbanites should try looking instead like astronauts and ground-control engineers. Traversal through the urban environment would then be smooth, floating, and scientific.

Militarized Futurists

The last of our three sub-styles is Militarized Futurist Ji Neng fashion. The Militarized Futurist style is the one most fans, social media commentators, and fashion journalists associate with Ji Neng fashion.[147] It is also the most common, with roughly

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[145] A puffer scarf is a scarf made of multiple rectangular down-filled pockets sewn together in a line, creating a scarf with discrete sections. It can be understood as a "deconstructed" puffer vest, or as an augmented airline pillow.

[146] Neves, Joshua. *Underglobalization:* 91

[147] For fashion journalism in English, see Hine, Samuel. "The Future of Fashion Might Come From Vancouver;" Johnson, Rebecca May. "A Survivalist Streak in Menswear." In Chinese, see Yvette. "穿上"机能

eight out of ten Ji Neng fashion posts one sees on social media belonging to this style. Some companies and brands that have produced apparel in the Militarized Futurist style include Acronym, Alyx 1017 9SM, Guerilla Group, Hyein Seo, Louis Vuitton, Prada Linea Rossa, and Stone Island. Influencers and fashionistas styled in Militarized Futurist 机能 designs can be seen in black, olive, and white digital camouflage tops, loose-fitting cargo pants with utility pockets, black sneakers or boots, and one-piece visor sunglasses. Proliferating on every surface of these garments and accessories are "ammo" pockets, attachment straps, and buckles of all shapes and sizes—interfaces galore. The two most iconic designs in this style—the 战术马甲 "tactical vest" and its equivalent accessory, the 机能胸包 "Ji Neng chest pouch"—have been absorbed by the fashion mainstream, finding its way onto Dior catwalks, posts by *Vogue* on Weibo, and the looks of celebrities like TFBoys.[148] While the Ji Neng vest and chest pouch should be seen as the latest iteration in the fashion industry's perennial obsession with and appropriation from military clothing designs—a history that at least dates back to the popularization of the Burberry trench coat after World War I[149]—what we can see in 机能 fashion exceeds simple borrowing from the military. With models and influencers looking like they came out of cyberpunk works like *Ghost in the Shell* (1995) or *Metal Gear Solid* (1998), instead of contemporary war films like *Wolf Warrior* (2015) or *American Sniper* (2014), the sartorial figure channeled in Militarized Futurist 机能 fashion is less the soldier than the cyborg. In other words, militaristic 机能 designs from Acronym to Dior alike seek to make fashionable urbanites look not just like any soldier, but a soldier from the future.

As I will elaborate in the next section, the cyborg aesthetics of Militarize Futurist 机能 fashion stylizes less the elite technocratic residents of the future city, or the many

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风"，下一秒就能加入复仇者联盟." (Chuan Shang Ji Neng Feng, Xia Yi Miao Jiu Neng Jia Ru Fu Chou Zhe Lian Meng).

[148] VogueMe. "#VogueMe 星球# [#机能马甲酷帅满分#]." Weibo image post, January 20th, 2020. https://m.weibo.cn/status/4463141775543241.

[149] Tynan, Jane. "Military Dress and Men's Outdoor Leisurewear: Burberry's Trench Coat in First World War Britain." *Journal of Design History* 24, no. 2 (2011): 139-156.

construction and infrastructure workers whose work builds this environment. Rather, the Militarized Futurist style looks more like "hired thugs" and "threatening police" who have come from a future where they have just finished bullying and evicting residents who did not want to leave a neighbourhood targeted for demolition and redevelopment.[150] It visually partakes in the futurity-producing, state-market driven operations of "demolishing" the built environment for redevelopment. Yet in stark contrast with official and commercial visions of city to come, this sub-style—more forcefully than any of the others—rejects official utopian projections of the future city in favour of its own articulation of a dark urban future. In doing so, designers, marketers, and consumer-influencers of Militarized Futurist 机能 fashion seem to have staked out a political position somewhere between the *utopian projection* of official architectural futurity on one hand, and the *dystopian reflection* of critical artists like Zhong Kangjun on the other.[151] In other words, 机能 fashion has articulated a contemporary Chinese urbanism that goes beyond both official visions and artistic critiques, while remaining in dialogue with them.

Let us turn in the last section of this chapter to a close reading of this style, and its implications for how the urban media environment in the Chinese metropolis is mobilized by different groups—like municipal planning agencies, residents facing eviction, or (middle class and wealthy) consumers of the global fashion industry—in their everyday contestations over what constitutes "legitimate modes for living" that cities will support.[152]

Section V. Militarized Futurists and Ambient Violence Become-Ornate

Claiming Ruins for/from the Future

When we look at photographs of Militarized Futurist 机能 fashion on social media, we find them staged in a distinct set of urban milieus that resemble less utopian

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[150] Neves, Joshua. *Underglobalization:* 72, 61.
[151] I call urban Chinese art exhibited in public galleries "reflection"—in contrast with "projection," which is etymologically link to "project"--because it reacts to projection by modulating and sending back its lights. For Zhong's work as shown in a public museum, see Braester, Yomi. "The architecture of utopia.": 67
[152] Neves, Joshua. *Underglobalization:* 70.

architectural futures, but more the spectral ruined environments that have been much discussed by scholars of urban Chinese media. In other words, unlike Avatar Astronaut 机能 fashion, Militarized Futurist 机能 fashion stages its photography and videography in demolition sites, derelict buildings, underground parking lots, unoccupied rooftops, industrial/infrastructural backrooms, deteriorating alleyways, and other similar sites of haunting ruin (See Figures 5.1, 5.2, 5.3) A illustrative example is the Xiaohongshu post titled "闺蜜穿搭｜暗黑系酷女孩街头出行一周穿搭" ("Bestie Outfits｜Dark Kei Cool Girls' Out-n-about Outfits For The Week") published on February 9th, 2020 by user 宇宙匿名, a fashion and makeup influencer. In three out of five "looks" for the week, 宇宙匿名 has photographed herself and her "bestie" in the Militarized Futurist Ji Neng style, posing in a building that appears either halfway demolished or halfway constructed. In one of the photographs (Figure 5.1), 宇宙匿名 and the bestie respectively stand and squat at the bottom of a visibly dirty concrete staircase, above which is a floor full of metal and wooden beams, and behind which is a small room with unfinished concrete walls. A broken speaker lies on the ground, and above it a wire juts out of the roof corner; there are graffiti ad sticker on the wall, and the ground is littered with paper confetti.

Militarized Futurist 机能 fashion photography is a process that actively participates in the rendering of the city as image—an image of ruination. Decadently derelict urban environments are not just found; they are produced via photographic techniques like framing, lighting, and post-production processing. Most significantly, all other urban residents (whether human or non-human) are framed out, as is plant life. The camera is made to see the urban environment behind the influencer as only built structures and infrastructure, contending with elemental forces of erosion. If demolition destroyed built inhabitations which had supported various ways of living in the city—from traditional commercial neighbourhoods like Dashanlan'r to "handshake buildings" in urban villages that are popular with migrant workers—then the photographic marketing of Militarized Futurist 机能 fashion renders these sites a second time to "clear away" even those straggling weeds, birds, and passerbys that were too marginal for redevelopment to target

the first time around.[153] This framing as erasure of everyday sociality and ecology gives the environments in Militarized Futurist 机能 fashion photographs a war-torn, abandoned atmosphere, making them ripe for claiming. If for art historian Wu Hung, "Ruins in Beijing and in [photographer Rong Rong's] pictures are places that belong to everyone and to no one," then Militarized Futurist 机能 fashion seem to have responded with, "Yes they belonged to no one, so now we are taking them."[154] Back in the Xiaohongshu post by 宇宙匿名, both of the influencers sport all-black outfits with long-sleeved tops, utility cargo pants, and sneakers. 宇宙匿名 wears a Ji Neng pouch at her waist, accented by two silver chains that clip onto her belt loop, while the bestie wears a Ji Neng pouch on her chest, its many straps dangling onto the floor. Looking like femme fatale agents in a cyberpunk thriller, both influencers stare directly into the camera, unsmiling. As was the case in the pulp noir stories from which cyberpunk originated, the atmospheric intrigue in this scene comes from its undercurrent of menace: "This place is ours. Don't test us."

Bourgeois Recuperation of Street Style and Condensation of Exclusionary Force

Claiming urban space with fashionable bodies has been understood in fashion and scholarly discourse as *street style.*[155] Street style denotes genres and styles of dress that develop and circulate in urban settings outside the mediasphere of the elite fashion system, like those of the British Rastafarians, mods, and punks analyzed by Dick Hebdige in his classic *Subculture: The Meaning of Style.*[156] In the postwar Japanese context, subcultural youth dressed in anti-normative street styles like *miyuki-zoku* and *futen-zoku*

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[153] For Dashanlan'r, see Neves, Joshua. *Underglobalization:* 72-75. For "handshake buildings," see O'Donnell, Mary Ann. "Laying siege to the villages: The vernacular geography of Shenzhen." *Mary Ann O'Donnell, Winnie Wong, and Jonathan Bach. Chicago, IL: University of Chicago Press* (2017): 107-21.
[154] Wu in Neves, Joshua. *Underglobalization:* 43.
[155] Even though both are sartorial forms of oppositional youth culture heavily borrowing designs from the military, *street style* is a closer precedent for Militarized Futurist 机能 fashion than the Red Guard uniforms of the Cultural Revolution. Despite their penchant for violently overturning the past to produce the future, Red Guards were not portrayed in Maost visual culture as occupying and claiming urban space like in street style. For Red Guard uniforms, see Li, Li. "Uniformed rebellion, fabricated identity: A study of social history of Red Guards in military uniforms during the Chinese Cultural Revolution and beyond." *Fashion Theory* 14, no. 4 (2010): 439-469.
[156] Hebdige, Dick. *Subculture: The meaning of style*. Routledge, [1979] 2012.

aesthetically confronted the polite middle class values of (their parents') mainstream culture by using their dandyish embodiment as human graffiti on street corners, performing cultural opposition in central wards of Tokyo like Shinjuku. More vehicularly embodied groups like *Harajuku-zoku* and *bôsô-zoku* raced flashy modified cars and motorcycles on public roads, making claims over infrastructure and its use.[157] While Militarized Futurist 机能 fashion has inherited the aggressive looks of street style punks and *bôsô-zoku*, it should not be understood as a counter-cultural practice of resistance. Counter-cultural street styles have very much been recuperated into the bourgeois symbolic economy, since their co-option by the fashion industry beginning in the 1980s. [158] The middle and upper-class fashion content producers who style themselves in Militarized Futurist 机能 looks on Weibo, Xiaohongshu, and Instagram have thus come from a sociological stratum closer to the traditional demographics of the elite fashion industry, than to the working class youth of punk and *bôsô-zoku*. Their outfits too, have very much been supplied by the global fashion industry.

With this sociological context in mind, I argue that the Militarized Futurist style in 机能 fashion styles itself in looks of violent excess from street style countercultures like punk and *bôsô-zoku* in service of the same spatio-temporal operation performed by state-market designed construction site vinyl wraps: to sacrificially project urban futurity by regulating access to and thus claim the present for the future. As Yomi Braester and Joshua Neves have noted, construction site vinyl wraps project architectural models and real estate futures of the now-demolished space they are enclosing in order to claim the present-turned-to-past for the future. 机能 fashion performs same operation, but concentrates the exclusionary architectural capacity of future-projecting construction site fences onto the much-smaller surfaces of influencers' bodies. This condensation of the power to regulate access to space results in a much more aggressive-looking—but also

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[157] Narumi, Hiroshi. "Street style and its meaning in postwar Japan." *Fashion Theory* 14, no. 4 (2010): 415-438.
[158] For an example of fashion industry co-opting street styles, see Rees-Roberts, Nick. "Raf Simons and Interdisciplinary Fashion from Post-Punk to Neo-Modern." *Fashion Theory* 19, no. 1 (2015): 9-41.

more honest, I argue—image of urban futurity than utopian architectural models of real estate development.

In a post titled "攻壳机动队保安日记之男生春季机能穿搭 OOTD" ("Ghost in the Shell Security Guard Diary: Guys Spring Ji Neng Style Outfit of the Day"), Xiaohongshu influencer Evig Ung can be seen half-squatting boldly in front of an unspecified raw concrete wall, sporting a grey Ji Neng vest on his chest and Matrix-style small black sunglasses on his face. As his post title suggests, he poses as if here to secure space. Like the wood and metal fencing surrounding construction sites, security guards regulate access to urban spaces via selective exclusion. Rather than contemporary punks and *bôsô-zoku* who stylize working class antagonism towards establishment and middle class forms of life, or artists like Zhang Dali whose ruin graffiti Neves sees as "reclaim[ing] these sites for/in the present," Militarized Futurist fashion influencers are more stylizing the futurity-preparing "threatening polic[e]" and real-estate developer-"hired thugs," who—before fencing can be erected—carry out evictions and clamp down on resident resistance.[159] The condensation of architectural force from fence to vest and various "tactical" pouches, I argue, makes spectacular and thus visible the banal and slow violence involved in demolishing and reconstructing the city as techno-modernist futurity. Whether or not they consider whom it targets, 机能 fashion designers and consumer-influencers have been more than willing to stylize this violence that aims to make way for the future. Instead of punks and *bôsô-zoku,* the true predecessors of the Militarized Futurist style are in my view the Italian Futurists.

Futurism's Technophilic Love of War

Robin Visser, in her study of contemporary artistic responses to post-reform urban transformation, has noted that "[v]ery few forms of Chinese urban art unabashedly celebrate urbanization, as did the work of the Italian futurists in the early twentieth century."[160] It would seem that the Militarized Futurist style in 机能 fashion provides a

[159] Neves, Joshua. *Underglobalization:* 45, 72, 61.
[160] Visser, Robin. *Cities Surround the Countryside:* 38.

counter-example to Visser's claim: like the Italian Futurists (and unlike other Chinese urban art noted by Visser), 机能 fashion *is* keen to add fuel to the flame that is urbanization. If not an "unabashed celebration," Militarized Futurist Ji Neng looks that circulate in Chinese visual culture are at least an enthusiastic sartorial elaboration of the ambient violence that is necessary to state-market driven urban redevelopment.

More than merely celebrating modern industry's transformation of urban built environments, the Italian Futurists produced fashion theories and designs that sought to impart onto urbanites' bodies modern machinery's capacity to rationalize and amplify the human body's energies.[161] Filippo Marinetti, for example, produce prototypes of hats that doubled as "illuminated-signal," "gramophone," and "radiotelephone." Publishing in the Futurist party newspaper *Roma Futurista,* Vicenzo Fani (aka "Volt") theorized mechanically, chemically, electrically, and optically enhanced fashion designs that would capacitate wearers as "[a] machine-gun woman, [a] radio-telegraph antenna woman, [an] airplane woman," and other technological forms.[162]

Most systematically, painter Giacomo Balla articulated Futurist ideals of fashion in a manifesto titled *Le vêtement masculin futuriste : manifeste* (1914). In it, he declares the that Futurist clothing will be, among other qualities, "aggressive, agile, simplicity and comfort[sic], hygienic, joyful, illuminating, asymmetrical, short-lived, and changeable."[163] While some of these design prerogatives, like using joyful bedazzling colors ("the most violet violet, the reddest red") have not been taken up by Militarized Futurist 机能 fashion, many of the qualities acclaimed by the Italian Futurist can be found in our 21st century style. Agility, which for Balla meant "augment[ing] litheness of body and encourage[ing] momentum in struggle, stride, and the charge of battle," manifests in Militarized Futurist Ji Neng designs as the frequent use of lightweight proprietary materials like 3M Thinsulate and GoreTex, gussets at the crotch, knees, and elbows to relieve tension on the seams

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[161] For force amplification and modern technology, see Edwards, Paul N. "Infrastructure and modernity: Force, time, and social organization in the history of sociotechnical systems." *Modernity and technology* 1 (2003): 185-226.
[162] Braun, Emily. "Futurist fashion: Three manifestoes." *Art Journal* 54, no. 1 (1995): 40-41.
[163] Ibid: 39.

from couching and jumping,[164] and vests, chest pouches, and "ammo" pockets that allow the wearer to grasp what they're carrying without reaching backwards or taking off their bag.[165] Simplicity and comfort, which for Balla meant "easy to put on and take off, so that one is well prepared to aim the gun, ford the streams, and hurl oneself into the water," manifests in 机能 fashion as metal, clip-in parachuting buckles on all manners of necklaces, bracelets, belts, bags, and pouches, as well as "escape zips" that enable jackets to be taken off and slung across the shoulders with one hand.[166] The final quality that I will mention here—hygienic, which for Balla meant "cut in such a way that every pore of the skin can breathe during long marches and steep climbs," manifests in Ji Neng designs as the extensive use of meshed, perforated, and sweat-wicking (and sometimes also waterproof, like GoreTex) fabrics in either the whole garment or in specific zones (like the armpits, upper back, and side torso) to increase breathability.[167]

Some of the above designs have always been found in sportswear made by companies like Nike and Adidas, but no sportwear company had gone so far as to incorporate metal parachuting buckles or tactical vests into their products—especially accessories like necklaces and bracelets. Militarized Futurist 机能 fashion has pushed past functionalism in sports apparel. Like the Italian Futurists a century before them, fashion designers and marketers pushing the Militarized Futurist 机能 style in China are channeling the violent, pro-war energies they see flowing through modern technological capacity—the same techno-industrial forces that the government and real-estate industry have wielded to reduce whole built environments to rubble, from which they built gleaming dominating monuments to globalization. How Militarized Futurist 机能 fashion

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[164] A gusset is a diamond-shaped piece of fabric added between the seams of tight-fitting garments to help prevent rips from the wearer crouching, stretching, jumping, etc. See https://www.businessoffashion.com/education/fashion-az/gusset

[165] Braun, Emily. "Futurist fashion": 39.

[166] For ~~rollercoaster~~ parachuting buckles, see https://editorialist.com/news/matthew-williams-givenchy/. I thank Connor Wessinger for informing me that this buckle design came from AustriAlpin's Cobra buckles for military parachuting use, rather than from rollercoaster seat belts, as reported in the fashion press. For "escape zip," see https://acrnm.com/products/J1A-GT_NA

[167] Braun, Emily. "Futurist fashion": 39.

has been consumed and circulated on social media affirms and even intensifies the leitmotif mode of producing and distributing urban futurity.

The Ornate Blade of Sacrificial Urban Futurity

In an urban environment enveloped by counter-manding modalities of ruination into the past and projection into the future, "the experience of the present," Joshua Neves has noted, is "always not quite here or there, perpetually fragmented and unfinished…a sacrificial time—where transformation is an end that is without end."[168] The notion of *sacrifice* is particular apt here, I argue, for describing the cyborg paramilitary aesthetics of Militarized Futurist 机能 fashion. At stake in the contemporary popularity of Ji Neng pouches and wide-legged utility pants among fashionable Chinese are the questions of who should be sacrificed to usher in the future, and who will carry out the killing.

机能 fashionistas were not the first to desire that the present be sacrificed in order to produce modernizing futurity. As exemplified in the official Beijing Olympics documentary *Dream Weavers: Beijing 2008* (2008), the government has long been promulgating a rhetoric of dutiful sacrifice that demands "civil or resilient responses from those asked to forgo, improve, or migrate" for the sake of urban development.[169] Such willing and harmonious acquiescence to forced relocation is modeled by the film's portrayal of Grandma Gao, who—clad in new clothes and beaming with whitened teeth, as Neves notes—enthuses proudly after the relocation of her family that, "life is much better than in the village."[170]

Our close reading of the Militarized Futurist style in 机能 fashion breaks this surreally cheerful image of twinned paternalistic developmentalism and dutiful sacrifice, by articulating the position of those middle and upper class citizens who supposedly stand to benefit from re-development: they do not believe the government's fairytale story that development will be all harmonious and civil. Violence will be required to secure the

[168] Neves, Joshua. *Underglobalization:* 46-47.
[169] Ibid: 68.
[170] Ibid: 71.

compliance of those (whose livelihoods in the present are) targeted for "improvement." This violence will take the form—like it did in Wukan, with whole battalions of People's Armed Police (WuJing) storming the barricaded village[171]—of menacing paramilitary thugs and police.

In a way, this rejection of official visions of harmonious development shows that the Chinese fashion industry and its consumers have internalized the critiques of artists like Cao Fei and Zhong Kangjun, whose work spectacularizes and makes visible the everyday violence required to push through urban development. 机能 fashion, especially in its Militarized Futurist sub-style, also makes visible and explicit this same violence. The difference here is that, instead of distancing away from it and critiquing it, 机能 fashion moves further into this violence by aesthetically elaborating it to new ornate heights. I call this fashion style "the ornate blade of sacrificial urbanism" because, like with ceremonial daggers, swords, and blades, we find in Militarized Futurist 机能 fashion elaborate designs (like ammo pockets) that first emerged to increase wearers' capacity for physical violence, now aestheticized to circulate as symbol. The cyborg soldier 机能 looks of fashion influencers are ornate because at no time will these fashionistas be expected to actually participate in the "dirty work" of physically evicting residents to facilitate redevelopment. If violence is what is required to sacrifice the present for the future, the commercial popularity of Militarized Futurist 机能 fashion among young middle class Chinese urbanites tells us that those who stand to benefit from it very much support and invest in this violence—to the point of dressing themselves to look like a futuristic imaginary of its providers. Coupled together with their cyberpunk outfits and dominating poses, these 机能 fashion influencers' facial expressions of unemotional confidence--to live and thrive in a future built from knowingly sacrificing others--articulate, in sum, a third image distinct from both official and critical visions of the contemporary Chinese metropolis as a site of contestation between biopolitically differentiated lifeworlds.

[171] See https://www.reuters.com/article/us-china-wukan-insight/in-chinas-democracy-village-no-one-wants-to-talk-any-more

Conclusion

In this chapter, I have situated contemporary techwear or 机能 fashion within the larger historical trajectory of post-reform urban development in China. 机能 fashion has emerged (around the mid 2010s) in the Chinese metropolis after decades of state-market driven real estate development, as well as resistance, critique, and reclaiming from artists and residents. We know 机能 fashion—both as a way of inhabiting and moving in the city, and as visual culture in the form of images that circulate on social media—is in aesthetic dialogue with the urban built environment in China, because the same tropes of cool scientific rationality in contemporary urban planning and the very same buildings of monumental futurity in contemporary architecture can also be found in 机能 fashion marketing photographs, shot on location in the city. Beyond just the city being used as background, fashion designers have replicated the temporal functionality of planning and architectural visual culture in the design and marketing of clothing and accessories.

Besides starchitectural buildings, publicly displayed master plans, urban planning museum videos, roadside real estate ads, and construction site fence wrapping, we have seen in this chapter that global fashion (as a particular category of clothing) *has also been mobilized* to project visions of the Chinese metropolis as "the technologized future city."[172] This has consequences for *both* fashionable *and* architectural visions of development, progress, and futurity. Here, after a chapter spent outlining how 机能 fashion replicates and responds to contemporary planning and architecture, we can turn to the differences between these two aspects of the urban environment in how they mediate visual culture.

Fashion is much more ephemeral and mobile than planning and architecture—even as image. It takes much less energy to produce clothing, to render it in a modeling program, to put it on, to take it off, or to destroy it than it takes to perform similar transformations to buildings and infrastructure. This ephemerality of fashionable futurity complicates Joshua Neves' account of how the urban environment in major Chinese cities like Beijing exhibit on its myriad surfaces the temporal contestation between state-market

[172] Neves, Joshua. *Underglobalization:* 26.

driven development on the one hand, and everyday residents claiming media infrastructures for their present livelihoods on the other. For Neves, "ephemeral" media like "traditional calligraphy, handmade signs, and street-level demonstrations" are crucial for residents acting to "reclaim and repopulate (the image of the) city."[173] The government, urban designers, and the real estate industry, on the other hand, prefer more durable and expensive-to-produce media like computer rendered planning models, printed roadside billboards, leitmotif films, and buildings. 机能 fashion complicates this account of temporal contestation between ephemeral, low-tech media vs. durable, high-tech media by aligning ephemerality with state-market driven urban development. The complication demonstrated by this chapter is that ephemeral urban media in contemporary Chinese cities are used not just by artists and residents to reclaim the city, they are also used by marketers and consumers of global fashion to reproduce, intensify, and distribute the sacrificial futurity of development.

[173] Ibid: 75.

Chapter 2: Techwear Uniforms

One of the most immediately remarkable things one notices when visiting any large, highly developed contemporary Chinese city are the "armies" of yellow- and blue-clad delivery workers on e-bikes who have come to saturate the ambient urban environment. "No matter on the streets or in 小区 (*xiaoqu*, or microdistrict)[174]", one TV segment from Zhejiang Television says, "we can see e-bike riding, blue or yellow uniform wearing food delivery workers busily shuttling back-and-forth."[175] A newswire piece from the state-run Xinhua News Agency begins similarly with, "Around us there is always a group of people: helmets on their head, bodies clad in red [since absorbed into blue], yellow, and blue uniforms, they criss-cross streets and alleyways, on motorcycles or e-bikes, large rectangular branded insulated bags always attached behind them. Yes, they are food delivery workers…"[176] These ubiquitous platform delivery workers and their brightly coloured techwear uniforms, I argue, comprise a particularly telling mutual reliance of the hi-tech and the "low-tech" that can help Chinese media and urban studies turn its attention away from the hyperbolic, fully-automated "smart" visions circulated by industry marketing and opportunistic politicians, towards the repetitive, lengthy building of infrastructural support for these "smart" technologies through low-tech forms like worker uniforms.

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[174] See section 3 for detailed explanation of microdistrict.

[175] Ed. 陈伟斌 (Chen Wei Biao). *范大姐帮忙* (Fan Dajie Bangmang, "Sister Fan's Help"). 钱江都市频道 (Qianjiang Dushi Pindao, "Qianjiang Urban Channel"), a subsidiary of 浙江广播电视集团 (Zhejiang Guangbo Dianshi Jituan, "Zhejiang Broadcast Television Group."). January 11th, 2018. Transcript accessed at: https://www.sohu.com/a/216069447_364748

[176] 新华每日电讯 (Xinhua Meiri Dianxin, "Xinhua Daily Wire"). "400 万外卖小哥每 2 天半就有 1 人死伤 谁在伤害他们？" (400Wan Waimai Xiaoge Mei Liangtianban Jiuyou Yiren Sishang Shui Zai Shanghai Tamen? 4 Million Food Delivery Workers Average 1 Death or Injury Every 2 and a Half Days. Who Is Hurting Them?) 新浪科技. (Sina Tech) August 29th, 2017.

Techwear from Consumer Fashion to Work Uniforms

In this chapter, I compliment the previous chapter's investigation of Chinese urban development by turning to techwear not as fashion, but as work uniforms used in the platform logistics industry. No investigation of how clothing functions as a mode of urban mediation can look *only* at products and practices of the global fashion industry. Doing so would effectively erase the vast majority of urban practices and lifeworlds that compose—every day through clothing and dress—the look, feel, and workings of the city. Instead, these quotidian items and practices of clothing that never get written about in the fashion press also have something valuable to tell us about how contemporary Chinese urbanism operates. Workers' techwear uniforms, I contend in this chapter, have become a crucial infrastructural element that food delivery platforms rely on to smoothen (and insulate from the surrounding environment) their daily encounters with more established modes of spatial organization in the city. Methodologically, infrastructure studies' attention to issues of *form* can help us unpack this dependency of plat-*forms* on uni-*forms*.[177]

Techwear, as I explain in detail in the introduction to this thesis, is a term that emerged (in the 2010s) in fashion discourse to name a new market segment in the global fashion industry that has (in comparison to the rest of the industry) been singularly focused on churning out designs that express a sci-fi futurism. Crucially, techwear is not "wearables," which is short for "wearable computers."[178] There are no computers or electronics of any kind sewn onto or attached to techwear. Compared to wearables, the relationship between the sartorial and the technological has operated in techwear fashion through both design references to popular imaginaries of science and technology (like chemistry labs or cyberpunk films), and through the much older (and decidedly analog) technological domain of textiles and their physio-chemical properties—such as the light reflectivity of hi-visibility fabrics.

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[177] Larkin, Brian. "The politics and poetics of infrastructure." *Annual review of anthropology* 42 (2013): 327-343.

[178] For wearables, see Ryan, Susan Elizabeth. *Garments of paradise: wearable discourse in the digital age*. MIT Press, 2014.

Nevertheless, the investigation that this chapter lays out has led me to expand this term "techwear" outside its fashion industry origins, to encompass any clothing that produces urban futurity through a technological focus.[179] The fashion industry is not the only sector of metropolitan society invested in producing the "new" or the "futuristic." It is definitely not the only sector that draws on (imaginaries of) science and technology to do so. In chapter one, urban futurity was produced--outside of the techwear garments themselves--through the visual culture of architecture and urban planning, design disciplines adjacent to fashion.[180] In this chapter, I analyze techwear as productive of urban futurity not through its linkage to architectural and planning visual culture, but through its linkage to the operations and expansion of smart logistics platforms. Instead of looking at how the fashion industry uses "tech" to design and market futuristic clothes, we are turning in this chapter to how the tech industry uses clothes to develop futuristic "smart" urban platforms. Recent scholarship on digital media has stressed the continuity between digital technologies and older, non-digital mediums like television.[181] Some, like J.D. Peters, have produced archaeologies of digital media that go all the way back to the development of upright posture in humans.[182] My analysis follows this emphasis on situating technologies that are commonly understood to be digital and futuristic, like on-demand logistics platforms, within longer technological lineages. In the context of this chapter, these lineages consist of the uniform as a type of clothing, and the urban planning unit called the 小区, or *microdistrict*.

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[179] The concept of *futurity* indicates that "the future" is not something that automatically exists, but must be produced, distributed, and maintained.
[180] Neves, Joshua. *Underglobalization: Beijing's Media Urbanism and the Chimera of Legitimacy*. Duke University Press, 2020: 33-60.
[181] For example, see Lamarre, Thomas. *The anime ecology: A genealogy of television, animation, and game media*. University of Minnesota Press, 2018.
[182] See arguments throughout Peters, John Durham. *The marvelous clouds: Toward a philosophy of elemental media*. University of Chicago Press, 2015, which draw from Leroi-Gourhan, André. *Gesture and speech*. MIT Press, 1993.

Research Questions and Chapter Outline

It is not an exaggeration to say that these food delivery platforms, branded in Meituan's bright yellow and Eleme's vivid blue, have changed the visual face of the contemporary Chinese metropolis. (See Figures 7 & 8) From the televisual view of the city that is the bus or car window, one can see that JIT (just-in-time) delivery platforms and the workers working for them have added hi-visibility streaks to the usual flow of pedestrians and vehicles on the roads and streets.[183] Like Weixian Pan has said, "[a]t certain points in the day, these migrant workers on their electric scooters become part of the moving architecture of Shenzhen's urban life."[184] When they were not on the road and were instead waiting for orders in front of restaurants (in and just outside of urban villages, where locations are central and rent is cheap), food delivery workers wearing 美团 (Meituan) and 饿了么 (Eleme)'s uniforms and helmets formed distinctly coloured clusters, socializing, smoking, or going on their phones. How did Chinese cities come to incorporate a delivery industry that looks like *Tron* (1982) meets *Pac-Man* (1980) into their everyday aesthetic? What can this aesthetic and the role that it plays within the growing Chinese platform economy tell us about the contemporary development of Chinese cities more generally? This chapter seeks to address the above questions by looking closely at techwear as it operates outside the fashion industry—specifically, the worker-worn techwear uniforms that compose the most prominent outermost visual surface of food delivery platforms in China.

Organizationally, I begin in section one and two with an overview of the existing discussion on digital/cybernetic urbanism, and a clarification of my own approach within this transdisciplinary field. This will allow us to trace not only how government actors and city planners have increasingly defined urban developmental futurity as the building of

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[183] For the bus window as televisual view to the city, see Neves, Joshua. *Underglobalization*: 139.
[184] Pan, Weixian. "Smart Urbanism in Shenzhen: Southern Lands, Distributed Intelligence, and Everyday Practices." Chapter in PhD Dissertation. *China Southern: Digital Environments as Geopolitical Contact Zones*, 2019: 47.

smart cities and infrastructures, but also how scholarly critics of this digital developmentalism have tended to fetishize the very objects they seek to critique. My own approach builds on this existing discussion and draws particularly on the recent turn in Chinese platform studies to infrastructure studies, in order to situate techwear uniforms as what Brian Larkin has called the *form* of (urban delivery) infrastructure.[185] After that, section three will be a brief history of Chinese urban platforms and of the uniform. I narrate this short history of urban platforms and the uniform in order to identify the historicity of these two technologies within the context of early 21st century transformations in capital accumulation and spatial organization towards tech industry-facilitated forms. Lastly in section four, I conduct a close investigation of the repeated, everyday encounters between food delivery platforms and residential property management that rely on the delivery uniform as their interface. Here I stress the historicity of the microdistrict as a schema of Chinese urban planning to give historical depth not only to the *inside* of food delivery platforms (the Chinese platform logistics industry and its techwear uniforms), but also to the *outside* (microdistricts) that these platforms must interact with. Let us turn first to the state of the contemporary Chinese metropolis in digital urban studies.

Section I. Urban Development from Smart Cities to Platform Urbanism

Hyping Smartness

After the historically unprecedented wave of post-reform (*gaige kaifang)* demolition and construction that occurred from the 1980s to the early 2000s, Chinese urban development in the 2010s has increasingly turned to the discourse of "smart cities" as a desirable vision of futurity. The 2010s saw the pervasive circulation of smart city plans, outlines, and proposals by multiple levels of government actors, from powerful central government offices like the National Development and Reform Commission to sub-

[185] Larkin, Brian. "The politics and poetics of infrastructure." *Annual review of anthropology* 42 (2013): 329.

municipal offices like that of Baoan district in Shenzhen.[186] Consider this introduction to its smart city plan from the municipal government of Shenzhen:

> The smart city is a revolution in urban governance and an innovative model in development. It is a higher state in the consolidated development of modern cities. The core of smart cities lies in the utilization of modern information communication technologies (ICTs) to construct ubiquitous high-speed integrated networks, smart sensing environments, and powerful analytical power able to process big data. Smart cities can transform municipal information system management protocols, increase the quality of city management and service delivery, improve the livelihood and quality of life of the public, drive the development of high-value industries and high-value industrial sectors, and catalyze a change in the form of economic development to realize scientific development.[187]

The passage beings with "development" and ends with "development." The smart city is an "innovation" in development. Pushing the developmental process forth and renewing it is seen by the Shenzhen government as a key feature of its smart city strategy. Developmental futurity here is identified as issuing from the new city hall gadgets of sensing built infrastructures (like lamp posts) coupled through data links to urban dashboards, which government workers can view and manipulate.[188] Although this tech company-marketed vision of urban futurity is arguably much less fashionable than the self-identified avant-garde architectural designs discussed in chapter one, they both share a financial mode of producing futurity: speculation. In her analysis of the "hype-r-building"

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[186] See 国家发展和改革委员会 (Guojia Fazhan He Gaige Weiyuanhui; National Development and Reform Commission). "关于促进智慧城市健康发展的指导意见" (Guanyu Cujin Zhihuichengshi Jiankang Fazhan De Zhidao Yijian; Guiding Comments on Advancing Healthy Development of Smart Cities). National Development and Reform Commission: 2014; and 宝安区人民政府 (Baoan Qu Renmin Zhengfu; Baoan District People's Government). "智慧宝安建设总体规划(2015-2017)" (Zhihui Baoan Jianshe Zongti Guihua; Smart Baoan Development Master Plan (2015-2017)). Baoan District People's Government (http://www.baoan.gov.cn/): 2015.

[187] 深圳市南山区人民政府. *智慧深圳规划纲要（2011-2020 年）*. 深圳市政府信息目录公开系统. February 2nd, 2015.

[188] For the "control room" as the object that mayors and city managers interface with when they buy smart city solutions from the likes of Cisco or Alibaba, see Furuhata, Yuriko. "Multimedia Environments and Security Operations: Expo' 70 as a Laboratory of Governance." *Grey Room* (2014): 56-79. And Söderström, Ola, and Anne-Cécile Mermet. "When Airbnb sits in the control room: platform urbanism as actually existing smart urbanism in Reykjavík." *Frontiers in Sustainable Cities,* Volume 2 Article 15 (2020): 2.

[separation mine], Aihwa Ong has noted that one of the functions of these monuments of architectural futurity, like the CCTV Beijing Headquarters, is "the production of spectacular infrastructure that attracts *speculative* [emphasis mine] capital and offers itself as alleged proof of political power."[189] As we will soon see, the attraction of speculative capital is also a major function of smart city discourse and developments. This discourse of smart cities is not only Chinese, of course, and has been a mainstay of global tech industry marketing, government policy, urban planning, and architecture since the mid 2000s.[190]

Smart City Critique in Media Studies and Urban Geography

In turn, media studies scholars have produced theoretical and historical work critiquing smart cities, alongside similar oppositional discussion in urban planning and urban geography.[191] Orit Halpern, Jesse LeCavalier, Nerea Calvillo, and Wolfgang Pietsch have coined the term "test-bed urbanism" to problematize the temporality of unending urban transformation towards a forever-movable goalpost (of some desired future state) in smart cities, while Jennifer Gabrys has expanded on Michel Foucault's brief lecture on "environmentality" to interrogate the dividuated mode of cybernetic governance (as opposed to governance based on subjects and populations) smart cities propose to enact.[192] Using more historical methods, Clemens Apprich has drawn attention to the media genealogical linkage and divergent political horizons between contemporary smart

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[189] Ong, Aihwa. "Hyperbuilding: spectacle, speculation, and the hyperspace of sovereignty." *Worlding cities: Asian experiments and the art of being global* (2011): 207.
[190] On the definition and proliferation of smart cities discourse, see Albino, Vito, Umberto Berardi, and Rosa Maria Dangelico. "Smart cities: Definitions, dimensions, performance, and initiatives." *Journal of urban technology* 22, no. 1 (2015): 3-21.
[191] For exemplary critiques of smart cities in urban design and planning, see Hollands, Robert G. "Will the real smart city please stand up? Intelligent, progressive or entrepreneurial?." *City* 12, no. 3 (2008): 303-320; and Greenfield, Adam. *Against the Smart City: A Pamphlet. This is Part I of" The City is Here to Use"*. Do projects, 2013. For exemplary critiques of smart cities in urban geography, see Vanolo, Alberto. "Smartmentality: The smart city as disciplinary strategy." *Urban studies* 51, no. 5 (2014): 883-898; and Kitchin, Rob. "The real-time city? Big data and smart urbanism." *GeoJournal* 79, no. 1 (2014): 1-14.
[192] Halpern, Orit, Jesse LeCavalier, Nerea Calvillo, and Wolfgang Pietsch. "Test-bed urbanism." *Public Culture* 25, no. 2 (2013): 272-306. Gabrys, Jennifer. "Programming environments: environmentality and citizen sensing in the smart city." *Environment and Planning D: Society and Space* 32, no. 1 (2014): 30-48.

city imaginaries and 1990s U.S. and European visualizations of cyberspace as urban space, while Shannon Mattern has argued via urban media archaeology that cities have always been mediated and intelligent outside the narrow tech industry-delineated confines of intelligence as information processing.[193] In the Asian context that this chapter addresses, Yuriko Furuhata has traced contemporary imaginaries and logics of computational architecture to both postwar Japanese architecture's inheritance of Imperial colonial urban planning, and to the profession's involvement in designing and testing computerized crowd management security infrastructure in the aftermath of massive demonstrations against the 1960 renewal of the U.S.-Japan ANPO security treaty.[194] Scholars from media studies have thus convincingly shown the smart city to be a thoroughly political project aimed at expanding tech industry and government control over urban life, with the planning and architectural disciplines as accomplices.

In terms of analytical objects, the critique of smart cities from media studies has focused on (plans for) prototype cities or exemplary architecture built from scratch—what Orit Halpern, Robert Mitchell, and Bernard Dyonisius Geogeghan have called "greenfield" sites.[195] These spectacular models of automated urbanism—to articulate Ong's insistence that speculation in Asian urbanism works through the production of spectacles—have very much overpromised and underdelivered on their sales pitch of upgrading and improving city management.[196] Despite all the hype around them, most greenfield smart cities actually have very few people (sometimes even no one) living in them. Songdo, Korea, the most famous of greenfield smart cities, has an occupancy rate of

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[193] Apprich, Clemens. "FCJ-213 Babylonian Dreams: From Info-Cities to Smart Cities to Experimental Collectivism." *The Fibreculture Journal* 29: Computing the City (2017). Mattern, Shannon. *Code and clay, data and dirt: Five thousand years of urban media*. University of Minnesota Press, 2017.
[194] Furuhata, Yuriko. "Architecture as Atmospheric Media: Tange Lab and Cybernetics." *Media Theory in Japan*. Duke University Press, 2017: 52-79. Furuhata, Yuriko. "Multimedia Environments and Security Operations: Expo' 70 as a Laboratory of Governance." *Grey Room* (2014): 56-79.
[195] Halpern, Orit, Robert Mitchell, and Bernard Dionysius Geoghegan. "The smartness mandate: Notes toward a critique." *Grey Room* (2017): 114.
[196] Ong, Aihwa. "Hyperbuilding: spectacle, speculation, and the hyperspace of sovereignty." *Worlding cities: Asian experiments and the art of being global* (2011): 207.

less than one quarter, after a decade-plus buildout.[197] Not that the tech doesn't "work"; just there is hardly anyone there to feed it data and provide a target for control. This emptiness makes greenfield smart cities resemble more the infamous "ghost cities" that have proliferated as sinks for excess capital in China, than the smooth utopian visions promised by corporate marketing brochures.[198] As Orit Halpern points out, "new housing in [greenfield smart city site] Rajarhat (not to mention across India) has never been (and might never be) occupied—having been bought solely for speculation by domestic and foreign investors."[199] "Lack[ing] embodied vibrancy," as Robin Visser has put it, greenfield smart cities should be seen less as urban architecture and more as financial instruments, used to materially underly real estate speculation.[200]

If the confluence of computation and urban living cannot be found in practice in greenfield smart cities, geographers have argued that we should then look instead at smart city projects deployed in extant cities, like Philadelphia, USA. Taylor Shelton, Matthew Zook, and Alan Wiig have polemically noted that,

> The assemblage of actors, ideologies and technologies associated with smart city interventions bears little resemblance to the marketing rhetoric and planning documents of emblematic, greenfield smart cities, such as Masdar in the United Arab Emirates, Songdo in South Korea and Living PlanIT Valley in Portugal. Therefore, rather than focusing on new cities built from scratch in such peripheral locales, many of which have as-of-yet failed to materialise, we find it more productive to examine how the smart city paradigm is becoming grounded in particular places.[201]

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[197] White, Chris. "South Korea's 'Smart City' Songdo: not quite smart enough." *South China Morning Post*. March 25th, 2018. Accessed at: https://www.scmp.com/week-asia/business/article/2137838/south-koreas-smart-city-songdo-not-quite-smart-enough

[198] For "ghost cities" and their role in the Chinese political economy, see Woodworth, Max D., and Jeremy L. Wallace. "Seeing ghosts: Parsing China's "ghost city" controversy." *Urban Geography* 38, no. 8 (2017): 1270-1281.

[199] Halpern, Orit. "Hopeful resilience." *E-Flux Architecture; special issue* (2017): 4.

[200] Visser, Robin. "Posthuman policies for creative, smart, eco-cities? Case studies from China." *Environment and Planning A: Economy and Space* 51, no. 1 (2019): 207. For the relationship between finance and greenfield smart cities, see the rest of Halpern, Orit. "Hopeful resilience."

[201] Shelton, Taylor, Matthew Zook, and Alan Wiig. "The 'actually existing smart city'." *Cambridge Journal of Regions, Economy and Society* 8, no. 1 (2015): 13-25.

In the Chinese context, this line of inquiry has produced accounts of smart cities as government-coordinated developmental projects in Wuhan,[202] Shanghai,[203] Hangzhou,[204] and Shenzhen.[205] But these projects, like their greenfield counterparts, have also made very little impact on the contours and rhythms of urban life. As Robert Cowley, Federico Caprotti, Michele Ferretti, and Chen Zhong admit after studying Wuhan's smart city projects,

> [T]he expectation of finding – for better or worse – a glistening, digitalised, ultra-efficient metropolis of the future remains unfulfilled. Instead, it is difficult to find visible or tangible evidence of the 'smart'. The championed flagship initiatives are relatively insignificant within the space of the city on the whole, and go largely unnoticed by local residents… even policy-makers themselves are sometimes only vaguely aware of their city's smart ambition when interviewed, while other key actors view it primarily as a passing fad mobilised instrumentally to attract funding."[206]

Even when implemented in existing metropolitan milieus, smart cities seem unable to escape their overhyped quality as architecturally-dressed instruments of financial manipulation. The funny thing is, global tech companies seem to also have overinvested in their own visions of the city as a smooth automated environment under their control. Alphabet (Google)'s highly-publicized Sidewalk Toronto project, which began in 2017, collapsed three years later in Sidewalk's withdrawal, with Alphabet citing financial unviability after the Toronto government rejected its "ambitious 1,524-page master plan for the lot that went well beyond what the government had anticipated."[207]

Contra Shelton, Zook, and Wiig, I do not consider that because urban denizens do not actually live in smart cities, media and geographical studies of such projects have been unproductive. As Apprich, Furuhata, Halpern, and others have shown, the

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[202] Cowley, Robert, Federico Caprotti, Michele Ferretti, and Chen Zhong. "Ordinary Chinese Smart Cities: The Case of Wuhan." In *Inside Smart Cities*, Routledge, 2018: 45-64.
[203] Visser, Robin. "Posthuman policies for creative, smart, eco-cities?"
[204] Yang, Sixiao. "The Impact of Digital Firms on Urban Governance Model in China: An Empirical Analysis of the Smart City Brain Model in China." Cities and Digital Technology Chair at Sciences Po, Working Paper No. 2, 2020.
[205] Ibid.
[206] Cowley, Caprotti, Ferretti, and Zhong. "Ordinary Chinese Smart Cities": 56.
[207] See reports on the project collapsing, like https://www.wired.com/story/alphabets-sidewalk-labs-scraps-ambitious-toronto-project/

cybernetic urban vision of smart cities is not new, drawn as they have been from manifold postwar discourses of urban planning, architecture, systems theory, design, cognitive science, computer science, management, evolutionary biology, ecology, science fiction, and meteorology.[208] The world-shaping capacities of these discourses, many of which have been foundational to postwar professional practices across the applied arts and sciences, exceed their early 21st century mobilization under the term "smart cities." This yet unexhausted appeal of informationalizing the metropolis is why critics in media studies have lately been moving to the study of "smartness," and their counterparts in geography have been shifting to "smart urbanism."[209] Still the question remains: if not in "smart cities," then where have cybernetic visions of urban futurity been coming into contact with city life? Where are future-oriented, technologically-driven developmental strategies actually becoming so ubiquitous and diffuse that they grasp at city inhabitants quotidianly and intimately, like uniforms might clothe a delivery worker's body?

Platform Urbanism and Quotidian Food Delivery

Beyond the analysis and critique of smart cities, some geographers have been pushing the critique of smart urbanism further into the realm of the mundane. They have persuasively called for an examination of consumer-facing, smartphone-mediated corporate platforms as everyday sites of smart urbanism. Critical work in this current has been clustered around the term *platform urbanism*.[210] Current discussions of platform

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[208] See Furuhata, Yuriko. "Architecture as Atmospheric Media;" Furuhata, Yuriko. "Multimedia Environments and Security Operations;" Apprich, Clemens. "FCJ-213 Babylonian Dreams;" and Halpern, Orit, Robert Mitchell, and Bernard Dionysius Geoghegan. "The smartness mandate." Besides the aforementioned genealogies, see also Halpern, Orit. *Beautiful data: A history of vision and reason since 1945*. Duke University Press, 2015; Furuhata, Yuriko. "The Fog Medium: Visualizing and Engineering the Atmosphere." *Screen Genealogies* (2019): 187; and Furuhata, Yuriko. "Indoor Weather: Air-conditioning and Future Forecasting." *Atmospheric Control: A Transpacific Genealogy of Climatic Media*. Duke University Press, Forthcoming. Breakdown by discipline discussed available upon request.

[209] For "smartness," see Halpern, Orit, Robert Mitchell, and Bernard Dionysius Geoghegan. "The smartness mandate." For "smart urbanism," see Luque-Ayala, Andrés, and Simon Marvin. "Developing a critical understanding of smart urbanism." In *Handbook of Urban Geography*. Edward Elgar Publishing, 2019.

[210] For China, see Caprotti, Federico, and Dong Liu. "Emerging platform urbanism in China: Reconfigurations of data, citizenship and materialities." *Technological Forecasting and Social Change* 151, 119690. (2020). Otherwise see Leszczynski, Agnieszka. "Speculative futures: Cities, data, and governance beyond smart

urbanism both extend from and break with the earlier discussion of smart cities. Distinguishing platform urbanism from smart cities, Sarah Barns has noted that, "Unlike smart city strategy, which for the past two decades has seen public and private investments in technology solutions for cities yield limited results, platform urbanism begins, first and foremost, with the everyday interactions of smartphone-equipped urban subjects."[211] Instead of trying "to sell the infrastructures of digital governance to city halls," tech corporations have looked to smartphone using consumers as the channel through which they ought to begin digitizing urban life, in order to bring the latter into their domain of business.[212]

Rather than attempting to digitize city life in a single grand project (as the greenfield smart cities try to do), tech platforms have much more successfully transformed and taken over specific segments of urban living through consolidating particular material mediums and consumer practices into a digitally facilitated package. Ride-hailing platforms like Uber or DiDi Chuxing target cars and taxi riding, short-term rental platforms like Airbnb or Muniao target residential housing and vacationing, and food delivery platforms like Meituan Waimai or Grubhub target restaurants and ordering out.[213] As Joshua Neves has similarly argued through ethnographic studies of ambient television and pirate DVD culture in Beijing,[214] such "quotidian and often intimate" encounters with technology are where the entry of urban life into computation can be grasped.[215]

For Marc Steinberg and Jingying Li, platforms can be 1) product-technology type platforms, 2) content platforms, or 3) transaction- or mediation-type platforms.[216] Product-technology type platforms see "platform" as synonymous with hardware, such as gaming

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urbanism." *Environment and Planning A: Economy and Space* 48, no. 9 (2016): 1691-1708; and Sadowski, Jathan. "Cyberspace and cityscapes: on the emergence of platform urbanism." *Urban Geography* (2020): 1-5.
[211] Barns, S. "We are all platform urbanists now." *Mediapolis* 4, no. 3 (2018): 3.
[212] Leszczynski, Agnieszka. "Glitchy vignettes of platform urbanism." *Environment and Planning D: Society and Space* 38, no. 2 (2020): 193.
[213] Söderström, Ola, and Anne-Cécile Mermet. "When Airbnb sits in the control room: platform urbanism as actually existing smart urbanism in Reykjavík." *Frontiers in Sustainable Cities,* Volume 2 Article 15 (2020): 2.
[214] Neves, Joshua. *Underglobalization*: 120-149, 169-198.
[215] Söderström, Ola, and Anne-Cécile Mermet. "When Airbnb sits in the control room.": 2.
[216] Steinberg, Marc, and Jinying Li. "Introduction: Regional platforms." *Asiascape: Digital Asia* 4, no. 3 (2017): 176-178.

consoles by Atari or jet engines by Rolls Royce.[217] Content platforms are social media apps or websites like iQiyi and Youtube where users consume and distribute user-created content—and increasingly professional and official content. Transaction- or mediation-type platforms, like Alibaba's Taobao, are intermediaries that help "users or parties to a transaction" come together and do business.[218]

Food delivery platforms like Meituan Waimai and Eleme—the two companies that control China's takeout delivery duopoly—combine in their business model transaction-type and product-technology type tendencies.[219] While it may seem that food delivery platforms bring together restaurants on one hand and diners on the other, a transaction between the two parties is not possible—unlike with restaurant review platforms like Yelp—without a crucial logistical product/service: the delivery. Making meals and making deliveries are two different services. Indeed, unlike rival Eleme, Meituan began as a purely mediation-type platform in the form of a restaurant review site called 美团点评 (*Meituan Dianping*) before branching out into takeout delivery. It is in this capacity of providing a logistical channel with the capacity to deliver restaurant meals before they perish that Meituan Waimai is a product-technology type platform—in addition to a transaction mediator for takeout meals. At the end of this chapter, I will return to outline an

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[217] For Rolls Royce, see Srnicek, Nick. *Platform Capitalism*: 73-74.

[218] Steinberg and Li. "Introduction.": 177. For Alibaba as infrastructural platform, see Zhang, Lin. "When Platform Capitalism Meets Petty Capitalism in China: Alibaba and an Integrated Approach to Platformization." *International Journal of Communication* 14 (2020): 114-134.

[219] In their brief typology of "Chinese digital platforms," Caprotti and Liu designate the food delivery platform Meituan Waimai—the focus of this chapter—as a *sharing platform*, "which are central to the sharing economy and based on the use of the platform to enable access to products, goods and services that are not directly owned by the platform operator." This is a terrible definition. Besides the fact that Meituan Waimai employs full-time workers (whose labour during work time the platform owns) through a 专送 (*Zhuansong*) franchise system (in addition to part-time workers who sign up through the app under a 众包 *Zhongbao* system), this invocation of the term "sharing economy" uncritically repeats the (Californian) ideological rhetoric of platform corporations, who rely on the non-commercial and pro-social connotations of the term *sharing* to mask their essential reliance on precarious, low-wage labour. See Caprotti, Federico, and Dong Liu. "Emerging platform urbanism in China": 8. For criticism of "sharing economy" rhetoric, see Scholz, Trebor. *Uberworked and underpaid: How workers are disrupting the digital economy*. John Wiley & Sons, 2017. For "California Ideology" as a term of tech industry criticism, see Barbrook, Richard, and Andy Cameron. "The californian ideology." *Science as Culture* 6, no. 1 (1996): 44-72.

infrastructural analysis of Meituan Waimai operating this logistical channel as a process of "channeling," building on the work of Nicole Starosielski.

Section II. Platform and Infrastructure Studies of China

Looking at how urban developmental futurity is produced on an everyday basis through the growth of smartphone-enabled platform delivery apps, this chapter aims to add to the discussion in Chinese platform studies. Specifically, my analytical focus on techwear as uniforms worn by food delivery workers is intended to push platform studies of China away from two distinct but related discursive "gravity wells" that I see as imposing unhelpfully narrow limits on explanations of digital urbanism. These two theoretical and methodological limitations are a romanticized focus on *labour* and *labour activism*, and a screen-centric, ocularist understanding of the *interface*. Both these foci on Chinese urban platforms--as labour management and as screen-interface--preclude our thinking from paying attention to the built environment of the city and the low-tech, unelectrified interfaces like techwear uniforms that platforms rely on every day to negotiate their place within this built environment. Before explaining my own approach, let us first examine these methodological issues.

Chinese (Urban) Platform Studies: Labour Romanticism

Writing against other scholars who base their critiques of smart or platform urbanism on finding fault with the smooth and fully-automated visions of the future city offered forth by the tech industry (and its boosters in government and architecture), Chinese urban media scholars like Weixian Pan, for example, have persuasively contended that digital urban environments are "socially enacted, where urban intelligence are distributed through everyday media practices, through management of human labor."[220] But in their attempt to de-mystify and deflate fetishistic views of digital

[220] Pan, Weixian. "Smart Urbanism in Shenzhen": 53.

technology by both industry and critics alike, urbanists of digital China have themselves become over-reliant on labour as an analytical panacea.[221] Julie Yujie Chen has argued that the ride-hailing app DiDi should be seen as a technology of "labour provision" that "[appropriates] drivers' labour" for "algorithmic valorisation."[222] The kinds of labour that the platform extracts from taxi drivers--beyond the work of transporting passengers--in turn, include "connectivity labour" (learning to take on passengers from hails on the platform instead of on the street), "infrastructural labour" (learning to take payments using WeChat), and "datafication labour" (feeding the platform database with their in-app interactions and physical/automobile movement).[223] Operating all this data extraction are algorithms and smartphone interfaces that comprise the DiDi platform's system of "intensive data extraction and surveillance, such as the rating system, tracking, and feedback."[224] Counterposed to this surveillance and control machine aimed at labour extraction, is (taxi) "drivers' defiance and counterwork."—labour activism against exploitation.[225] Many drivers, Chen reports, use mobile social network apps "for transmitting information about strikes and collective activism,"[226] while others use bot

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[221] In the Chinese context, current accounts of platform urbanism that solely analyze labour and labour resistance/activism include, nonexhaustively: Chen, Julie Yujie. "Thrown under the bus and outrunning it! The logic of Didi and taxi drivers' labour and activism in the on-demand economy." *New Media & Society* 20, no. 8 (2018): 2691-2711. Chen, Julie Yujie. "Technologies of control, communication, and calculation: taxi drivers' labour in the platform economy." In *Humans and Machines at Work*. Palgrave Macmillan 2018: 231-252. Qiu, Jack Linchuan. "Labor and Social Media: The Exploitation and Emancipation of (almost) Everyone Online." *The SAGE Handbook of Social Media* (2017): 1-16. Chen, Julie Yujie, and Jack Linchuan Qiu. "Digital utility: Datafication, regulation, labor, and DiDi's platformization of urban transport in China." *Chinese Journal of Communication* 12, no. 3 (2019): 274-289. Liu, Hong Yu. "Migrant Workers in the Digital Market: China's Platform Economy." Conference Paper Presented at British Postgraduate Network for Chinese Studies Annual Conference 2019. Available at: https://theasiadialogue.com/2019/08/13/migrant-workers-in-the-digital-market-chinas-platform-economy/. Sun, Ping. "Your order, their labor: An exploration of algorithms and laboring on food delivery platforms in China." *Chinese Journal of Communication* 12, no. 3 (2019): 308-323. Chen, J.Y. & Sun, SP. (2020). "Temporal Arbitrage, the Fragmented Rush, and Opportunistic Behaviors: The labor politics of time in the platform economy." *New Media & Society* (forthcoming): 1-19.

[222] Chen means "algorithmic valorisation" as when the value of taxi driving labour is determined by algorithms, like with surge pricing. Chen, Julie Yujie. "Thrown under the bus and outrunning it!": 2692, 2694, 2699.

[223] Chen, Julie Yujie. "Technologies of control, communication, and calculation.": 238.

[224] Chen, Julie Yujie, and Jack Linchuan Qiu. "Digital utility": 278.

[225] Ibid.

[226] Chen, Julie Yujie. "Thrown under the bus and outrunning it!": 2704

apps to optimize interactions with DiDi's dispatch and scheduling algorithms to their advantage.[227] At work in the takeover of the taxi industry by DiDi, for Chen, is a system of "control, exploitation and counteractions."[228]

In the accounts of scholars like Jack Qiu and Julie Chen, urban platform are exploitative algorithms that control workers while hiding and extracting their many kinds of labour. Conversely, these exploitative algorithms are responded to by workers with "good" or "activist" hi-tech media practices like bot apps, and strike organizing on social media.[229] Chen makes it clear that her model of the platform studies scholar is the labour activist, when she declares in her study of DiDi that "scholars and activists alike may find common ground among workers across industrial sectors and across national borders."[230] Echoing Chen, Qiu's vision of the media scholar as labour activist is even more lofty, as he paraphrased the *Communist Manifesto* when he wrote,

> These ongoing debates about social media and labor...have ushered in a new phase of progressive academic intervention. Against a neoliberal backdrop, questions of collective and productive labor power have emerged paradoxically as issues of labor re-enter the world-historical limelight: social media workers of the world, unite![231]

I am for labour activism, but these ecstatic calls to workerist internationalism from academics studying 21st century Chinese urban platforms, who cannot but explain their objects via labour exploitation, sound to me more *dogmatic* than *conjunctural*. The "world-historical" proletarian subject of 2020 apparently operates no differently from the "world-historical" subject of 1923, when Gyorgy Lukacs first coined the term.[232] For Qiu and Chen, labour activism is as all-encompassingly emancipatory as urban platform

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[227] Ibid: 2705
[228] Ibid: 2706.
[229] Bots do not even necessarily help drivers earn more, as Chen admits that "manipulating the system does not necessarily lead to more income for taxi drivers." Ibid.
[230] Ibid.
[231] Qiu, Jack Linchuan. "Labor and Social Media:": 2.
[232] Ibid. For urban Fordist workers as the subject who/that can change world history, i.e. "Only when the consciousness of the proletariat is able to point out the road along which the dialectics of history is objectively impelled…only then will the proletariat become the identical subject-object of history whose praxis will change reality." see Lukács, Georg. *History and class consciousness: Studies in Marxist dialectics*. MIT Press, [1923] 1972: 197.

algorithms are all-encompassingly exploitative—or as smart city technologies are all-encompassingly gleaming and optimized.[233] For platform urbanism, there are only algorithms, workers, and scholars as labour activists in their accounts.[234] Qiu and Chen are in my view romanticizing activism by Chinese platform workers as an adequate counterforce to platform capitalism. Where, I ask, are architects, planners, interface designers, and the urban built environment? Where are the low-tech, everyday techniques that utilize non-electronic media like clothing, rather than hi-tech ones that use media like bot apps? As we will see in section four, analyzing platform urbanism solely through the lens of labour has led media scholars of China to become blind to developments that do not primarily operate through relations of labour exploitation, such as the persistent conflict between delivery workers and residential security guards, or the recent investment boom in data and computational technologies by and for the real estate industry. At the end of this section, I will outline a different methodology that enables us to shed light on such issues. Before that, I must turn to the second limiting theoretical tendency in Chinese platform urban studies.

Chinese Platform Studies: Interface Ocularism

After labour, a narrow conceptualization of the *interface* in Chinese platform studies has also pulled the subfield into neglecting the mediums of the worn and built environment. The equating of urban technology with screens has continued as Chinese media scholars have turned their attention from urban planning videos and smart city control rooms to platform apps working through smartphones as the site of urban life's encounter with the technological--a site we can call the *interface*. As Branden Hookway has laid out, an *interface* is a mediating relation (usually concretized as a two-sided form) between two entities that, through this mediation, changes the nature of the two things it

[233] For smart cities as automated optimization, see Halpern, Orit, Robert Mitchell, and Bernard Dionysius Geoghegan. "The smartness mandate": 114.
[234]Also noted in Pan, Weixian. "Under the Dome: Un-engineering Digital Capture in China's Smog." *Asiascape: Digital Asia* 4, no. 1-2 (2017): 22.

brings together while itself being changed by them.[235] Interfaces may mediate relations between users and a technology, or between one technology and another.[236] Returning to existing accounts of the interfaces that mediate between urban platforms and their exterior conditions, we can see that current discussions of Chinese platforms regard the screen's edges as the boundary limit of the interface. I call this narrow conceptualization *interface ocularism*. For example, in her excellent study of Alibaba's Taobao as a paradigmatic case of the platformization of China's commerce infrastructure, Lin Zhang interrogates how Taobao used emoticons in its internal Instant Messaging system AliWangWang to help the platform secure a sizable userbase during its early years, by "allow[ing] shoppers and shop owners to virtually replicate the bazaar-style haggle and banter typical of the petty-capitalist informal market."[237] Similar understandings of interface as screen can also be found in the recent special issue of the *Chinese Journal of Communication* on the theme of "The Platformization of Chinese Society."[238] Xiaoning Zhang, Yu Xiang, and Lei Hao, in their case study of Chinese streaming platforms like YY Live and Douyu TV, looked to the spectacularly excessive on-screen visual effects of virtual gifts--"which allows both the gift-giver and the receiver a tremendous amount of visibility"--to demonstrate streaming platforms' use of screen interface design to incentivize profitable (for the platform) behaviours from content creators and fans.[239] More innovatively, Wilfred Yang Wang and Ramon Lobato push back against the one-sided focus on user personalization (and its

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[235] "The separation maintained by the interface between distinct entities or states is also the basis of the unity it produces from those entities or states." Hookway, Branden. *Interface*. MIT Press, 2014: 6-10.
[236] Scholars of platformization have already delineated the two kinds of interfaces employed by social media platforms: user interfaces and software interfaces (APIs). The former opens up the platform for encounters with humans/users, while the latter opens it up for encounters with other machines/apps. See Helmond, Anne. "The platformization of the web: Making web data platform ready." *Social Media+ Society* 1, no. 2 (2015): 14.
[237] Zhang, Lin. "When Platform Capitalism Meets Petty Capitalism in China: Alibaba and an Integrated Approach to Platformization." *International Journal of Communication* 14 (2020): 121-122.
[238] For the issue intro, see de Kloet, Jeroen, Thomas Poell, Zeng Guohua, and Chow Yiu Fai. "The platformization of Chinese Society: infrastructure, governance, and practice." *Chinese Journal of Communication* 12, no. 3 (2019): 249-256.
[239] Zhang, Xiaoxing, Yu Xiang, and Lei Hao. "Virtual gifting on China's live streaming platforms: hijacking the online gift economy." *Chinese Journal of Communication* 12, no. 3 (2019): 344.

technical implementation via recommendation engines) by US-centric media theory.[240] They mobilize a walkthrough of video platform iQiyi's onscreen interface—which has few personalization options and "emphasizes the browsing of categories and verticals"—to argue that video platforms not only seek to individuate but also *integrate* audiences "into a common, shared, stable online television experience."[241]

In all of the above cases, the interface ends at the edge of the screen. Even if this screen-centric conception of interface in studies of Chinese platforms has worked fine for studies of video content platforms, investigating *urban platformization*—what, paraphrasing Anne Helmond, I define as the preparatory "cleaning, wrangling"[242] and then absorption of city infrastructures and functions into logics of computational management by platforms[243]—requires, in my view, a more expansive, environmental understanding of interface--one that *is sensitive to urban and adjacent fields of design*. Without a conception of interface that goes beyond the screen's edges, the "urban" in "platform urbanism" drops away in impoverishment. Platforms used by city dwellers in everyday life are not, after all, built on demolished or emptied greenfield sites; the city *already has its own existing forms* that platforms must interface with. To operate as part of "the urban," platforms need interfaces beyond the touchscreen—interfaces that can engage with more than just the eyes, ears, and hands of users. A recent study on food delivery labour by Julie Yujie Chen and Sun Ping has briefly alluded to platforms' negotiations with existing urban forms like "gated communities" and "skyscrapers", but an in-depth analysis is still lacking.[244] This chapter aims to bring one of these existing urban forms, the *microdistrict*, to our attention. Doing so will bring us new insights, I argue, on the contestations and

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[240] See for example Chun, Wendy Hui Kyong: "Queerying Homophily." In: Clemens Apprich, Wendy Hui Kyong Chun, Florian Cramer. *PatternDiscrimination*. Lüneburg: meson press 2018: 59–97.
[241] Wang, Wilfred Yang, and Ramon Lobato. "Chinese video streaming services in the context of global platform studies." *Chinese Journal of Communication* 12, no. 3 (2019): 365.
[242] For data cleaning and data wrangling as the basic technique of social media platformization, as outlined in Helmond, Anne. "The platformization of the web," see for example, McKinney, Wes. *Python for data analysis: Data wrangling with Pandas, NumPy, and IPython*. " O'Reilly Media, Inc.", 2012.
[243] Helmond, Anne. "The platformization of the web.": 2.
[244] These "gated communities" are called *microdistricts* in the planning literature; see section four of this chapter. Chen, J.Y. & Sun, SP. (2020). "Temporal Arbitrage, the Fragmented Rush, and Opportunistic Behaviors: The labor politics of time in the platform economy." *New Media & Society* (forthcoming): 11.

cooperation between the tech and real estate industries in the development of the contemporary Chinese metropolis. Methodologically, looking into the Chinese history of microdistricts as a unit of urban planning means "[departing] from the dominant foci of critical study of platforms to date, which has emphasized the platform as company and the platform as on-screen interface and hidden algorithm."[245]

To lay out how the interfaces of urban platforms might encounter and engage with these architectural and infrastructural urban forms, I next outline my approach to Chinese platform urbanism via the problematic of *form* in infrastructure studies.

Interrogating Form as Interface between Infrastructure and Platform

What exactly do urban platforms platformize, beyond vague notions of "the city," or "labour provision"—as Chen has put it?[246] They platformize urban *infrastructure*. Urban platforms are built on top of existing infrastructures, like "roads, buildings, information networks," traffic signs and lights, traffic rules, rainwater flow grates, the postal system, the taxi industry, the restaurant industry, e-commerce payment systems, payment clearinghouses, police and security services, and even "basic" (in the Global North) provisions like readily available electricity and petrol.[247] As urban platforms such as food delivery platforms have gained power and implanted themselves more and more deeply into everyday life in the city, it is these existing infrastructures that they impinge upon, and in some cases "*compete with or even supplant*."[248] Like platform studies, infrastructure studies has become a popular paradigm in contemporary media studies through which scholars can understand and analyze media objects. For the purposes of this chapter, my interest in infrastructure studies will focus on its intersection with platform studies. While existing discussions of infrastructural platforms recognizes that infrastructure studies can bring to platform studies a valuable historical perspective, what I want to take from

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[245] Richardson, Lizzie. "Coordinating the city: Platforms as flexible spatial arrangements." *Urban Geography* (2020): 1.
[246] Chen, Julie Yujie. "Thrown under the bus and outrunning it!": 2692.
[247] Ibid.
[248] Plantin, Jean-Christophe, Carl Lagoze, Paul N. Edwards, and Christian Sandvig. "Infrastructure studies meet platform studies in the age of Google and Facebook." *New Media & Society* 20, no. 1 (2018): 301.

infrastructure studies to analyze urban platforms like Meituan Waimai is the attention to *form* as the sensual concretization of media logics.

Jean-Christophe Plantin, Carl Lagoze, Paul N Edwards, and Christian Sandvig were the first to articulate the intersection between infrastructure studies and platform studies.[249] I follow them here in understanding platforms as underlying media that has qualities of "programmability, affordances and constraints, connection of heterogeneous actors, and accessibility of data and logic through application programming interfaces (APIs);" and in understanding infrastructures as underlying media that has qualities of "ubiquity, reliability, invisibility, gateways, and breakdown."[250] As platforms are beginning to take on the functions of infrastructure, and in turn infrastructures are increasingly provided and managed by platform corporations (rather than governments), Plantin et al. have begun exploring a merging of the two analytic approaches as necessary to understand contemporary *platform infrastructuralization* and *infrastructure platformization*. Using as an example the developmental trajectory of computing in the United States—from government-funded public interest utility in the 1960s to privately-owned, deregulated, commercial product in the late 1980s—and further on to the consolidated, oligopolistically-owned, ubiquitous walled ecosystems in the 2010s, I argue—the authors showcase the new insights that infrastructure studies' historical approach can bring to platform studies.[251] Beyond the understanding of technical and organizational designs that have allowed platforms to decentralize data production while recentralizing data ownership and control, a historical perspective links such an understanding to the development of larger socio-technical systems that have enabled platform activities like data collection in the first place.[252] Two particular studies in the Chinese context that have followed Plantin et al.'s historical approach to analyzing infrastructure platformization are Zhang's aforementioned account of Taobao, and Plantin and de Seta's account of

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[249] Plantin et al. "Infrastructure studies meet platform studies in the age of Google and Facebook.": 298-301.
[250] Ibid: 294.
[251] Ibid: 300-301.
[252] For data decentralization and recentralization as twinned platform logics, see Helmond, Anne. "The platformization of the web": 7-8.

Wechat.[253] Zhang has perceptively noted that Taobao began as a platform takeover of the petty capitalist bazaar, a form of marketplace infrastructure. Its success in digitizing the petty capitalist bazaar lay partly in its use of exaggerated emoticons in its internal messaging system to replicate the theatrical haggling that is central to marketplace transactions in petty capitalist settings.

Building on this preliminary work on the historicity of infrastructure platformization, my approach aims to draw attention to the *form* through which platforms platformize existing infrastructures. This allows us to understand the process of platformization as continuous with—rather than disconnected from—longer histories of the city, such as the historically unprecedented, post-reform demolition and construction spree in China that we discussed in chapter one. Focusing on how platforms impinge on existing infrastructures through form also connects platform urbanism back to smart city critique. Unlike discussions of platform urbanism, earlier critiques of smart cities from architecture, planning, and media studies have paid much attention to form. From the screen-proliferating security control room of Expo '70 Osaka to the *Garden of the Future* at IBM's global headquarters in Armonk, New York, media scholars like Furuhata and Halpern have long been concerned with how smart cities have been en-*formed* in design.[254] By drawing on infrastructure studies' attention to form, part of my aim here is to recover this readerly emphasis on *form as the aesthetic concretization of media logics* that was present in smart city criticism, but which has been neglected in the turn to urban platforms—as scholars have tracked contemporary transformations in the production of technologically driven urban futurity. How Meituan Waimai is platformizing the city through interfacing with existing urban infrastructure, I argue, can be grasped if we closely examine the design of its *uni-forms*.

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[253] Zhang, Lin. "When Platform Capitalism Meets Petty Capitalism in China;" Plantin, Jean-Christophe, and Gabriele de Seta. "WeChat as infrastructure: the techno-nationalist shaping of Chinese digital platforms." *Chinese Journal of Communication* 12, no. 3 (2019): 257-271.
[254] Furuhata, Yuriko. "Multimedia Environments and Security Operations": 67-72; and Halpern, Orit. *Beautiful data*: 257-269.

Among infrastructure scholars, anthropologist Brian Larkin has written influentially on issues of form, and it is worth recapitulating briefly his argument here.

> Infrastructures, as technical objects, take on form. Once something exists— say a road or an electric plant—we are not just in the domain of matter but of technological ensembles that are enformed as they are brought into material existence. In the study of infrastructures, form is both ubiquitously visible yet absent from analytic consideration. However, it is the *interface* [emphasis mine] through which humans engage with technologies and is part of the reciprocal interchange between humans and machines. Form is thus a *relation* between humans and technology as well as a thing in itself, the medium where infrastructure and user meet. There can be no technics without form, yet it is separate from those technics, participating in a paradigmatic chain of relations with previous forms, their aesthetic histories, and the epistemic worlds that come with them.[255]

There are a few points to unpack in Larkin's notion of form. The first is that the form of infrastructures is concrete and material, but not merely technical. This is because of the second point, that form mediates between humans and technology. Because humans must encounter infrastructural forms through their embodied senses, perceptions, and subjective positions, this encounter is necessarily wrapped up in sense, experience, and culture—all of which rely on but exert force beyond technical operations. Finally, to be concerned with how infrastructural forms mediate relations between humans and technology is to be concerned with questions of interfacing. Hookway has already explained that the "interface" is both noun and verb, always constituting a relational mediation by "facing."[256] This last point allows us to re-inscribe issues of form into the analysis of urban platforms: the interface is how platforms form (verb), and form (noun) is the interface between platforms and infrastructures.

Not only do platforms use interfaces to form (i.e. discipline and interpellate) people into workers and users, they also use interfaces to form other machines into configurations amenable for the platform. In other words, one of the outsides of urban platforms is other technologies. Scholars of platformization have already delineated the two kinds of interfaces employed by social media platforms: user interfaces and software interfaces

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[255] Larkin, Brian. "Promising forms": 175.
[256] Hookway, Branden. *Interface*: 10-12.

(APIs). The former opens up the platform for encounters with humans/users, while the latter opens it up for encounters with other machines/apps.[257] Looking at infrastructure platformization from the other side of infrastructures: large and concealed they might be—infrastructures also have interfaces, like water faucets, entrance gates, and traffic lights.[258] It is by engaging with these concentrated access points to infrastructure with their own interfaces that platforms can grasp and attempt to transform them. So not only do interfaces of platformization attempt to order human sense experience, they also attempt to (re)configure technics. The techwear uniforms worn by food delivery workers, as I will argue in detail, is a single interface that performs the double duty of forming platform workers (from the population of migrants) and forming channels (for the logistical movement of restaurant takeout) through existing security and traffic infrastructure. Notably, security and traffic infrastructures make use of machines like boom gates, some of which are operated by humans. It is, to complicate Larkin's definition, not always so clear that humans are on one side of an interface, while machines are on the other.[259]

Nicole Starosielski, in her account of the developmental history of the transoceanic submarine cable network that forms the infrastructural backbone of global internet connectivity, has shown that infrastructures are fundamentally *precarious*. With undersea cables, environmental forces like "cyclones, tectonic plate shifts, and rising waters threaten to physically disrupt the movement of media and communications."[260] Cable companies, in turn, "develop extensive social, architectural, geographic, and discursive strategies of insulation" to protect their data channels from environmental turbulence.[261] The word *platform*, as Tarleton Gillespie has intimated, suggests a form that is already smooth and flat (*platte fourme* is old French for "flat shape")*.*[262] Occluded within this term are those strategies and processes of *form-ing* that aim to smoothen unevenness,

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[257] Helmond, Anne. "The platformization of the web": 4.
[258] For interfaces as access points or "gates" to infrastructure, see Peters, John Durham. *The marvelous clouds:* 31.
[259] This point mirrors Larkin's that it is very difficult to separate the technical operation of infrastructure from its sensual and semiotic operations. Larkin, Brian. "Promising forms": 185, 193.
[260] Starosielski, Nicole. *The Undersea Network*. Duke University Press, 2015: 16.
[261] Ibid: 17.
[262] Gillespie, Tarleton. "The politics of 'platforms'." *New media & society* 12, no. 3 (2010): 350.

contingency, and interference from exterior sources—sometimes unsuccessfully. Such "strategies of insulation" as regulating interface between the platform and its surrounding socio-technical environment are what I will be attuned to in my reading of delivery workers' techwear uniforms.[263]

In this section, I have tracked the existing scholarly discussion on urban computation as it has moved from smart city criticism to platform urbanism, and then to infrastructural platform studies. The question of form and interface have served as my throughline across these discussions, enabling me to prepare readers for an outside-the-screen reading of delivery workers' techwear uniforms as an everyday interface that mediates urban delivery platforms and their constitutive outsides. If platformization names the process under which the tech industry attempts to transform common practices (such as buying groceries, taking taxis, etc) and existing technologies to become platform-compatible—so that they may be absorbed into the computational management of platforms—then examining closely those *forms* through which the industry reaches out to grasp at daily life in the city, I argue, opens the black box to show these processes of tech industry-driven urban development at work in their quotidian, everyday repetition.

In the next section, I briefly summarize the two very different material lineages that food delivery workers' techwear uniforms have brought together: the uniform and the on-demand or JIT (just-in-time) sector of the now-massive Chinese urban logistics industry, in order to give some historical context to the analysis of tech industry-driven urban development that we will turn to in section four.

Section III. 即时配送 (Just-in-Time Delivery) and Uniform Media

The Post-2008 Emergence of Urban Platforms

As I have indicated in chapter one, decades of neoliberal disinvestment and abandonment of infrastructure in the United States has produced a decaying public

[263] Starosielski, Nicole. *The Undersea Network*: 16.

infrastructural base. On the political economic side, neither the real estate sector nor the finance sector provided profitable avenues for capital to invest in after the 2008 U.S. housing bubble collapsed—the former for obvious reasons and the latter due to low interest rates resulting from the Federal Reserve's post-crash stimulus plan of printing money, aka. "quantitative easing." To put it exceedingly briefly, this malaise in other sectors of the tertiary economy funneled much capital investment, in search of higher returns, into the tech industry.[264] It is not a coincidence that many of the widely-recognized Silicon Valley urban platforms, like AirBnB and Uber, emerged in the aftermath of the 2008 crisis. Combined with crumbling public infrastructure, the scene was set "in which platforms can achieve enormous scales, co-exist with infrastructures, *and in some cases compete with or even supplant them*."[265]

On the other side of the Pacific, the Chinese government has similarly been turning to the tech industry to play the role of post-crash growth engine, after the 2008 crisis thoroughly depressed OECD countries' consumer buying power that the existing engine--Chinese export-processing industries--had relied on.[266] This national developmental strategy has been named Internet Plus. In the decade since, Chinese venture capital investment in the tech industry has been among the top three highest of any country in the world.[267] This financial push into the tech sector has as its human complement a group of transpacifically mobile Chinese IT entrepreneurs and workers, whom Annalee Saxenian have called "the New Argonauts."[268] These men (the vast majority of them are men) have taken their experience in and connections to the American tech industry to replicate and

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[264] Srnicek, Nick. *Platform Capitalism*. Polity Press, 2017: 30.
[265] Plantin, Jean-Christophe, Carl Lagoze, Paul N. Edwards, and Christian Sandvig. "Infrastructure studies meet platform studies in the age of Google and Facebook." *New Media & Society* 20, no. 1 (2018): 301. See also Appel, Hannah, Nikhil Anand, and Akhil Gupta. "Introduction: Temporality, politics, and the promise of infrastructure." *The promise of infrastructure* (2018): 5.
[266] Yu, Hong. *Networking China: The Digital Transformation of the Chinese Economy*. University of Illinois Press, 2017: 5-13.
[267] For venture capital investment into Chinese tech industry, see Woetzel, J., Song, J., Wang, K.W., Manyika, J., Chui, M., Wong, W., 2017. *China's Digital Economy: A Leading Global Force*. McKinsey global institute discussion paper, August 2017.
[268] Saxenian, AnnaLee. *The New Argonauts: Regional Advantage in a Global Economy*. Harvard UP, 2007.

transform for the lucrative Chinese market many of its platform business models.[269] This economic turn to tech has been paired with the Chinese government's techno-nationalist geopolitical policy of securing its cybersovereignty by promoting homegrown digital platforms as national champions (to prevent American companies from platformizing Chinese infrastructure through market capture).[270] What has emerged from this macro environment are some of the largest and most extensively used platforms in the world, like WeChat, DiDi, Alibaba, and so on.

As was the case with Uber, AirBnb, and Grubhub, food delivery platforms in China began to emerge after the 2008 crisis, around 2011.[271] Through vast flows of venture capital investment and a pro-industry, techno-nationalist policy, China has seen digital platforms like Meituan Waimai enter into and transform transportation infrastructure and logistics—not so much to supplant but to operate alongside and on top of government-run infrastructure, which, unlike in the U.S., has been robustly funded.[272] As Federico Caprotti and Dong Liu have put it, "The rise of Chinese digital platforms is to be noted for its rapidity as well as its societal and urban pervasiveness."[273]

The planet's largest food delivery platform, as of 2020, is Meituan Waimai. According to a Bloomberg profile in 2019, Meituan Waimai's 600,000 delivery workers complete "about 20 million daily deliveries across the network. For comparison, Grubhub Inc., the U.S. leader and owner of Seamless, delivers fewer than 500,000 meals a day [1/40th of Meituan's volume]. Meituan's scale dwarfs that of India's *dabbawalas*, who

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[269] This was at least the case in the late 2000s and early 2010s, as the Chinese platform economy was just emerging; as of 2020 the Chinese tech industry is well capable of producing novel business models and technological features that are later taken up by Silicon Valley platforms. For the industry's misogynisticly masculine culture, see https://www.nytimes.com/2018/04/24/business/china-women-technology.html

[270] Plantin, Jean-Christophe, and Gabriele de Seta. "WeChat as infrastructure: the techno-nationalist shaping of Chinese digital platforms." *Chinese Journal of Communication* 12, no. 3 (2019): 259, 268.

[271] iiMedia Research. "2018-2019 中国在线外卖行业研究报告" (2018-2019 Zhongguo Zaixian Waimai Hangye Yanjiu Baogao). *iiMedia Research*. April 30th, 2019.

[272] 14% of GDP in China goes towards infrastructural investment. The equivalent amount in the United States is 2% of GDP. For more on China's infrastructural power, see Bach, Jonathan. "China's Infrastructural Fix." *Limn Issue 7: Public Infrastructures and Infrastructural Publics*. 2016. Online at: https://limn.it/articles/chinas-infrastructural-fix/

[273] Caprotti, Federico, and Dong Liu. "Emerging platform urbanism in China": 2.

deliver some 80 million pail lunches a year."[274] The platform has a reach of 2800 cities, and a yearly customer base of 400 million people. Although it began with restaurant takeout, Meituan has lately expanded its services to cover other kinds of perishables, like groceries, flowers, and cakes.[275] Hence it has dropped the food delivery branding to tout its services as 即时配送 or Just-in-Time (JIT) delivery, abstracting takeout delivery into on-demand delivery. The platform has only one competitor in what has become a duopolistic market: 饿了么 (Eleme). Both Meituan and Eleme are backed respectively by Tencent and Alibaba, two of the three giants of the Chinese tech industry (the third being Baidu).

Uniforms as Disciplinary Mechanism in the Society of Control

On the one hand, the ubiquitous presence of Meituan and other platform companies in Chinese cities is discernible from their take-over of the infrastructure of urban logistics systems, which used to be the sole domain of the State Post Bureau and their delivery services, like EMS.[276] On the other hand, this presence is symbolized by the uniforms worn by workers of these platforms. In this sub-section, I want to expand my analysis of the private delivery platform, which has been built on top of public infrastructure, by looking closely at the type clothing known as the *uniform*.

What kind of clothing count as uniforms? Like I have explained with reference to Marshall McLuhan in the thesis introduction, all clothing are simultaneously media of existence (keeping people warm, protecting them from the sun, etc.) and media of communications (expressing social identities, visualizing behavioural expectations, etc.).[277] In turn, all social groups more or less develop pressures and expectations regarding how its members ought to dress. In many cases (e.g. in a university classroom), these expectations are tacit and indirectly enforced. When such pressures on how

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[274] Lulu Chen, David Ramli, and Peter Elstrom. "The World's Greatest Delivery Empire." *Bloomberg Businessweek*. Special Double Issue, April 1st, 2019.
[275] Sun, Ping. "Your order, their labor": 309.
[276] Privately-owned delivery services were illegal until 2005. See https://www.sohu.com/a/157739341_343156
[277] For existential vs. communications media, see Peters, John Durham. *The marvelous clouds:* 13-15.

members of a group should dress are "explicitly, precisely, intentionally, and officially" enforced, what emerges is a *uniform code*.[278] Uniforms as clothes are governed by the uniform as written or visual code, which are produced, disseminated, and regulated by hierarchical superiors like school headmasters or military officers. A uniform, in other words, "is a type of standardized clothing that is overtly and officially within the control of a group hierarchy."[279] Compared to the looser *dress codes*, uniform codes define positively "what *must* be worn, whereas dress codes specify what may *not* be worn."[280] Uniforms—and the codes that govern what they must be and how they must be worn—are used to visually (and biomechanically) suppress difference or deviance from an explicit, standardized norm. It is, in other words, an instrument of discipline.

Uniforms do not work alone to enforce social codes and norms, such as compliance and obedience in schools. They are only one part of a larger disciplinary environment, which Michel Foucault has analyzed through the architectural design of the barracks, the prison,[281] the school, the hospital, and other institutional spaces which hierarchically control not only dress but "appearance, language, behavior, and gesture."[282] Uniforms, in other words, simultaneously visualize and rely on a more comprehensive environment to produce discipline. The capacity of a group hierarchy to enforce uniform codes and punish transgressors does not and cannot rely solely on clothing. A system of legitimate violence that can adjudicate transgression and meter out punishment, time-keeping devices and built architecture to delineate the expected temporal and spatial boundaries of dress regulation—these are all complimentary, non-sartorial components of any disciplinary environment that makes enforcing uniform codes possible. Uniforms, in sum, work in tandem with other disciplinary mechanisms, like managers and architecture. Once the target population has internalized the disciplinary vision of the enforcers, however, Foucault noted that the guards, architecture, and uniforms that helped train the

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[278] Hertz, Carrie. "The uniform: As material, as symbol, as negotiated object." *Midwestern Folklore* 32, no. 1/2 (2007): 44.
[279] Ibid.
[280] Ibid.
[281] Foucault, Michel. *Discipline and punish: The birth of the prison*. Vintage, 2012.
[282] Hertz, Carrie. "The uniform": 44.

population in the first place are no longer required. Each individual becomes their own warden. This is why some people do not jay walk even when there are no incoming vehicles or police.

In a short essay called *Postscript on the Societies of Control*, Gilles Deleuze sketched out *control societies* as the computationally managed mode in which power will operate after the waning of disciplinary societies in the latter half of the 20th century.[283] The transformation of disciplinary society into control society would, Deleuze predicted, reintroduce designed environments and architectures as technology of behavioural regulation—but updated to be variable.[284] These would function like networked smart city infrastructures that can be grasped and manipulated in control rooms,

> "a city where one would be able to leave one's apartment, one's street, one's neighborhood, thanks to one's (dividual) electronic card that raises a given barrier; but the card could just as easily be rejected on a given day or between certain hours."[285]

Why bother training populations to internalize discipline when the environment itself can be controlled to physically accomplish the same? It is not sci-fi, Deleuze wrote in 1992, to envision "a control mechanism, giving the position of any element within an open environment at any given instant (whether animal in a reserve or human in a corporation, as with an electronic collar)."[286] This short passage almost precisely describes how JIT delivery platforms track the real-time locations of their delivery workers with the GPS function of each worker's smartphone—which must always be have the platform's app turned on, and location enabled--when they are working.[287] I say "almost precisely," because in his short sketch, Deleuze did not consider the case in which the "card" is not compatible with "barrier". A crucial point is that control mechanisms are *built on top of*, rather than erase and replace mechanisms of discipline. Uniforms as a mechanism of

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[283] Deleuze, Gilles. "Postscript on the Societies of Control." *October* 59 (1992): 3-7.
[284] Ibid: 4-5.
[285] Ibid: 7.
[286] Ibid: 7.
[287] 孙萍 (Ping, Sun). "如何理解算法的物质属性 — 基于平台经济和数字劳动的物质性研究" (Ruhe Lijie Suanfa De Wuzhi Shuxing--Jiyu Pingtai Jingji He Shuxue Laodong De Wuzhixing Yanjiu; How to Understand the Materiality of Algorithm—An exploration of platform economy and digital labor) *科学与社会* (*Science and Society*) 9, no. 3 (2019): 59.

discipline are still needed in control society, because smartphones on which workers must identify themselves by logging in to the platform app are no use when facing security guards who insist on scrutinizing not cards or phones, but faces.[288]

The location-tracking smartphone is not exactly Deleuze's "electronic collar" because a collar is worn and a smartphone is not. With a collar, even people who do not have access to its real-time location data can see that it visibly marks a body as belonging to another party. Unlike an electronic collar, the smartphones used by JIT platforms to track and control delivery riders are not able to visibly and quickly communicate riders' identity as a platform worker to security guards. Hence the electronic collar theorized by Deleuze actually turned out to be bifurcated: as worn techwear uniform and carried tracking smartphone. All this is to say that, in addition to the screen-interface and the built environment, uniforms as a disciplinary medium between bodies and their outsides deserve our attention in any investigation of how the city encounters the media logics of computational platforms. As interrelated fields of design (screen interface-, urban-, clothing-), these three mediums contiguously complement and support one another in their operations, with any slack from one resulting in pressure on the other two.[289] In the final section, I present an account of how screen, planned infrastructure, and uniform lean and pull on each other to mediate the platformization of urban logistics in China.

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[288] For example, see the cases noted in Chen, J.Y. & Sun, SP. (2020). "Temporal Arbitrage, the Fragmented Rush, and Opportunistic Behaviors": 8.

[289] Interior and furniture design would constitute a fourth field of design, in addition to screen-interface, built environment, and clothing. Since the encounter between platform and microdistrict I analyze in this chapter takes place outdoors, we can dispense with this fourth field of design for this case.

Section IV. Channeling into 小区 (Microdistricts): Techwear Uniform as Logistical Insulation

On the Other Side of a Uniform is a Microdistrict

The design elements I want to focus on in this analysis of Meituan Waimai's (summer) polo shirt uniform in order to demonstrate how the platformatization of urban logistics and disciplining of workers work in China are: the bright yellow/dark brown color scheme, the light-reflective shoulder stripes both front and back, and the large Meituan kangaroo logos on the chest, back, and shoulders. These design elements, I am arguing in this section, work like a worn access pass that delivery workers must use to negotiate their entry into residential microdistricts in order to reach their customers. 48% of Meituan's delivery orders come from customers in residential microdistricts.[290]

Most business buildings in any large, wealthy city tend to have access control apparatuses, staffed by security guards. But to answer why Chinese delivery workers must also interface with access control systems and security guards to enter even residential areas, we must first understand what a *microdistrict* is, and how this model of enclosed urban planning has become the dominant residential typology in early 21st century Chinese cities.[291] 小区 (*xiaoqu*) or microdistrict (*mikrorayon* in Russian) is an urban planning concept that came to China from the Soviet Union in 1956. Microdistricts combine in an enclosed area housing with facilities designed for social reproduction, like daycares, parks, convenience stores, and recreational clubhouses. Their size was defined originally as "a self-contained residential district with an area of 75–125 acres and a population ranging between 5000 and 15000…each with a service radius of 300–

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[290] 徐倩 (Xu Qian). "美团外卖尝试与物业合作：外卖员扫码可进小区送餐" (Meituan Waimai Changshi Yu Wuye Hezuo: Waimaiyuan Saoma Keyi Jin Xiaoqu Songcan; Meituan Waimai Attempts to Collaborate with Property Management: Workers Can Enter Microdistrict To Deliver Meals By Scanning Code). 人民网北京 (Remin Web Beijing). November 2nd, 2017. Accessed at: https://www.sohu.com/a/201776339_114731.

[291] Lu, Duanfang. "Travelling urban form: the neighbourhood unit in China." *Planning Perspectives* 21, no. 4 (2006): 384.

400m."[292] Even though it was introduced to China in the 1950s, the microdistrict did not come into widespread use until the reform era, after 1978. During the socialist era, the *danwei* or work unit was the dominant urban residential form. Danweis differed from microdistricts in that they combined production (factory) and reproduction (housing, canteen, recreation, etc.) in an enclosed area, in the model of the company town. After reform, government planners moving away from work unit-based urban organization revived the microdistrict schema through planning codes designed to regulate the then-new commercial residential developments. [293]

Because the vast majority of these post-reform microdistrict developments have been built on once-rural land subsumed by quickly growing cities, local governments (who primarily depend on land sale revenues to fund themselves) offloaded the cost of building "basic" infrastructure like roads, piping, and wiring onto the developers as a cost-saving measure.[294] To recoup the cost of developing and maintaining these basic infrastructural provisions, developers in turn adopted a fee-paying property management model from the Hong Kong real estate industry, establishing the communal infrastructure and facilities of microdistricts as the private property of residents. Combining this fee-based model of service maintenance with the rapid influx of migrants from all class and regional backgrounds into the swiftly growing cities, what has emerged since the 1990s is a consensus between microdistrict residents and developers over safety and access control as top priorities. Consequently, this emphasis on microdistrict safety has manifested architecturally as "the building of fences, the installing of access doors, the mounting of security cameras, and the erecting of camera-fed monitor walls."[295] As we will see,

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[292] Ibid: 383.
[293] Ibid: 384.
[294] 黄童超(Huang, Tongchao). "中国城市小区是如何一步步封闭的" (Zhongguo Chengshi Xiaoqu Shi Ruhe Yibubu Fengbide, How the Chinese Urban Microdistrict Gradually Became More and More Enclosed). *回声 (Resound)* under *网易新闻* (*Netease News*). February 24th, 2016. Accessed at http://view.163.com/special/resound/xiaoqu20160224.html.
[295] Ibid.

uniforms have been mobilized as platform technology to facilitate travel through precisely these security barriers.

Securing Microdistricts at the Entrance Gates

During my visits to Shenzhen in the late 2010s, most microdistrict entrances had already "smartened" part of their access control infrastructure, by linking the mechanical boom gates that raise to allow vehicular entry to cameras that could read license plates and check them against a registration database. For pedestrians and vehicles that have no licensing requirements though, it was still up to the on-duty security guard to decide whether or not they could enter. There is not always a security guard on duty at every microdistrict entrance point, but as journalists from Zhejiang TV have documented, the more expensive a residential microdistrict is, the more on-duty security guards there will likely be.[296] Residents are supposed to tap an access card to open the door or gate, but after doing that a few times in front of the security guards, the latter group soon recognizes who the card-carrying residents are, and as a matter of courtesy, opens the access doors for residents as they approach. People have ironically called this practice "刷脸," (Shualian) or "scanning face" —a privilege afforded only to regulars and VIPs. This is all to say, there is sizable discretionary power and pressure (to balance security vs. courtesy to residents) on the part of microdistrict security guards to regulate access by profiling potential entrants.

Unsurprisingly, this access control system creates a very material problem for platform delivery workers, all of whom use e-bikes that need no licensing. The majority of riders are migrant workers, making their living in cities to which their rural *hukou* offer no rights.[297] These migrant men (the majority of them are young men) are arguably one of the very populations that microdistrict security guards have been hired to keep out. When

[296] Ed. 陈伟斌 (Chen Wei Biao). *范大姐帮忙* (Fan Dajie Bangmang, "Sister Fan's Help"). 钱江都市频道 (Qianjiang Dushi Pindao, "Qianjiang Urban Channel")
[297] Sun, Ping. "Your order, their labor": 309.

someone they do not recognize attempts to enter the microdistrict, guards usually "ask the entrant questions and require that they register [their National ID card number]" before letting them through.[298] Outright refusal of entry can also happen, but security guards usually avoid such rejection, due to complaints from resident-customers whom pay precisely for the convenience of food delivered to their apartment doors.[299]

On the scheduling side, delivery platforms expect workers to perform at or better than a delivery time that is algorithmically calculated for every order—averaging around 30 minutes in 2020.[300] Lateness results in considerable fines, sometimes in amounts exceeding a worker's daily income. As Chen and Sun have noted,

> On average, the riders make 7 to 9 RMB (approximately US$1 to US$1.3) per delivery. They face fines ranging from 2 to 500 RMB (approximately US$73), depending on how late they are and whether the customers complain or not. One rider named Jun lost his commission and was fined 50 RMB (approximately US$7) because of a three-second delay.[301]

For delivery riders, answering and registering for the guard can mean the difference between making their commission or losing 5-7 commissions worth of pay in a lateness fine. This kind of pressure from conflicting prerogatives between platform and property management has at times irrupted into physical confrontation, such as a brawl that took place between delivery workers and security guards in Chengdu in July, 2017.[302]

Uniformed Entry

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[298] 宗和 (Zong He). "网购外卖员制服蹭饭？这不可能，但真有人买快递、外卖制服进小区盗窃，多小区难设防" (Wang Gou Waimaiyuan Zhifu Cengfan? Zhe Bu Keneng, Dan Zhen Youren Mai Kuaidi, Waimai Zhifu Jin Xiaoqu Daoqie, Duo Xiaoqu Nanshefang). *上观新闻 (Shanghai Observer)*. March 7th, 2017: 6.

[299] 彭文卓 (Peng Wen Zhang). "外卖员能否自由进小区？可实现身份核验但效果待考" (Waimaiyuan Nengfou Ziyou Jin Xiaoqu? Ke Shixian Shenfen Yanzheng Dan Xiaoguo Daikao). *工人日报 (Worker's Daily)*. January 4th, 2018.

[300] Ibid: 313-314.

[301] Chen, J.Y. & Sun, SP. (2020). "Temporal Arbitrage, the Fragmented Rush, and Opportunistic Behaviors": 8.

[302] 彭文卓 (Peng Wen Zhang). "外卖员能否自由进小区?" ((Waimaiyuan Nengfou Ziyou Jin Xiaoqu?).

Under such recurring pressures driven by conflicting prerogatives, platform riders and security guards seem to have reached an agreement under which delivery uniforms function as the means of authenticating identity, crucial for securing quick and smooth passage for the payload.[303] "They [security guards] usually do not require delivery workers who wear uniforms to stop and register," one news article reported.[304] Riders identify themselves visually to security guards by wearing their uniforms.[305] In the case of Meituan Waimai, the uniform's bright yellow/dark brown color scheme and light-reflective shoulder stripes make riders easily visible. (See Figures 1.1 and 1.2) The collar of the polo shirt design signifies propriety and professionalism, while the large Meituan logos front and back mark the worker's body as belonging to the platform. I refer to precisely this particular configuration of body and dress when I argue that "uniforms discipline workers." Discipline in our case is less ambitious body choreographies and more simply producing the category of "delivery platform workers" by visibly separating them from non-workers. The platform logo has specifically been cited by guards as a key visual cue.[306] Worn together with a yellow helmet while carrying an insulated bag, this silent sign of sartorial form is usually enough for the payload and its chaperone to secure smooth passage. "Delivery workers can come in," as one Hangzhou doorman said.[307]

This capacity to "open sesame" has consequently encouraged thieves to put on delivery uniforms—which anyone can buy on Taobao—in order to gain entry into residential compounds.[308] "Because he was wearing a delivery uniform, no one

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[303] Ibid.
[304] Ibid.
[305] Ed. 陈伟斌 (Chen Wei Biao). *范大姐帮忙* (Fan Dajie Bangmang, "Sister Fan's Help"). 钱江都市频道 (Qianjiang Dushi Pindao, "Qianjiang Urban Channel"): 7-9.
[306] 彭文卓 (Peng Wen Zhang). "外卖员能否自由进小区?" ((Waimaiyuan Nengfou Ziyou Jin Xiaoqu?).
[307] Ed. 陈伟斌 (Chen Wei Biao). *范大姐帮忙* (Fan Dajie Bangmang, "Sister Fan's Help"): 14.
[308] 任国勇 (Ren Guo Yong). "外卖工作服竟成小区"通行证，他屡偷电瓶得手" (Waimai Gongzuofu Jingcheng Xiaoqu 'Tongxingzheng', Ta Lv Tou Dianping Deshou; Food Delivery Uniform Becomes Microdistrict 'Access Pass', He Successfully Stole Multiple E-bike Batteries). *扬子晚报 (Yangzi Wanbao Wang; Yangtse Evening Post)*, part of Xinhua Newspaper Group. May 29th, 2018. Accessed at:

suspected his movements in and out of the microdistrict," one news article about such thefts noted.[309] We know uniform-wearing indeed functions as identity authentication when others have spent the energy to emulate and replicate it, with successful results.

However, that uniforms can help authenticate workers to residential security does not mean that they enable smooth passage every time. Infrastructures are not purely technical—especially ones involving human staff, like access control gates. They are also modes of sense encounter.[310] The Meituan polo shirt is only one interface component among many—including helmet, e-bike, insulated bag, and smartphone, as well as one's posture, gestures, tone of voice, facial expression, and so on—that riders (and through them, the platform) must mobilize in assemblage to sensually persuade potential gatekeepers through "proper" self-identification. We may therefore categorize the food delivery worker's uniform as an *analog access shirt*. Rather than calling the uniform an *access pass*, I am stressing its "shirtness" because the morphological shape of the uniform's design—and consequently how it may be worn--matters: the logo is easily visible when facing both the delivery worker's chest and back, because it has been embroidered into both places. Worn access passes—for example when worn on neck lanyards—are not visible from the back. Compared to an access pass, the shirt design is a much more public broadcasting of workers' affiliations to the platform. Because it is not connected to a system of binary computation (nor is it even electronic), but is instead linked—

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http://news.sina.com.cn/o/2018-05-29/doc-ihcffhsv2025476.shtml. Ed. 施荔 (Shi Li). "为方便潜入小区偷电瓶 男子网购外卖服乔装打扮" (Wei Fangbian Qianru Xiaoqu Tou Dianping, Nanzi Wanggou Waimaifu Qiaozhuangdaban; In Order To Sneak Into Microdistrict To Steal E-bike Batteries, Man Disguises with Food Delivery Uniform Bought Online). 看看新闻, 上海广播电视台 (Kankan News, Shanghai Broadcast Television). March 28th, 2018 at 9: 35. Accessed at http://news.sina.com.cn/s/2018-03-28/doc-ifyssmke5943798.shtml

[309] 任国勇 (Ren Guo Yong). "外卖工作服竟成小区"通行证": (Waimai Gongzuofu Jingcheng Xiaoqu 'Tongxingzheng'; Food Delivery Uniform Becomes Microdistrict 'Access Pass').

[310] Larkin, Brian. "Promising forms": 176.

through the rider's techniques of the body[311]—to this whole assemblage of media techniques and technologies, its efficacy forming only one part of a qualitatively accumulating chain, the uniform as access shirt behaves in an analog rather than digital fashion.[312] Analog technologies of discipline like uniform shirts have their uses even in societies of control, because digital technologies of control (e.g. platform algorithms) must always find ways to mediate their relations to various analog outsides.

Interface from Uniform (back) to Screen

Analog, low-tech technologies also prepare the ground for digital ones. Every day in China, Meituan riders deliver around 10 million orders into microdistricts. Every one of these orders creates pressure at the interface between platform and security infrastructure, due to conflicting aims between the delivery platform (actualized through riders and customers), which desires quick and smooth access, and property management (actualized through guards and residents), which desires regulation of access. Due to this constant pressure that always threatens to irrupt into breakdowns (like lateness, or fights) in the logistical network, Meituan has begun working with real estate companies in an attempt to formalize and solidify the "last hundred meters" of the logistical pathway from the microdistrict entrance to the apartment doors of customers—a channel hitherto precariously secured by the uniform, among other interfacial forms.[313] Through a Wechat applet developed by Meituan called "Microdistrict Guardian," security guards can use their smartphones to scan incoming entrants dressed in delivery uniforms. Workers with current orders inside the microdistrict will be given a QR code that authenticates them to the app. The security guard can then see the real-time locations of all delivery workers inside

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[311] The term "techniques of the body" was first coined by Marcel Mauss. For an example of its usage in describing the wearing of uniforms, which I am following, see Craik, Jennifer. "The cultural politics of the uniform." *Fashion Theory* 7, no. 2 (2003): 129.

[312] Media techniques always require body techniques to perform. This was articulated in Vehlken, Sebastian. "Zootechnologies: Swarming as a cultural technique." *Theory, Culture & Society* 30, no. 6 (2013): 110-131.

[313] 徐倩 (Xu Qian). "美团外卖尝试与物业合作" (Meituan Waimai Changshi Yu Wuye Hezuo)

their microdistrict on a map, which highlights the number of minutes each worker has spent inside, as well as the statuses of their orders. (See Figure 9)

This information comes from worker geolocation data inside microdistricts that Meituan already collects; what has changed is that property management workers now also have access to it, through visualization. To analyze the operation of delivery platforms such as Meituan from the standpoint of labour, as Chen and Qiu have done in their workerist approach to platformatization, is hence not enough. This exclusive focus on "labouring" does not adequately explain what is taking place, for the guards are not employed or given jobs by Meituan. Also inadequate is the conception of security guards as "users" whom are enrolled onto the platform to generate data without pay—what Chen and Qiu, following Tiziana Terranova, have called "free labour."[314] Guards are paid, just not by the platform: it is consequential that someone *else* is paying them while they generate this data. Reports from early usage of the applet suggest that it might not be so easy to interpellate security guards, who tend to be older and less tech-savvy, as users.[315] But this one single applet's precarity, I argue, is not the point. What is important is that Meituan, by successively shifting the practice of microdistrict entrant authentication that is a core part of the operations of property management onto interfaces (uniforms, applets) that they control, is forcing the hands of the real estate industry to get into the business of building and operating data infrastructure, either in collaboration with platform players or on their own. The alternative for these real estate industry players is that they might end up paying for the labour that their own employees expend in facilitating logistical channel maintenance and data generation for another company. 2019 saw the emergence of the first Chinese start-up accelerator dedicated to PropTech (Property Technology), backed by real estate developer Swire Properties, insurer Ping An Group, and property management firm

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[314] Qiu, Jack Linchuan. "Labor and Social Media:": 7.

[315] 彭文卓 (Peng Wen Zhang). "外卖员能否自由进小区?" ((Waimaiyuan Nengfou Ziyou Jin Xiaoqu?). For the screen-based, real-time interface as Althusserian ideology machine that interpellates "users", see Chun, Wendy Hui Kyong. *Programmed visions: Software and memory*. MIT Press, 2011: 66-67.

JLL.[316] My argument is that increasing venture capital investment in and corresponding hype about PropTech—tech funded by and developed for the real estate industry—is partly a consequence of urban platforms' everyday perturbations of existing city spatiality through channeling processes and apparatuses.[317] This drafting of real estate into tech is what urban platformization looks like.

Channeling through Urban Spatial Organization

Following Nicole Starosielski, I call JIT delivery platforms' uniform-assisted, repetitive interfacial pressuring of existing urban spatial practice (i.e. microdistrict security) *channeling*. Using different terminology, Anne Helmond has already noted that the establishment of channels which enable data to flow back to a platform's database is an essential preliminary step in the process of platformization.[318] My aim here has been to show such a process of channel building at work in places that exceed social media, organizing flows that exceed data, utilizing media that exceed algorithms and screens. For Starosielski, *channels* are relatively "friction-free surfaces" on which traffic can flow.[319] They are the physical, environmentally embedded reality of what network science abstractly calls edges, which connect a network's nodes.[320] Undersea fiber optic cables are channels for data traffic, while the routes plied by JIT delivery workers through automobile traffic and microdistrict security are channels for takeout and grocery traffic. Channels must first be produced and then maintained, via "investments in and reorganizations of [their surrounding]

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[316] Ying Wang. "First property technology accelerator program launched in the mainland." *China Daily*. July 23rd, 2019. Accessed at: http://www.chinadaily.com.cn/a/201907/23/WS5d36630aa310d83056400740.html

[317] PropTech is but the latest face of the old dream of cybernetic urbanism. It is smart city technologies built for use by real estate companies instead of government officials and planners. For investment and hype in the sector, see Ren, Daniel. "Property technology has the potential to create a multibillion dollar market as China looks for new growth engines." *South China Morning Post*. Oct 2nd, 2019. Accessed at: https://www.scmp.com/business/companies/article/3031123/property-technology-has-potential-create-multibillion-dollar

[318] Helmond, Anne. "The platformization of the web": 6.

[319] Starosielski, Nicole. *The Undersea Network*: 17.

[320] For an example of the use of "nodes" and "edges" in understanding networks, see Facebook's documentation for its Graph API: https://developers.facebook.com/docs/graph-api/overview/

environments," which already have existing spatial organization and flow.[321] To the budding channel builder, these given environments "are not always smooth spaces, but turbulent ecologies" that can create interference in transmission, and make channels precarious.

From the point of view of Meituan Waimai the platform, microdistrict security guards not (easily and smoothly) letting delivery workers into residential complexes is a problem of transmission interference, produced by the turbulent ecology of urban security. To mitigate such turbulent interference, channel builders deploy what Starosielski calls *strategies of insulation*. These insulating techniques "produce an internal break in an ecology, allowing one system to extend into and through another without being affected by it."[322] With the underseas cable network, strategies of insulation can involve disguising cables that traverse through scenic California coasts, or very visibly labeling cables traversing Atlantic fishing grounds on nautical charts and with at-sea beacons and lights.[323] Hi-visibility and prominently branded workers' uniforms has been one strategy of insulation for JIT delivery platforms. Authentication apps for security guards is another.

To build and maintain a conduit for traffic flow by using strategies of insulation to effect a cut in the existing ecology is what, building on Starosielski, I call *channeling*. The hi-viz and branded techwear uniforms of delivery platform workers separate the young men wearing them from the larger population of migrant workers, whom are deemed automatically "suspicious" by microdistrict security systems. While *insulating a channel* implies a differential that gets maintained by post-hoc strategies of insulation, *channeling* implies that the differential is *created* by insulation in the first place. Compared to its noun form, *channeling* denotes a more directional process. One channels forces from elsewhere towards something to open this thing up. Workers are able to create and maintain passageways through microdistricts—i.e. open channels through microdistrict security

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[321] Starosielski, Nicole. *The Undersea Network*: 14.

[322] Ibid: 18.
[323] Ibid: 142-159.

systems for themselves and their payloads—because their uniformed bodies are at the very same time channeling the legitimacy and trust of Meituan and Eleme the corporations, through logos worn on the torso. Channeling as media practice is both the drawing of forces and through these forces—the transformation of environments to enable flow.

Conclusion

In this chapter, I have drawn from infrastructure studies to demonstrate a novel approach for the study of digital urbanism that focuses on precisely those things which are not (commonly understood to be) computational, such as clothing and urban planning schemas in the Chinese context. In my view, such a line of inquiry complementarily synthesizes various aspects from the cluster of digital urbanist theorizing that is smart city criticism, platform urbanism, and infrastructural platform studies. Smart city criticism has brought crucial historical depth to contemporary visions of the cybernetic metropolis. Yet it has tended to overlook lived experience in favor of spectacular models. Platform urbanism has corrected smart city criticism's overreliance on proposals and plans by ethnographically mapping everyday, smartphone-enabled urban practices. But existing analyses of platform urbanism tend to focus dogmatically on algorithms, screen-interfaces, and labour (activism), granting algorithms and screen-based interfaces undue powers of exploitation and transformation (in what I call interface ocularism), and worker resistance and activism undue powers of emancipation (in what I call labour romanticism).[324]

On the temporal level, the labour romanticism and interface ocularism in Chinese platform studies has been somewhat attenuated by the recent cross-pollination with infrastructure studies, which—like smart city criticism—has long been invested with a strong historicist dimension.[325] On the spatial level, however, current discussions of platform urbanism or the platformization of urban infrastructure have yet to go beyond algorithms, screen-based interfaces, and worker contestations when accounting for the quotidian, ambient transformative force that contemporary platforms exert on cities. This

[324] See note 27.
[325] See note 46.

chapter's analysis of the daily encounters between delivery platform and microdistrict security aims to add to the scholarly discussion at precisely such a juncture.

Looking at its conditions of emergence, we can see that Meituan Waimai's "Microdistrict Guardian" applet was developed in direct response to a repetitive pattern of conflicts between delivery workers and customers eager to minimize delivery time, and security guards paid to ascertain the identity of anyone coming in and out of the microdistrict. Despite understanding the heavily punitive algorithmic time management system facing platform delivery workers,[326] we cannot account for the development of this authentication and mapping applet without the other side of the story, concerning microdistricts and their spatial organization. Given that security guards (an older population than delivery workers) already seem reluctant to use the applet, I maintain that—without both parties having already gone through the experience of relying on the uniform to function as a medium of authentication, it is highly unlikely that Meituan would be able to convince guards and property management companies to even pay attention to such an app in the first place, never mind downloading and using it. The app emerged as an update for the uniform. Like all apps, it stood on the shoulders of prior media forms and practices.

So-called urban "digital" platforms, in other words, must lean heavily on analog, non-electronic, "low-tech" technologies like uniforms in order to function and grow. They cannot effortlessly bypass existing mediums and practices of spatial organization to exert exploitative control over workers, or to exert transformative force over urban environments. On the contrary, platforms are dependent on low-tech, insulating forms that can modulate the existing spatial practices constantly threatening to interfere with their payload and data traffics. It is through understanding these low-tech forms and their media logics that we may begin cultivating capable contenders that can critically interface with the dominant logics of platform corporations and the tech industry.

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[326] See note 83.

Conclusion

We have come finally to the time when the two sides of techwear, and the two different aspects of the urban built environment that we have found them in, must be appraised together. What is the linkage between platform-managed, venture capital backed, ubiquitous on-demand urban food delivery systems, and techno-futuristic sartorial and architectural visual culture of the city? What is the relationship between booming venture capital investment in Property Technology by major real estate players in China, and fashion brands and influencers taking time and resources to imagistically render the city as techno-futuristic? As elaborated in the previous two chapters, my answer to these questions is that both are speculations on the future of the Chinese metropolis that effect material transformations to the urban fabric in order to bring it closer to their techno-scientific vision.

To put it differently, these two sides of contemporary Chinese urbanism, of elite leisure and proletarian work, of managing desire and managing logistics, of building image and building infrastructure: they are two ends of one single developmental dynamic, one process. This process is the use of (imaginaries of) rationalizing and "advanced" science and technology to create desire for, justify, and implement urban development. From the perspective of techwear, or clothing as a medium of urban development, scholars of Chinese urban media have thus far both underreported and overreported on the reach of media technology in the metropolis.

Firstly, scholars of Chinese urban media have overreported on the effectiveness and ability of platform algorithms and screen interfaces as mediums of technological urban development. What chapter two's analysis of the operations of food delivery platforms demonstrates is that the *tech* used to actually make cities to work in a "futuristic" and "technological" fashion is not actually all that hi-tech and revolutionary. Seen from workers' techwear uniforms, the on-demand delivery service of a logistics

platform like Meituan is composed of a mechanized dispatch system[327] that relies heavily on one of the oldest analog products capitalism has always offered—textiles and clothing—in order to organize the oldest force this same capitalism has always utilized: workers. The manager is now a geolocation-sensing algorithm, but it cannot empower or coerce delivery workers to complete their assigned tasks without the low-tech, analog infrastructure of an easily visible, branded uniform. If the urban built environment of the future is to be managed by "Internet Plus" digital platforms like Meituan (and there is much indication from government and industry that this is indeed the blueprint), then what I have hoped to elucidate with this close scrutiny of logistics platform "tech" is that this "futuristic" urban infrastructure should not be seen as enchanted with extraordinary powers of production or exploitation, but is rather another precarious way to work the labour-intensive, low-tech-lubricated gears of the existing developmental machine. [328]

On the other hand, scholars of urban China have also underreported on the reach of future-projecting urban visual media, as this media technology of temporality has expanded beyond durable built forms like roadside real estate ads, to an ephemeral and mobile form in sci-fi styled techwear or 机能 fashion. As critics like Joshua Neves have amply shown, the cost of "scientific" and "rationalizing" urban development is ambient "slow violence": all the alienating urban planning, abandonment, demolition, and constant construction (on top of the momentous violence that is policing, eviction, and forced relocation) has characterized urban transformation in China—and in most highly-urbanized centers of early 21st century capitalism, for that matter—for the last decade and a half.[329] On top of this knowledge, what I hope to have added with my analysis of the aesthetics and media logic of fashion techwear in chapter one—especially around the most common sub-style of Militarized Futurism—is that this slow, ambient violence is also

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[327] For specifically how the Meituan dispatch system works in terms of programming/teaching a computer to process certain information, their own engineers explain quite clearly on their tech blog. See 井华 (Jing Hua). 即时配送的订单分配策略：从建模和优化 (Ji She Pei Song de Dingdan Fenpei Celue: Cong Jianmo He Youhua). Meituan Tech Blog, October 11th, 2017. URL: https://tech.meituan.com/2017/10/11/o2o-intelligent-distribution.html

[328] Yu, Hong. *Networking China*: 5-13.

[329] Neves, Joshua. *Underglobalization:* 196.

felt and *grasped* by the middle class whom the government has designated as its beneficiary. It haunts their desires, even as they celebrate the consummation of these desires by consumption. These consumers of global fashion grew up in an environment of proliferating demolished ruins, fenced-in construction sites, and rationally blissful projections justifying the above. Militarized Futurist 机能 fashion (and its close cousins the astronaut and the infrastructure construction worker) has been a visual cultural medium for (younger members of) China's newly emergent middle- and wealthy-class to precipitate out through condensed aesthetic articulation the *pervasive atmospherics of exclusion* that has been the condition of their own genesis as a socioeconomic group. Temporally speaking, beneficiary young middle-class and wealthy urbanites *are* the future that Chinese "scientific" urban redevelopment over the last few decades was supposed to bear fruit as. This future, in other words, looks ornamentally militaristic because it was brought into being through a process that unleashed an everyday, banal violence on the urban fabric, which—when it does not rise to the level of directly targeting outsiders, migrants, and other "illegals" for forced relocation and discipline[330]—dully erases their livelihoods, demolishes their infrastructures of inhabitation, and sweeps away their traces on the city's surfaces. Crucially, the temporality at work here in this aesthetics of violent force is not one of loss or documentation, for urban futurity as a technology has been linked to not only demolition and trauma (as it was with scar literature and New Documentary Movement cinema) but also—in its form as 机能 fashion--with birth and investiture. The violent force of "techno-scientific planning" has permeated through the urban/social body to induce not only phobia and loss, but also philia and pleasure.[331] Aesthetically, fashionable and militarized techwear has developed the "letting die" of necropolitics into *making die*, which has always been twinned with making life.[332]

Our investigation of techwear has determined, in sum, that contemporary scientific, rational, and technological urbanism in China is as much political as it is technical.[333] And

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[330] Ibid: 91.
[331] Ibid*:* 68.
[332] Ibid: 196.
[333] Ibid: 57

this technicality, when we peer into and open it, is as much *low-tech* as it is hi-tech. In order to chart an alternate path, we may look first then not to the keyboard and screen of the computer terminal, or to the drafting table and construction site, but to our own bodies and their intimate, everyday interfaces with the existing metropolis.

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Figures

Figure 1 机能 (Ji Neng) Fashion visual culture on Chinese social media. Reproduced with kind permission from 牙膏 Soda.

Figure 2.1 Two Sets of Photographs from Shoots by Guangzhou *Ji Neng* Brand Reindee Lusion, Published on Weibo. Reproduced with kind permission from Reindee Lusion.

Figure 2.2 Two Sets of Photographs from Shoots by Guangzhou *Ji Neng* Brand Reindee Lusion, Published on Weibo. Reproduced with kind permission from Reindee Lusion.

Figure 2.3 19F/W Deconstruction Pressing Adhesive Waterproof Cloak by Reindee Lusion. Reproduced with kind permission from Reindee Lusion.

Figure 3 Image post on Instagram by @jenniferbin, featuring 机能 *(Ji Neng)* fashion designer Errolson Hugh posing against Beijing Galaxy SOHO building, designed by Zaha Hadid Architects. Reproduced with kind permission from Jennifer Bin.

Figure 4 Image post (2019) on Instagram by @C2H4, taken at the C2H4 Fashion Show "Post Human Era." Source: Instagram.

Figure 5.1 Image post (2017)) by Xiaohongshu (RED) user @宇宙匿名, taken at a half-demolished building. Reproduced with kind permission from 宇宙匿名.

Figure 5.2 Image post (2020) by Xiaohongshu (RED) user @Evig Ung, titled "Ghost in the Shell Security Guard Diary: Guys Spring Ji Neng Style Outfit of the Day." Reproduced with kind permission from Evig Ung.

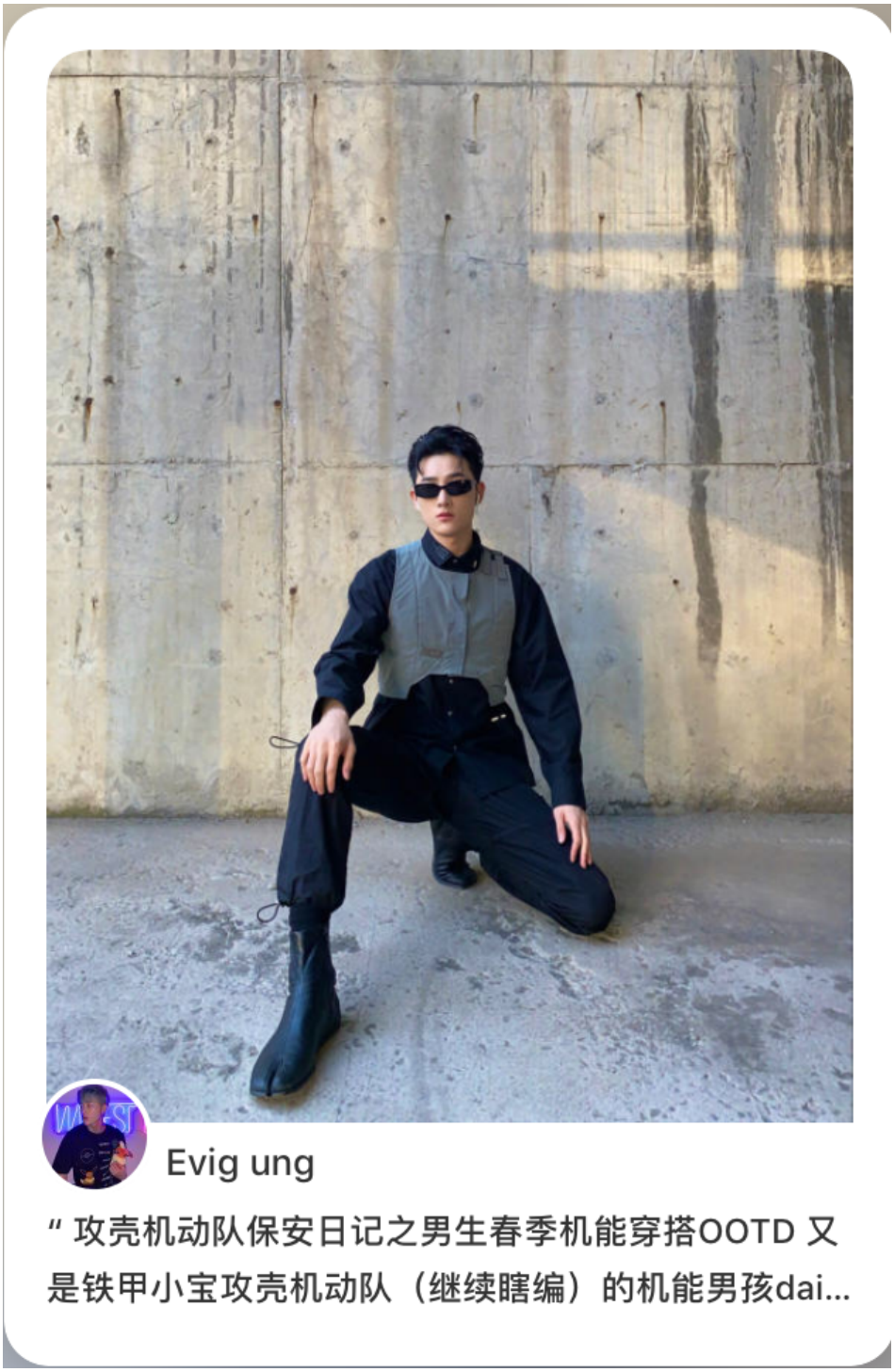


Figure 5.3 Image ad (2017) by Instagram user @5.12 taken in the 白石洲(*Baishizhou)* urban village in Shenzhen, for *WeSmart*, a line of electronically-heated clothing marketed with 机能 fashion aesthetics. Reproduced with kind permission from Wesmart.

Figure 6 First page of the manifesto "Le Vêtement Masculin Futuriste" (1914) by Giacomo Balla.

LE VÊTEMENT MASCULIN FUTURISTE

Manifeste

L'humanité a toujours porté le deuil, ou l'armure pesante, ou la chape hiératique, ou le manteau traînant. Le corps de l'homme a toujours été attristé par le noir, ou emprisonné de ceintures ou écrasé par des draperies.

Durant le Moyen-âge et la Renaissance l'habillement a presque toujours eu des couleurs et des formes statiques, pesantes, drapées ou bouffantes, solennelles, graves, sacerdotales, incommodes et encombrantes. C'étaient des expressions de mélancolie, d'esclavage ou de terreur. C'était la négation de la vie musculaire, qui étouffait dans un passéisme anti-hygiénique d'étoffes trop lourdes et de demi-teintes ennuyeuses efféminées ou décadentes.

C'est pourquoi aujourd'hui comme autrefois les rues pleines de foule, les théâtres, et les salons ont une tonalité et un rythme désolants, funéraires et déprimants.

Nous voulons donc abolir:

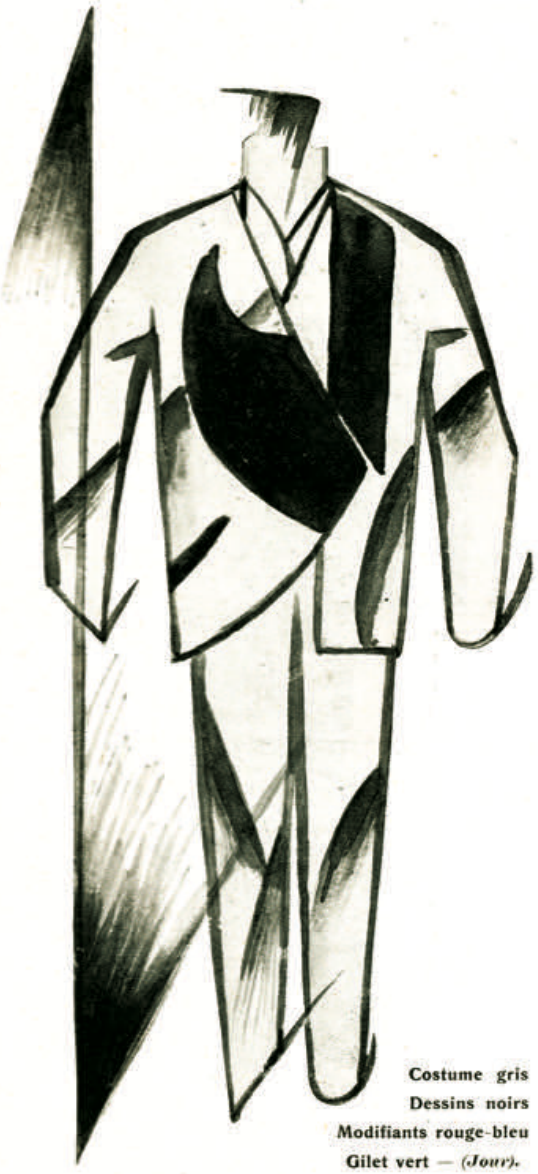
1. — Les vêtements de deuil que les croque-morts eux-mêmes devraient refuser.

2. — Toutes les couleurs fanées, jolies, neutres, fantaisie, foncées.

3. — Toutes les étoffes à raies, quadrillées et à petits pois.

4. — Les soi-disants bon goût et harmonie de teintes et de formes qui ramollissent les nerfs et ralentissent le pas.

5. — La symétrie dans la coupe, la ligne statique qui fatigue, déprime, contriste, enchaîne les muscles, l'uniformité des revers et toutes les bizarreries ornementales.



Costume gris
Dessins noirs
Modifiants rouge-bleu
Gilet vert — *(Jour).*

Figure 7 Eleme Uniform Hooded Windbreaker Jacket, Back Side. Note the Pac-Man "Eating" Reference in the Logo. Source: http://ele.me

Figure 8.1 Meituan Waimai Uniform Short Sleeved Polo Shirt, Front Side. Note the Grey Reflective Stripes From Shoulders to Armpits. Photo by Author.

Figure 8.2 Meituan Waimai Uniform Short Sleeved Polo Shirt, Back Side. Note the Grey Reflective Stripes From Shoulders to Armpits. Photo by Author.

Figure 9 “Microdistrict Guardian” Applet, Showing Real-Time Monitoring of Delivery Workers in Microdistrict. User Interface Mockup by Meituan.