Wild Tides:

Media Infrastructure and Built Space in Post-Financial Crisis Ireland

Patrick Brodie

A Thesis

in

The Mel Hoppenheim School of Cinema

Presented in Partial Fulfillment of the Requirements

For the Degree of

Doctor of Philosophy (Film and Moving Image Studies) at Concordia University

Montréal, Québec, Canada

October 2020

CONCORDIA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared

By: Patrick Brodie

Entitled: Wild Tides: Media Infrastructure and Built Space in Post-Financial Crisis Ireland

and submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy (Film and Moving Image Studies)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

_____Chair
Dr. Lynda Clarke

_____ External Examiner
Dr. Anna McCarthy

_____ External to Program
Dr. Kregg Hetheringon

_____ Examiner
Dr. Emer O'Toole

_____ Examiner
Dr. Charles Acland

_____Thesis Supervisor
Dr. Kay Dickinson

Approved by   _____
                   Dr. Marc Steinberg, Graduate Program Director

October 21, 2020   _____

                   Dr. Annie Gérin, Dean of Faculty

Abstract

Wild Tides: Media Infrastructure and Built Space in Post-Financial Crisis Ireland

Patrick Brodie

Concordia University, 2020

Wild Tides articulates the ways in which the circulatory logics of contemporary capitalism are mapped within the Republic of Ireland (Ireland) through the spatial lens of media industries and their infrastructures. Building upon existing critical research on media infrastructure, financialization, and logistics, the dissertation unpacks the shifting cultural and economic policy logics in Ireland since the global financial crisis of 2007-2008. The effects of this crisis in the country revealed the extent to which Ireland's political, economic, cultural, and environmental futures were tied to the turbulence of global financial markets and trade. The dissertation addresses this post-crisis environment through three case study chapters: 1) creative industries and media production environments around Dublin (film studios, post-production hubs, urban formations, peripheral industries and infrastructures); 2) media and cultural policy across urban and rural spaces (media production funding, tax breaks, transnational agreements, labour conditions); 3) media infrastructures and the technology industry (data centers, tech industry clusters, pro-business planning, environmental discussions).

The dissertation builds on research emphasizing the integral role that infrastructure plays within the social and spatial environments of contemporary life under global capitalism, contributing insights relevant to media industry studies, infrastructure studies, science and technology studies, and human geography. Responding to formative media studies questions as to the cultural role of media within contemporary transnational capitalism and the decline of nation-state governance, the dissertation applies political economy and critical geography to expand understandings of the emplaced role of labour, communities, and landscapes within media and its infrastructures. Drawing on extensive site-specific fieldwork in Ireland, policy and discourse analysis, and an interdisciplinary theoretical grounding, my approach, as well as looking inside the media infrastructures to see how they work, also looks at intensities and

externalities: the edges of governance, where local culture interacts with sites of infrastructural development.

The dissertation finds that the infrastructures of production and circulation of culture and media in Ireland are deeply intertwined via financial and business policy arrangement in the Irish government both before and after the crisis, revealing entanglements of the state and transnational corporations and implications of their complex cooperation on-the-ground. The interlocking operations of the Irish state and transnational corporations effectively naturalize the role of foreign direct investment (FDI) in determining Ireland's spatial, political, cultural, and economic futures. The thesis unpacks these financialized *logics* of corporate and cultural development as they are enacted and lived in an environment of widespread economic austerity and more recent recovery. The concluding chapter of the dissertation unpacks the cultural politics of data centers in Ireland and the role of the tech industry within global climate change. Speaking to the role of media infrastructure in Ireland's present and future, it proposes ways to think about infrastructure that do not play into the shifting tides of the global economy and contribute to ongoing environmental damage.

Acknowledgements

With the last few months of my thesis-writing happening fast and furiously during the isolating Spring and Summer of Covid-19, it is easy to forget that this was a four-plus-year process, involving a great many friends, colleagues, collaborators, and interlocutors. I owe most insights in this thesis to dialogues and exchanges, time spent working through ideas with others. Most importantly, this work would not have been possible without the patient, rigorous guidance of my supervisor, Kay Dickinson. Coming to Montréal and Concordia with a vague project on Ireland and transnational cinema, Kay was instrumental in directing me towards scholarship and approaches far beyond what I had thought possible within our discipline. Beyond that, she has been deeply involved and generous with her time at every stage throughout the process, even while on sabbatical and halfway across the world (perhaps even more so, if I'm being honest). While I had initial doubts about her "streamlined," let's say, timeline for completion, her constant assistance is really what made finishing this thesis in only four years possible. I am so enormously grateful for having the incredible opportunity to learn from her, for her for pushing my research in the direction she did, and for urging me to constantly keep the tensions between labour, space, and capital at the heart of my analysis.

I have also benefitted from the generous feedback offered throughout my PhD from my committee members, Emer O'Toole and Charles Acland. Emer's expert guidance in all things Ireland has been key in directing the thesis through the country's infinitely fascinating cultural corners, and her support has extended far beyond my writing. Charles' feedback has similarly been outrageously generous, and it's hard to measure how much I've benefitted from his level and skillful grasp of media industries and cultural studies histories and methodologies. I would furthermore like to thank Kregg Hetherington and Anna McCarthy for rounding out a really all-star PhD examining committee. Additionally, I must thank my MA supervisors at Columbia University, Rob King and Jane Gaines, who helped provide the foundations of my research theories and methodologies and steered me towards Concordia in the first place.

In the Mel Hoppenheim School of Cinema, I cannot overstate how formative first-year seminars with Kay, Marc Steinberg, and Joshua Neves were for myself and my cohort. Kay, Marc, and Josh's professional support and guidance extended far beyond the seminar room, throughout the duration of the program, and spilling over into many lively post-event chats at N

Bar. Josh's GEM Lab has provided a reliable and stimulating community during my time at Concordia. Masha Salazkina and Haidee Wasson have been incredible scholarly role models as well as steady hands at the wheel during the sometimes-tumultuous experience of doing a PhD at a neoliberal university in times of austerity and crisis, remaining extremely supportive every step of the way. I am also grateful for the continual aid of Maggie Hallam and Ria Rombough, the department's superstar front-line administrators. I must also thank the School of Irish Studies for their financial and other support throughout my degree, offering a second home beyond the film department. Matina Skalkogiannis has been especially helpful and generous with her time and support.

I also want to give a special acknowledgment to my PhD cohort, Lola Rémy, Giuseppe Fidotta, Ylenia Olibet, Mark Barber, Egor Shmonin, and Dragan Batancev, for creating such a supportive and generous scholarly environment. I have valued each of their support and friendship since arriving at Concordia. Finally, to list, in no particular order, other Concordia friends and colleagues: Joaquín Serpe, Patrick Brian Smith, Viviane Saglier, Enrique Fibla Gutierrez, Matthias Mushinski, Sima Kokotović, Nikola Stepić, Weixian Pan, Natalie Greenberg, Darien Sánchez-Nicolas, Fadi AbuNe'meh, Rebecca Holt, Maria Corrigan, Piyusha Chatterjee, Philipp Dominik Keidl, Jacqueline Ristola, Sanaz Sohrabi, Alessandra Renzi, Corina Macdonald, Clemens Apprich, David Leblanc, Sadie Gilker, Derek Garcia, Dasha Vzorov, and a host of others too numerous to list. Each and every one of these people have inspired me.

I also need to acknowledge the support of the Fonds de Recherche Québec – Société et Culture, as I may have starved without the doctoral grant that has supported the final three years of my research. In addition, I would be remiss not to thank Mitacs for a generous stipend, which allowed me to perform crucial fieldwork in Ireland from January-June 2019. While in Ireland, I benefitted from the professional environment and friendships in the Trinity College, Dublin Geography Department, who generously hosted me and provided me with collegial shelter from the rain and wind of the Irish Winter during my fieldwork in the cozy attic of the Museum Building. Phil Lawton's supervision and support were indispensable, and collaborations with Patrick Bresnihan continue to enrich my research. In addition, I'll remember the comradery of Cian O'Callaghan, Maedhbh Nic Lochlainn, Fiona McDermott, Paul O'Neill, and a further host of scholars and artists in Dublin who were so generous as to offer time and insight on numerous occasions. Throughout my fieldwork and conference travel, I have also benefitted from

Table of Contents

List of Figures

Introduction

> The combination of an increased reliance on short-term foreign liquidity sources and an increased reliance on property as an outlet for lending, in the short term, inflated asset bubbles further and, in the medium term, created the perfect storm for one of the most spectacular property and financial crashes in the history of capitalism.
> Sinéad Kelly, "Light Touch Regulation: The Rise and Fall of the Irish Banking Sector"

> A rising tide lifts all boats.
> Seán Lemass, common usage

The economic fortunes of contemporary Ireland are intricately tethered to the fluctuations of global capital.[1] Since the late-1950s, and then especially since the early-1990s, Ireland's increasingly active participation in the capitalist world system created, on the surface, an emergent and remarkably prosperous society characterized by consumer culture, social change, and the swelling presence of multinational business. The 2007-2008 financial crisis, which tore across the markets of much of the world and revealed the degree to which financial globalization and interdependence continues to export risk to the most vulnerable of people and places, left Ireland in a state of disrepair. The high-water marks of finance capital could be seen dotted across all corners of the country, with unfinished housing projects, suburban developments, and other abandoned built environments representing the generalized feelings of shock and hopelessness cutting across the population. Prosperity at the hands of global finance capital and its logistical supply chains, as it turned out, was actually part of an interconnected and deeply extractive system of *erosion*, through which the world's largest owners of capital and a select few native sons and daughters generated enormous amounts of spectacular wealth, only to withdraw it and reveal the empty veneers of growth and success that mask its corrosive liquidity.

Wild Tides performs a study of some of these hidden mechanisms of value creation that undergird the social and economic development logics of the Irish state since this radically altering financial crisis.[2] In the aftermath, capital has re-animated space in Ireland, but the public

---

[1] Although "Ireland" refers to the 32 counties of Ireland, I am in this thesis using Ireland as shorthand for the Republic of Ireland, the 26 counties south of the border with the UK and Northern Ireland which separates the historical "Free State" and the occupied six counties.

[2] The time period on which this thesis focuses is roughly 2007-2019. However, this is not a strict timeline, and I make no contentions of doing "historical" work. Rather, methodologically and conceptually, I gather material based

has largely been deprived the fruits of its vitality. Focusing in particular on the media industries and their infrastructures of production and circulation, as well as the public imaginations and popular discourses around media and culture, this dissertation locates the place of media within the spatial and circulatory logics of capitalism as its material operations cut across the landscape of contemporary Ireland. Rather than focusing on the work of media producers in understanding and reflecting on these phenomena, as has typically been the case for film and media studies work on finance, infrastructure, and logistics, this dissertation looks at built spaces and the infrastructures of circulation themselves, and the various projects, relations, and tensions that arise from their development across the country. How the social and cultural fabric of communities have responded to the eventful waves of global capital can be seen through focused engagements with various sites of struggle that characterize the political environment of post-financial crisis and recovery-era Ireland. The state continues to gamble the country's, and by extension its media and creative industries', futures on the foreign direct investment (FDI)-driven dreams of finance, global media, and big tech.[3] This thesis confronts the veracity of these pro-growth logics and arguments amongst their effects on workers, communities, and the natural environment. In doing so, I uncover both the false promises and potentially alternative futures offered by more textured engagements with where capital "'hits the ground' and shapes conditions of everyday life, always working in consonance or conflict with the active role of space and multifarious resistances in guiding and molding capital's operations" (Mezzadra and Neilson 2019, 22). pervasive

Wild Tides expands on previous understandings of media and globalization in Ireland by proposing a materialist focus on the nexus of finance, media, and technological infrastructure. Within media studies, attention has shifted to the material infrastructures of supposedly immaterial media, an emphasis which dovetails with popular drives towards greater transparency at the level of state and corporate governance (Larkin 2008; Mattern 2017b; Parks 2015a; Parks and Starosielski 2015; Starosielski 2015). Infrastructures are the sites within which powers—

---

on moments, cases, and phenomena, gathered through fieldwork, policy research, discourse analysis, and other materials, that appear significant *within* this time frame in terms of media infrastructure and the built environment.
[3] A terminological note: throughout this dissertation, I often use "FDI" as a broad term describing inward investment at a large scale (e.g. multinationals), which is how the Industrial Development Authority (IDA) and other state and semi-state bodies use it (i.e. "FDI companies"). Such imprecise usage demonstrates the ubiquity and unquestioning commitment to the strategy, obviously painting over power relations and geographical distinctions between its various sources. Where possible and relevant, I attend to the nuances of power and distinguish between this reductive definition of FDI and other forms of foreign investment, involvement, and intervention.

economic, political, social, cultural—become encoded, and imaginaries of certain kinds of existence are embedded. Scholars such as Brian Larkin (2008, 2013), Lisa Parks (2015a, 2015b), and Nicole Starosielski (2015) have focused on these entanglements in order to complicate fixed understandings of how media circulates in given milieus, emphasizing the specificity of formal and informal infrastructures as they are experienced across diverse spaces on the ground. My project builds on these understandings of infrastructure to articulate the ways in which finance and logistics play a role in these everyday exchanges, as these particular territorial logics come to permeate life under neoliberal capitalism.

"A Rising Tide Lifts All Boats"

While Ireland's textured colonial and postcolonial histories are beyond the scope of this thesis, it is important to remember the relationship Ireland, as a developing nation, had to the financializing global economy in the early stages of its liberalization from the late-1950s through the 1980s. Ireland, after emerging from an independence struggle and a bitter civil war, had remained neutral during World War II under the rule of Eamon de Valera's Fianna Fáil. As the story goes, De Valera's Ireland was deeply protectionist. However, one of the primary figures in his governments through the 1950s was fellow former revolutionary Seán Lemass. Serving as the Minister for Industry and Commerce for several tenures, most influentially prior to his election as Taoiseach from 1959-1966, Lemass' economic philosophy espoused a cautious and experimental liberalism, predicated on mostly US investment.[4] Lemass oversaw the establishment of the "world's first free trade zone" in Shannon, and as Taoiseach advocated strongly for Ireland's admission to the European Economic Community (not achieved until he left office in 1971). He also, significantly for this thesis, presided over the establishment of Ardmore Studios in County Wicklow in 1958, partially funded by US interests to facilitate "Hollywood-style" film production in the Dublin region. Chapter 1 will unpack the intricacies of these liberalization measures and their implications for contemporary Ireland and its media infrastructures. But, suffice to say, these measures under Lemass formed the template for visions of how Ireland could be "opened up" for business over the next decades, and were profoundly

---

[4] It should be noted, this is an "origin story" with a popular appeal but is dubious in the historiography. I reproduce it here for its metaphorical significance within the material enactment of the state's development programs. See McCabe 2020.

influential for liberalization measures as implemented by postcolonial and developmental nation-states worldwide, including for much more spectacular experiments with export-processing zones implemented in China and elsewhere in the Global South (see Easterling 2014). This early liberalization period, from Lemass to the Celtic Tiger "boom" in the 1990s, would firmly latch Ireland's fortunes to the rolling waves of the global economy, and these ties would only tighten as the state implemented a series of measures which would make this the structural condition of Ireland's economic strategies. Lemass' famous dictum, "a rising tide lifts all boats," often mistakenly attributed to John F. Kennedy, can be considered an ur-logic for economic common-sense in Ireland. Today, it is a phrase uttered both ironically and with complete sincerity in Ireland, but always present as a metaphor for how the country's prosperity can be measured along with the tides of naturalized national and global economies.

What is important, for this dissertation, about tracing Irish (neo)liberalization through this period is not what Lemass said, nor even the specific mechanisms that he encouraged and enacted while in power. Rather, it pertains to a few specific and enduring resonances: 1) the metaphorical significance of Lemass' economic philosophy across history, to the degree that "a rising tide lifts all boats" will today be uttered by a film studio CEO advocating for a growing industry or a freelance worker shrugging off a recent failure at a café; 2) the establishment of Ardmore during his tenure as Minister for Industry and Commerce, setting the stage for future offshoring of media productions; and 3) the emplacement and facilitation of a system of political and economic liberalism which helped set in motion a pervasive and prevailing series of economic naturalizations. This refers to not only the presence and role of FDI in shaping the political and economic landscape of the country, but also the subjugation of Irish culture, space, and labour to the "turbulent circulations" of the global market, its imperial mechanisms, and the epistemologies of value extraction which characterize the "financialization of everything" (Harvey 2005).

As a part of, and in response to, the expansion of neoliberal economic measures in Europe and elsewhere throughout the 1970s and 1980s, the built environment and infrastructure of the country "modernized" and rapidly transformed across the period, from 1993-2007, that came to be known as the "Celtic Tiger." The development of an outwardly strong, FDI-driven economy in Ireland has encouraged foreign investment and constituted interrelated projects from the financial, media, and tech sectors. Strategic infrastructural investment through these

processes have effectively naturalized the place of foreign capital across Irish economic, social, cultural, and political life. The proliferation of media production and media infrastructure in the country through the Celtic Tiger and aftermath has coincided with the growth of a financialized and tech-based economy reliant upon the investment of large transnational corporations. Since the 2007-2008 financial crisis, which brought Celtic Tiger growth to a screeching halt, these pro-FDI mechanisms have only intensified.

Speculative property and urban development, buttressing these pro-FDI policies with the help of state zoning and tax incentives, were central to the 2007-2008 financial crisis. When the property bubble burst and Ireland was thrown into economic turmoil, as will be detailed in Chapter 1, the state doubled down on neoliberal measures to generate a recovery economy centered once again on FDI—and privatization—across most sectors. Largely due to "recommendations" imposed by the bailout conditions of the "troika"—the International Monetary Fund (IMF), European Commission, and European Central Bank, who implemented a loan and austerity program based on so-called fiscal discipline designed to pull Ireland out of debt—the country was compelled to slash public jobs and subsidies, privatize assets, and enter what was essentially a structural adjustment program by another name (see Coulter 2013). In this environment, policies around media production moved from initiatives designed to facilitate and grow an indigenous production culture to a rhetoric of jobs and investment-based development intended to attract and facilitate the operations of foreign capital, in many ways privatizing the country's cultural infrastructures. Complex operations across public, private, and hybrid institutions and are responsible for profound transformations of space, capital, and sovereignty through the Irish media industries and their surrounding activities, intricately tied to finance and big tech. By confronting the usefulness of neoliberalism as a catch-all term for these sorts of measures both in Ireland and imposed from abroad, before and after the crisis, I will tease out the specificities of Irish neoliberal development in particular relation to post-crisis re-financialization emerging from the austerity economy. Within a lineage from Ireland's early deregulated zoning mechanisms like the Shannon Free Zone (SFZ) and the International Financial Services Center (IFSC), I will introduce how Ireland's progressive "free zoning" from its institution as sites for financial, media, and tech industry offshoring have contributed to the material conditions of Ireland at present and its geopolitical (and geo-economic) positioning within global trade flows. In doing so, I will articulate the ways in which "logistical" governance, a logic which operates

across state and corporate partnerships which optimizes the production of value across global supply chains (see Cowen 2014), has become a profoundly transformative presence and actor across the Irish landscape.

In film and media studies, particularly in the Irish context, globalization has often led scholars to focus on the ways in which representations of the nation have changed in relation to emergent social, cultural, economic, and political realities (Barton 2004; Crosson 2003; Rockett, Gibbons, and Hill 1987; McLoone 2000, 2008; Pettitt 2000). While we can certainly question the foundation of a discipline on a territorial surface inscribed by imagined notions of unified cultural and sovereign identities (see Anderson 1983), the focus on a national space is not always a primary shortcoming, because it is through such space that a state *thinks* and conjures certain conditions into being (democratically or not). Changes in media policy and legislation are often driven by transnational economies of production and circulation, and while this can be seen in cultural products, it must also be observed through textured political economy. National policy and industrial growth are dictated by global trends, transnational (often EU) intervention, and the availability and attraction of private finance. As Michael Hardt and Antonio Negri (2000), among many others, assert, nation-state sovereignty has been largely supplanted by the transnational, roving sovereignty of de-territorialized capital. But this deterritorialization exists and is experienced differentially across nation, class, race, gender, sexuality, ability, and other spectra. And in spite of such deterritorialization, nation-states have not disappeared—their role in governing populations and regulating capital has merely changed (Mezzadra and Neilson 2019). Framing a national space within transnational flows of capital and media, in relation both to state policy and plans as well as those built supranationally across structures like the EU, and attuned to broader cultural changes associated with globalization, we can see how culture, community, and macroeconomic units are formed in a globalized landscape in relation to public and private regulatory structures that seem to refute the idea of nation itself.

The largely turbulent shifts associated with globalization and neoliberalism have brought mixed blessings to Ireland. The Celtic Tiger, memorably dramatized by Lenny Abrahamson's 2007 television series *Prosperity* on national broadcaster RTÉ, intensified social and economic inequality within what was revealed in 2007-2008 to be largely vacuous capital growth. Since the 1990s, an increasing diversity of population and participation in the world economic system has led to a good deal of prosperity, during which Ireland has catapulted itself into being one of

the wealthiest nation-states by GDP per capita in the world, even in spite of years of downturn and stagnation following the financial crisis. It has also seen major progression on social issues, as the long shadow of the Catholic Church has begun to wane in Irish life, perhaps most recently and encouragingly represented by the passing of the 34th Amendment allowing same-sex marriage (2015) and the repeal of the 8th Amendment prohibiting abortion (2018), both by popular referendum. However, the underside of these changes has been increasing structural inequality, housing shortages, the privatization of services, the racialized oppression of the direct provision system, reckoning with the past and present abuses of the Catholic Church, and ongoing and often conservative cultural negotiations about what it means to be "Irish" after globalization. Until recently (as will be discussed in the Conclusion), the progressive values of much of the Irish populace have not been represented through the electoral process, with the center-right parties Fine Gael and Fianna Fáil dominating government. Protest movements have tended to be local in character. Regressive politics can still be found both in the margins and the mainstream, and many citizens who feel left out or abandoned by the state's Dublin-centric recovery-era prosperity engage in affective politics which would not be out of place in the era of right wing populisms in the rest of the EU and the US. The place of the occupied six counties in the north within the Irish state narrative remains unresolved, with periodic talks of a border poll demonstrating the degree to which the *national* question itself, like the uneven modernity that has characterized the postcolonial Irish state, has never been fully contended with.

It is within the unfinished and constantly evolving cultural politics of Ireland that I will be analyzing the role of media and its infrastructures in the post-financial crisis era. Political change (if not progression) has not prevented the Irish state from capitalizing on the essentialisms and commodified versions of "Ireland" as a product which has been the straw-person argument for many cultural critics, especially in film and media studies (Barton 2004; Pettitt 2000). As Mark McGovern has noticed in his study of Irish pubs in England (2002), the branded figures of Ireland and the Irish are persistent and powerful visions of consumer culture in many parts of the world. Kevin J. James notices these inward-facing commodification logics in Irish tourism and how places both attract visitors as well as how locals "perform" certain cultural identities for them (2014). But the Irish state also extends this "soft power" (Nye 1990) into how it operates and attracts investment in general, branding the state, citizens, and space of Ireland as ideal resources for the extraction of value. In general, the Irish state joins with the

private sector in peddling an ongoing series of naturalizations with regards to so-called "uneven development" across Irish space, culture, and labour (Chapter 1), whether by its unquestioning commitment to financial logics in urban development (Chapter 2), its treatment of Irish labour as a "resource" for international media production (Chapter 3), or the artificial generation of a "business climate" suitable to the environmentally destructive technological infrastructures of the tech industry (Chapter 4). Throughout the language, policy, and planning materials deployed to support such projects, these conditions are posed as *natural* elements of everyday existence in post-financial crisis Ireland, and it is unclear the degree to which this is a strategy for manufacturing consent or is simply such a pervasive set of arguments that its logics slip into public life and discourse unnoticed. What we can see then, in Ireland, is a persistent and ongoing naturalization of the FDI-driven logics of neoliberalism across the country's public social, political, and cultural discourses.

Chapter Breakdown

Each chapter of this dissertation is organized around a particular set of phenomena and case studies which illustrate and confront its core themes. Each, in some way, concludes that, in post-financial crisis Ireland, the ongoing naturalization of extractive FDI and transnational corporations facilitates the operations of media industry and infrastructure projects, policies, and politics. However, each addresses different aspects of the core themes in novel ways in response to the communities, frictions, and conditions encountered on the ground during my research and sited fieldwork in Ireland.

Chapter 1, "Turbulent Waters: Ireland and the World Economy," traces the histories and theoretical threads that run through the duration of this thesis. Picking out a series of interconnected conditions and phenomena that are shaping contemporary Ireland—neoliberal financialization, the media and creative industries, technological infrastructure, and logistics and extraction—this chapter positions the dissertation's case studies within a diverse existing set of literature. It also, more crucially, argues that transdisciplinary scholarship is necessary to understand the complexities of the spatial and economic entanglements of Ireland's media environments and their politics. Beginning by connecting early experiments with liberalization in the country, and the de-regulated zoning mechanisms like the SFZ and IFSC that carry through to today, the chapter reveals the political implications of financialization through the 1980s-

1990s for the post-financial crisis shifts identified throughout the thesis. Seeing these logics reflected through literature on the media and creative industries and globalization, I then unravel how they extend into the built environment through "media infrastructure" like film studios, broadband networks, and data centers. At this point, I contend that the "ambient" circulations facilitated by infrastructure represent a point at which to identify changes in governance where the public and the private collapse within infrastructure and its management, demonstrating the prevalence of "logistical" forms of rule in new technological systems, particularly within data centers and other technological infrastructures.

Chapter 2, entitled "Ghostly Currents: Crisis, Ruin, and the Creative Industries," identifies the financialized logics at work within the built environment of contemporary Dublin through direct encounters with the creative and media industries and the projects designed to support them. The Irish financial crisis was deeply tied up in property markets, and left swathes of half-built and unfinished housing and mixed-use developments across the country. These ruins of finance capital became a major cultural touchstone and public point of negotiation around feelings of guilt and hopelessness post-crisis. Within this aftermath, the Irish state established a semi-state organization called the National Asset Management Agency (NAMA). Essentially acting as a for-profit asset management company at the behest of the Irish state, the agency absorbed millions of Euro in toxic real estate assets across the country in order to make them profitable once more, whether by selling them, developing them themselves, or some combination of the two. A major element of this strategy was the continued development of the Dublin Docklands, a former port area which houses the IFSC, an offshore financial services hub with a formerly exceptional 10% corporate tax rate, and is now marked by several Strategic Development Zones (SDZs), or areas demarcated for private development with de-regulated planning rules. The Docklands is now a "creative hub" and is home to the offices of many of the major tech multinationals located in Ireland, including Facebook, Google, and Airbnb. The technocratic asset management strategy represented by NAMA, informed by recommendations from the "troika" and neoliberal common-sense solutions to crisis, foreclosed many alternative uses of space in the capital and any imaginations of different futures to be built out of the crisis. Navigating the ways in which creative industries-led growth permeates the city, particularly through the visual media of planning and development and the capture of creative labour through spatial planning and policy, I unpack the place of media within the logics of neoliberal recovery

and deep imbrications with space and culture by emphasizing the invisible circulations of finance and the spectacular experience of the "creative city." In discussing the ways in which affect, labour, and contingencies are captured and contained within the built environment of the "creative city," the chapter describes just how rampantly the violence of finance capital circulates through the living and ruined structures across the city and the multiplicitous plans, actors, and organizations responsible for managing the material frictions it encounters.

Building on the intersection of space and policy in Chapter 2, the third chapter, called "Waves of Austerity: Media Sovereignty, Policy, and Labour," articulates the ways in which media policy is *infrastructural* to the circulation of global capital through the country and its modes of extracting value from space and labour. Looking at how the policy of the Irish Film Board (IFB)/Screen Ireland (SI) post-financial crisis has become increasingly profit-orientated as the public remit of "cultural goods" has been sidelined, this chapter unravels the role of the state in managing its media industries in the face of media globalization. While many approaches to global media tend to focus on de-territorialization and the declining role of nation-states within transnational formations, I argue that the state is crucial to how private capital comes to colonize the logics of public good in given places, in this case through culture. However, while this complicates ideas of media sovereignty, my primary focus turns from policy to labour—that is, to how workers across the country feel and relate to top-down media policies—utilizing information gathered from interviews and informal conversations with a range of media workers and professionals between 2017-2019. On a global level, the popular Section 481 tax incentive has brought in large-scale media productions from all over the world, and the state puts in place infrastructural conditions for them to operate smoothly. But most workers do not directly benefit, despite arguments about ripple and spillover effects. The landscape of media work in Ireland is characterized by precarity and contract-to-contract work, within which most media workers spend most of their time gig to gig rather than in the stable employment promised by FDI-driven media policy. The Irish state, within these policies, treats workers as a resource for value extraction, much like they tend to treat space as agnostic to whichever company is currently paying to use it. This positioning of workers as resources through ideas of "talent" and "skills" contributes to a naturalization of precarity at the whims of transnational investment.

Bringing together the creative industries, media circulation, and finally the place of big tech corporations within these complex ecologies, Chapter 4, "Storm Clouds: Data Centers and

the Cultural Logics of Climate Extraction," builds on debates forwarded in the first three chapters and identifies the convergence of a variety of state and corporate logics within a single infrastructure: data centers. These unique private infrastructures have been at the forefront of planning and economic development since the financial crisis, coinciding with big tech's increasing presence within the Irish economy and its public and cultural life. Representing a fulcrum of public and private partnership, where the state has bent over backwards to ensure the proper infrastructure, planning provisions, technical labour, and business environment to facilitate these massive and power-hungry facilities, data centers represent the coalescing of various logics at the heart of Irish spatial development in the post-crisis and recovery era. One of the primary arguments for the "boom" in data centers has centered around the "cool climate" in Ireland, stating that these weather conditions reduce the (astronomical) cooling costs. However, this "cool" climate is secondary to the amenable "business climate" of the country, which frequently employs cultural rhetorics to naturalize the role of big tech companies in the infrastructural provision of not only capital and connectivity but future care through industrial employment. However, these faulty assumptions gloss over the fact that these facilities employ very few people, put enormous strain on the energy grid, and rely on a tax environment which allows them to give very little back to the public, as territorial technologies of "logistical media" ensuring smooth flow of data and capital across the world. Through this array of conditions, these companies and their partners in the state engage in what I call "climate extraction": a coalescing logic of extraction which can only be achieved in partnership with the Irish state's persistent association of the country's space and labour with "greenness" and the naturalization of the infrastructural conditions of an FDI-driven economy tethered to global markets.

Methodology

In this research, I am attempting to come to grips with how media features (or centers) within the circulatory dynamics of capitalism, which will be unpacked in more detail in Chapter 1. Circulation functions through the operational and infrastructural conduits built (physically or legally) to facilitate it—whether 1) the built environment of the "creative city," 2) the arcane and FDI-hungry logics of film and media policy, or 3) the server racks and cable networks of the digital economy (which requires enormous amounts of media content across its various scales and sites of operation). Each of these three broad descriptions form the bases of my case study

chapters (Chapters 2-4). Researching infrastructure means devoting ample time to the "boring" chores of analyzing government documents, policy briefs, reports, corporate strategies, court cases, promotional materials, and the "grey media" that characterize the everyday work of politics and business (Ballestero 2019; Bowker and Star 1999; Opaque Media: A Workshop 2017; Star 1999), paying close attention to the power hierarchies expressed within, visualized, and reproduced by their future-driven language, plans, and images. Hours were spent combing over industry reports, plans and designs, policy documents, newspaper articles, and state and corporate organizations' websites in order to get a broad grasp of the logics at play in Irish media industries and infrastructure, and how they are operationalized. Contained within these documents are the futures that the state and capital attempt to implement, imagining futures rife with unseen and inconvenient inequalities and violence.

However, these plans are inevitably disrupted by the messiness of life and experience, and state power and capital mobilize to smooth these out, as financialization and the logistical organization of the global economy means that such plans are used to "grease the wheels" for future operations.[5] These top-down phenomena are experienced very differently on the ground, and such conditions enrich or disrupt capital's operations. As researchers, it is our responsibility to take care through these diverse experiences rather than glossing them over by focusing our gaze too strongly on the speculative plans of the state and capital. Thus, this dissertation utilizes site-specific fieldwork and interviews performed intermittently starting in Summer 2017 and culminating in a five-month visiting researcher position in the Geography Department at Trinity College, Dublin in Winter 2019. Fieldwork is a useful method for muckraking and mapping out stakeholders in transnational environments, even if it cannot answer for all of the nuances of subjectivity, the messiness of politics, nor the ways in which value is extracted from emplaced environments. Echoing Lisa Parks, Lindsay Palmer, and Daniel Grinberg's reflections on media studies fieldwork, it "coincides with an interest in understanding how material conditions, location, *difference*, and *power hierarchies* function as part of media cultures" (2017). But the pictures that we paint for ourselves are necessarily filtered through theoretical and methodological tools at our disposal, documents we have time to study and sites we can feasibly visit, and our positions as researchers, risking the reproduction of such hierarchies in our very endeavors. This leaves us with the task of weaving together theories, documents, discourses, and

---

[5] For this incredible logistical phrase, I owe gratitude to my supervisor Kay Dickinson.

lived experiences as delicately and ethically as we can. There is always a politics to how these things are brought together, what is represented, and what is left dangling outside of our study.

Using a broadly interdisciplinary theoretical and methodological approach spanning media studies, anthropology, geography, and science and technology studies, the hybrid methodologies employed across this thesis best articulate the lived experiences of these large-scale and top-down corporate and governmental projects by workers, communities, and environments and their operations at a variety of scales. Turbulence, the choppy waves and shifting tides of the world and its economies, must always be managed for capital to operate and extract value. Finance, infrastructure, and logistics are ways in which to exert some manner of control over a dispersed and often unmanageable assemblage of global factors across contexts, and their logics have proved robust for states and corporations attempting to govern these flows to the best of their abilities. However, in the process, as Chapter 1 will argue, their entanglements have become naturalized across both top-down discourses and in many other social and cultural contexts. Media industries and their infrastructures are more and more at the forefront of how the future of global economies will function, especially through the tech industries and their re-organization of economies across the world. The horizontal integration of media and technology, across diverse supply chains and contexts of circulation, demonstrate the degree to which media conglomeration and technological development will organize and disorganize across a diversity of global sites, aggregating and disaggregating along with the turbulence of global systems.

The layering and entanglements of these various fields are difficult to keep track of both spatially and temporally, especially when the dominant stakeholders are multinational corporations, state/semi-state bodies, or their ideological machinery. Media infrastructures are hard to study, and strategically so, often contained within "black boxes" shielded from scrutiny. In public-facing materials, states and corporations are always pushing their considerations into the future by building "global" arguments in the present, layering their infrastructure on top of convenient physical and localized cultural histories. The infrastructures of media and big tech, from film studios to data centers, seem purpose-built for some other future purpose, modular, constructed on spaces of former industry, obsolescence and ruin hard coded into their territorial DNA and the corporate visions they represent. Film studios occupy former manufacturing zones; data centers sit on former grazing pastures. In the "boring" plans and images for these infrastructures, we can see how the visual media of planning and development demonstrate

financialized and *logistical* ways of seeing and visualizing the future. They perform several different kinds of erasure, all at once: the erasure of existing communities and ways of being in these spaces; the augmentation of spatial histories and ruins with capitalized futures; and finally, the removal of the labour that goes into these sorts of plans, whether in real or virtual space. Taking seriously the visual media of planning—whether plastered on the side of construction hoarding, projected in cutouts at conferences and boardrooms, or within the offices of designers and marketing teams themselves—is a crucial part of any methodology that accounts for their particular modes of seeing and governance. If finance and logistics, as dominant forms of circulation across the global landscape, are shaping the networks within which nation-states exist, we need to use all tools at our disposal to understand how these forms of circulation come into being, operate, and collide with the state and diverse territories on the ground.

But the spectacular presence and future dreams of media infrastructure also necessitate a sustained and measured engagement with the diverse lived experiences of media infrastructure. Their plans and visualizations direct "eventful" attention away from the everydayness of precarity and abandonment of people on the outside of them (see Povinelli 2011). Rather than seeing these as separate objects of study, however, throughout this thesis I have tried to identify the tensions and entanglements occurring across these sites and scales, which are often not as antagonistic as you would expect. Aihwa Ong addresses the often ambivalent forces that researchers must carefully study, choosing "to examine the everyday effects of transnationality in terms of the tensions between capital and state power because there is no other field of force for understanding the logics of cultural change" (2000, 23). The bluntness of her advocacy for this approach is inspiring: when it comes down to it, the state and capital—and their logics of value and governance—dictate our lives in more ways than we care to admit, even as we live through various vectors of precarity, whether in terms of jobs, racialization, abandonment, or environmental collapse. When these structures are transnational in scope, how exactly do we then relate to them, whether in acquiescence or struggle?

But just as state and corporate power are black-boxed and hard to access, local politics are equally recalcitrant and hard to grasp, making it especially difficult to follow strands between these levels of operation. In Ireland as elsewhere, local culture and politics are crucial to understanding how media and tech companies generate consent or dissent for their territorial projects. Thus, both *scale* and *place* are central to research into media infrastructure projects.

Powerful corporations are enormously scalable (see Vonderau 2019), crunching place into their metrics, incorporating friction into their very way of generating and extracting value (see Tsing 2005). However, as Anna Tsing argues, studies of global capital have often failed to account for the structural diversity of transnational economic systems, and we must better account for the "bigness" of this operation across different scales: "the bigness of capitalism is an imaginative project for all its participants, and figures are the elements that bring the field to life" (2009, 153). Much of this thesis focuses on the machinations and places where this big capital "hits the ground" (Mezzadra and Neilson 2017) in Ireland—for example, in Athenry, County Galway, where a proposed €850 million Apple data center was supported by a popular movement of thousands called "Athenry for Apple" but stopped by a small minority of objectors on environmental grounds; or in west Kerry, where Disney filmed portions of *Star Wars: The Force Awakens* (J.J. Abrams, 2015) and *The Last Jedi* (Rian Johnson, 2017), shooting on UNESCO World Heritage Site Skellig Michael before international pressure forced the IFB to revoke their permission, while still allowing them to film in disconnected rural locations across west Kerry. Local infrastructural conditions are overhauled by such moments of collision, whether in terms of social infrastructures (like civil society, in the case of Athenry) or physical infrastructures (the film crew for *Star Wars* had to build their own modular, temporary access roads across muddy fields to get to the treacherous and inaccessible coastal sites in west Kerry (Fig. 1)).

Fig. 1: Infrastructure for *Star Wars'* film set on Ceann Sibeál, Ballyferriter, County Kerry (source: radiokerrynews 2017)

But like Mezzadra and Neilson articulate, it is facile to understand these places as simply where capital "hits the ground," even if this is a useful heuristic. Rather, we must see them as sites through which to "move from the subterranean to the surface level and back again to show how the systemic edge is always caught in a dense fabric of frictions, conflicts, and resistances" (2019, 138). In doing so, we can understand the entanglements on-the-ground that drive such projects and then also disrupt, challenge, or support them. These are not incursions but *entanglements* with social, political, economic, cultural, and environmental conditions all at once. As Ravi Sundaram argues, "infrastructures are at the center of media circulation by way of entangling people, objects, knowledges, and technologies" (2015, S299). Workers operating within these entanglements, while actors within infrastructural arrangements, are often thrust together by these very same impersonal arrangements. In one day I spent doing interviews in Limerick city, I was shepherded around to various arts spaces, coffee shops, bars, and organizations, as I followed the threads of local actors within the media and arts scene, all tenuously interconnected by the infrastructural investments (and lack of investments) in Limerick's creative industries that I was trying to unravel. In a day spent in Athenry, I was similarly directed from storefront to storefront, and even to someone's front door in the town center, pointed to new and various people and organizations involved in the town's civil society with each additional meeting. I still occasionally receive Facebook messages from Athenry for Apple members I met or was put in touch with that day, who often ask me to advocate for future data center projects in Athenry via my social networks. While giving a lecture on fieldwork encounters to undergraduate Geography students at Trinity, I was describing my site visits to the as-yet undeveloped Poolbeg SDZ at the far eastern end of the Dublin Docklands, where I was struck by a chaotic smattering of concrete blocks on the road between the port container stacks and an empty lot. A student from neighboring Ringsend, raising her hand, told me that for years it had been an Irish Traveller site, an extremely marginalized community in Ireland, and these blocks were likely placed to prevent their occupation of this frontier for Dublin re-development and to enforce state "re-settlement" of the community. When meeting with a data center developer in Newtownmountkennedy in County Wicklow, our conversation was interrupted by a phone call from a former state official with whom he was working. The data center developer handed me the phone, and the former official informed me that the country was run by a cabal of powerful, wealthy people who also controlled RTÉ (the national broadcaster) and were insulated

from democratic accountability by controlling public opinion through the national media. Throughout my research, and in the many years returning to Ireland prior to embarking on this project, I have found that word-of-mouth, community networks, and general presence have been more valuable and generative than expertise. Dozens of encounters never made it into these pages, but nonetheless inform a robust background of my overall approach and understanding. There are always kernels of truth and insight to be gleaned from such accidental encounters and entangled experiences of place, capital, and community.

Film and media studies' methodological and conceptual training has more often favored historical, discourse, and textual analysis than these sorts of on-the-ground engagement with sites, communities, and technologies. Susan Leigh Star influentially theorizes the diverse practices required to perform ethnographies of infrastructures and "the imbrication of infrastructure and human organization" (1999, 379). But trained as a film and media scholar, with secondary and tenuous grounding in geography, I am in fact no ethnographer. I take seriously sustained engagements with social and cultural specificities, in order to better resist the often facile temptation to "scale up" from the particularities of local politics, in the process smoothing out difference. Parks, Palmer, and Grinberg's insights on media studies fieldwork has been useful, if not comprehensive, to my understanding of these methodologies:

> our fieldwork does not aspire to or adhere to all of the central tenets of a classically defined ethnography: immersion in spaces, mastery of languages, establishment of cultural competency, longitudinal study, participant observation, and 'thick description.' As media scholars we are primarily interested in understanding how diverse communities in the world think about, organize, and use media technologies to support their interests. (2017)

However, there is always more to the picture, and panoramic views can sometimes foreclose the real and productive messiness of life and labour under financial and supply chain capitalism. Of course, I cannot speak Irish to people in the Gaeltachts (Irish-speaking regions) in west Kerry and Galway, nor would I ever purport to understand the granularities of context in a way that only someone who has lived within that community for years possibly could. Neither do I know the rhythms, the relations, the everyday feeling of life in Athenry. I appreciate Parks, Palmer, and Grinberg's insights, especially in terms of their approach to media infrastructures as often quite *rural* spatial technologies in their distribution and necessity to operate across vast distances of

the world (which is not nearly as urbanized as the proportions of research within the humanities would seem to tell us). I also have found useful the kind of liberty it provides me, as a trainee researcher, to do fieldwork without spending years performing longitudinal ethnographic study. However, through the film and media studies lens, the concerted focus on "media" as an organizational factor risks reproducing some of the troubling things about the "new materialisms" which put too much emphasis on the "object," the media technologies as they organize and reflect politics, as the issue of analysis (see Bennett 2009; Peters 2015). The concrete entanglements, the weird things that happen during encounters between people, infrastructure, and the environment, cannot actually be understood without scratching that social surface presented upon a first fieldwork encounter, which is typically felt initially only in relation to the broader system within which you as a researcher participate—that is, the power relation of the academy—and within which something like "infrastructure" operates from a largely top-down perspective. More sustained time, and engagement with the rhythms and contours of a place, need to be a part of this methodology, even if we are more concerned about specific social effects in relation to more global technologies and movements.

To complicate this, somehow managing to perform both sustained engagement as well as dealing with the practical limitations of humanities-based media studies research, raises more tricky methodological problems. What do you do with informal, intangible moments, the kind that pervade this thesis? Speaking with a colleague about ethnographic research, I raised this issue in terms of what we can write and what we cannot, and what is ethical to write and what is not? He told me that we have what is on the record—literally, what you record on your tape recorder—and that is all. But my research practice found this not to be true. So much gets left out of this "ethnographic record." At the same time, how do you use reflective, observational insights from fieldwork without feeding into critiques about the rigor of our field? How to choose what goes *on* the record—in accordance with interlocuters, of course—when the record is always, necessarily, incomplete? Or, even more broadly, how to actually *do* ethnographic research with the tools we have and the ways we have of doing it?

In her study of energy politics in the Orkney Islands in northern Scotland, Laura Watts deals with similar assemblages of people and things in looking at the speculative financial gazes that are focused on Orkney due to its environmental resources (a testbed for tidal power), with tech investors, European and UK politicians, and local communities operating across the various

scales of Orkney's social, political, and environmental life. While sharing an office waiting room with a Silicon Valley entrepreneur looking to invest in Orkney-generated energy, she describes events with the following qualification:

> this is not precisely how it happened, not precisely how it was said, because all empirical research can only record so much. Stuff happens off camera, the pen can only move so fast, you can only sit in one chair, not all the chairs in all the rooms. This is good, honest objectivity because it has good, honest limits…What you read has a *partial perspective*, as theorist of science and technology Donna Haraway long ago named it. Its knowledge is situated, embodied, in relation to others, because the knowing that I am after, what I want to tell you about and work with, has no laboratory walls nor well-defined variables. It is a communal endeavor, and the social world is always a right *mess*, to paraphrase sociologist John Law…This story honors that rich tangle by looking at it with both eyes, with a *split vision*, and finding different strands to follow. (2018, 5-6)

This kind of research and trust obviously comes with spending upwards of a decade returning to the same case study, community, friends, colleagues, and collaborators. But it seems to me a more generative way of drawing what's "offscreen" into the kind of research we do in film and media studies. The strands of political entanglements in Ireland require focus on these "weird" (a word that I and other researchers found useful across my research) and perhaps "wild" worlds that occur at the points where corporate infrastructure "hits the ground," in doing so creating unruly and conceptually disruptive places of encounter. Strange and uncanny entanglements occur in meetings with local communities and their embedded and complex political lives and affects. It is sketchy, of course, but necessarily so, because that is how experience is, and throughout this dissertation I have tried to preserve the character of these interactions, as to lock them into place would be to reproduce the governing impulse to *control* and *manage*. Everyday life is wiggly, and infrastructures and governance struggle to keep up, to make everyday worlds knowable, legible, and manageable. Global turbulence may be the norm, but everyday life has always been uncontainable and unmanageable. Infrastructures, by their definition, *circulate* things; governance *manages* how this happens. But people do not live and move according to fixed structures. Rather, in Ireland, strange encounters and unexpected connections abound, and this should excite rather than limit our approaches.

Even if this weirdness remains mostly offscreen of our written research, or even an alternative thinking that haunts the background of analysis, we can perhaps take a cue from Jack Halberstam and Tavia Nyong'o in their reclamation of "wildness" as a generative political force (2018). While the title of this thesis, "Wild Tides," associates the turbulence of global markets with the cultural and environmental politics of Ireland and climate change, I do so in order to comment on the persistence of colonial optics in contemporary Irish development, as the "wild" refers to "a colonial division of the world into the modernizing and the extractive zones" (455). Ireland, as a post-colony,[6] is often seen through colonial imaginations and frontier-logics of its rural, "wild" backwardness, a place of pre-colonial heritage and colonial extraction, and this is oftentimes peddled by the Irish state itself. This is prevalent recently in the "Wild Atlantic Way" tourist campaign, which has branded the west of Ireland as a wild, authentic landscape and culture to *experience* by driving up and down its coastal road network, supporting local businesses and absorbing culture along the way. It has been very successful in drawing tourists and business to the Atlantic coast. But it also, in clearly non-reflexive ways, by treating the Atlantic coastline as a "resource" (Government of Ireland 2018b, 103), commodifies the people and landscape via regressive visions of rurality and authenticity which, as I will argue throughout this thesis, massively simplify the complex dynamics of globalization through the space of Ireland. Uneven development across Ireland does not mean that underdeveloped regions are disempowered, but rather that there are differential experiences of economic and spatial development and responses to it, filtered through complex social, cultural, and environmental histories. The so-called "waiting rooms of history" (Chakrabarty 2000) imagined by theories of uneven development discount the already-global forms circulating through such environments, the turbulence and crises that are felt in differential ways across urban and rural spaces, and the vibrant politics and ingenuity of people living through underdevelopment. Through fieldwork and more sustained engagement with workers and communities in these environments, "wildness," in a queer and feminist reading, can also perhaps be "where the environment speaks back, where communication bows to intensity, where worlds collide, cultures clash, and things fall apart" (Halberstam and Nyong'o 2018, 454). Charmaine Chua, Martin Danyluk, Deborah Cowen, and Laleh Khalili, in their essay on global logistics entitled "Turbulent Circulation," draw a generative relation between the "turbulence" of global systems and the "liveliness" of

---

[6] Again, "post-" in spite of ongoing occupation in the six counties.

politics (2018), as will be discussed in Chapter 1. In associating turbulence and wildness, I am doing something similar, in alignment with such political and academic attempts to understand the unruly politics that finance and logistics endeavor to control. Through this conceptual interlinking of turbulence and wildness, the latter is perhaps alone a two-fold framework through which to understand both the system and the "systemic edge" (Mezzadra and Neilson 2019)—somewhere at the edges of the supposed frame, we can acknowledge the non-totality of the system itself, while appreciating that these same systems leak and seep into life itself (see Anand 2019; Liang 2005).

Two examples, along with brief encounters described above, stand out, the first in Ballyferriter, County Kerry while studying the growth of *Star Wars* tourism in the region. I spent a night at an Airbnb explicitly advertised as a *Star Wars* getaway, whose owner was building a *Star Wars*-themed "glamping" (novelty camping) site in the back garden. After showing me on-site photos of the *Star Wars* production and post-production events held in the town, she informed me all the places in town to eat, drink, and wander to gather information on the production and its aftermaths, putting me in touch with a few residents and business owners. I had dinner in town, and in an informal and unrelated conversation, the woman serving me said that her father's land had been rented to film a key resolution scene in *Star Wars: The Last Jedi*. She offered to bring me on a tour the next day. But later, out at one of the town's three pubs that evening, I ended up chatting with another married couple who claimed that the scene had been filmed on *their* land. There was even competing branding: my server's father had put up an official road sign outside of town directing tourists there, while my friends at the bar gave out business cards to promote their claim. Interpersonal conflict and claims to land, historically politicized in rural Ireland, bubbled to the surface through simple inquiries about a global film production, which certainly navigated—in order to avoid—such generative local friction.

A second, of many, notable and "weird" encounters occurred while researching the failed Apple data center project in Athenry. Stakeholders at all ends of the spectrum were crucial to understanding what went wrong with the project, who was involved, and the general fascination with the case at a national scale. One day, I spoke on the phone with a representative for Coillte, the semi-state company in charge of managing forestry assets. He was asking me, a PhD student from Canada, if I could connect him to anyone that might want to build a data center on other Coillte properties. At another point, I was standing in the woodland site of Apple's project with a

representative from Athenry for Apple. He was telling me that this plan, projected to use between 5-8% of Ireland's energy capacity on a daily basis, was a better environmental bet than most other infrastructural projects proposed for the site, because its operations would be more sensitive to the area's shallow water table. Frequently, points in my research that felt like dangling threads, fascinating but not part of the overall story, suddenly burst with significance in terms of interlocking logics of land use and extraction at various and apparently disparate scales.

Unraveling the densely interconnected webs of Irish life, culture, and politics while simultaneously traversing the scales of stakeholders involved in my case studies presented a variety of problems for research. Dangling threads, it turns out, were often a different path into the dense tangle of phenomena characterizing media infrastructures in Ireland. Thus, the hybrid methodologies employed throughout this study represent a continuous adaptation to newly presented information. But when relating to these "worlds" you enter as a researcher, in the turbulent environments of global capitalism, we also must keep in mind that there are many different "arts of living on a damaged planet" (Tsing 2015). As Tsing notices, many across the world, in the Global North and Global South, are living "life without the promise of stability" (2). In Athenry, I encountered residents who craved the stability of a bygone era (industrial capitalism, which may have never even arrived in Ireland) through a tech services-focused future. In opposition to the turbulent "wildness" represented by the financialized global economy and the livelihoods that it offers, the promise of jobs and infrastructure through these systems was seductive and all-encompassing, even if empty at the center. If modernity and modernization were designed to "fill the world…with jobs," "such jobs are now quite rare; most people depend on much more irregular livelihoods. The irony of our times, then, is that everyone depends on capitalism but almost no one has what we used to call a 'regular job'" (3). Fieldwork amongst media professionals revealed a widespread acceptance of such unstable forms of work, which characterize the sector. However, although many felt browbeaten, others embraced the competition, passion, and flexibility that drive value production in the media industries (see Caldwell 2013). But while such arts of living through precarity oftentimes behave towards emancipation, and critical theorists tend to focus on these moments and practices disproportionately, my fieldwork revealed that the politics are far more ambiguous, short-circuiting easy left-right distinctions and solutions, especially when it comes to labour, communities, and environmental relations to land. There is only so much a militant leftist

research practice, as defined by Mezzadra as "an attempt to localize, within a specific situation, the points around which practices of organizing and struggle can match" (2013, 310), can do in the face of the flooding of influence of common-sense logics of global capital and its modes of economic development and promises of building better lives as managed and administered by state forces and their ideological apparatuses. Sometimes, you just have to report what you see.

But this disparity is generative, and part of the "wildness" discussed above—unpredictability and contingency should be central to our methodologies, even if *stability* remains a chimeric fascination of the institutions and communities we study. Research into these formations requires a simultaneous understanding of the ongoing allure of more stable and prosperous ways of life, which often take on unexpected and contradictory political formations, and the impossibility of achieving more just ones under the turbulent conditions of global capitalism. "Wildness," off-frame, might just unite these diverse experiences, even if it remains impossible—and not in any interest but capital's—to capture.

Conclusion

As this thesis takes the reader in and out of a variety of loosely interconnected and differentially-globalized "worlds" across Ireland, I hope that the dynamic and lively environments encountered throughout are generative, both in terms of their deep relations to Irish culture and politics as well as for other contexts. The machinations of global finance, tech, and media capital spare few territories their omnivorous and extractive operations. Whatever the case, I hope that it becomes clear that different political futures arising out of the networks of globalization and the dense entanglements with life and culture in Ireland are in fact possible. But to disrupt the common-sense logics that are driving the processes of media production and circulation in Ireland and elsewhere, we have to first learn how they operate, and become intimately acquainted with the ways in which they are reproduced.

Chapter 1 – Turbulent Waters: Ireland and the World Economy

> The environments that cables stitch together are not always smooth spaces, but turbulent ecologies. Turbulence is a chaotic form of motion that is produced when the speed of a fluid exceeds a threshold relative to the environment it is moving through…Turbulence is rarely a direct and purposeful opposition to flow. Rather, it describes the way that social or natural forces inadvertently create interference in transmission simply because they occupy the same environment, in the end contributing to a network's precariousness.
>
> Nicole Starosielski, *The Undersea Network*

> The integration of financial markets in the early 1970s initiated a period of enduring and structural turbulence in world economic affairs. When the convertibility of the dollar against gold was replaced by floating and volatile exchange rates, the unpredictable was, of necessity, factored into the calculus of world economic futures. Henceforth turbulence could not be prevented; it could only be managed.
>
> Melinda Cooper, "Turbulent Worlds"

Ireland's early experiments with liberalization through Seán Lemass' economic guidance were first steps towards becoming an active nation-state participant in the global economy. As world systems theorists have articulated (Arrighi 1994; Wallerstein 1976), the interconnections of the global economy subject diverse locations across the world to the fluctuating cycles of accumulation and financialization promulgated by very powerful productive centers. While the US has dominated the current cycle—what Giovanni Arrighi calls "the long twentieth-century" (1994)—the height of each cycle leads, according to these theorists, to deepening crisis and eventual systemic collapse. Many saw the global financial crisis of 2007-2008 as evidence of the imminent collapse of US hegemony.[1] But key to these understandings of power and hegemony are the devastating effects of these cycles (and collapses) on countries and regions across the world. In the aftermath of this crisis, Ireland was left shattered, and the socio-cultural and political formations of the country are still navigating the "recovery."[2]

This chapter will briefly outline the history of the Irish state's active entry into these global "slipstreams" leading up to the Celtic Tiger and 2007-2008 financial crisis. It will then build a theoretical grounding through which to understand the role of media and infrastructure

---

[1] This US collapse may still be imminent, with the botched 2020 Covid-19 crisis and national uprisings against racial violence across the country in 2020.
[2] This "recovery" has likely stalled, of course, with a post-Covid-19 recession.

during the crisis and recovery. While many have unpacked the methods by which capital's omnivorous operations occur on a world-scale and entangle with specific places and environments (see, for example, Mezzadra and Neilson 2019; Moore 2017; Smith 1984), this chapter will lay the groundwork for how to understand these processes through the unique context of Ireland, where exactly they "hit the ground" (Mezzadra and Neilson 2019), and where they are then operationalized or disrupted. As I will continue to argue, media and the media industries are a fulcrum through which the global mechanisms of finance capital are mobilized in Ireland, through historic coalitions between the state and capital. As global turbulence increasingly becomes the norm, both in markets and in nature (see Cooper 2010), the sites at which the wildly uneven flows of global capital affect local workers, communities, and environments must be analyzed as *emplaced* implications in order to push back against the place-agnosticism of finance capital.

Financialization, then, forms a backdrop for much of this dissertation, especially due to the powerful presence of finance capital across the landscape of Ireland both pre- and post-financial crisis. The permeation of financial logics across the country's planning, society, and culture demonstrates the profound and pervasive implications of this mechanism of global circulation. At a basic level, financialization is, as Max Haiven aptly summarizes,

> a term which refers to the increased power of the financial sector in the economy, in politics, in social life and in culture writ large. More expansively, the idea of financialization speaks to the way financial measurements, ideas, processes, techniques, metaphors, narratives, values and tropes migrate beyond the financial sector and transform other areas of society. (Haiven 2014, 1)

Pertinent to the wider argument of this dissertation, financialization is particularly urgent in the ways in which finance comes to organize spheres of life somehow thought to be far removed from financial considerations. This is particularly and increasingly true when it comes to the globalization of the media industries. Financialization can be read through the contemporary geographies of media: tax incentives attract foreign capital in the form of investment in media production, and organizations like special purpose vehicles (SPVs), short-term companies established for tax residency, are formed to avail of these exceptional financial mechanisms and funnel profits offshore. This then shapes spatial and industry practices in a given territory, as infrastructure and facilities must be built to accommodate these operations, and property markets

and de-regulated planning dictate where global media capital lands in the form of these infrastructures. Workers are, ultimately, dependent on the precarious flows of this media capital, left to compete for scraps, as the eventful waves of capital promoted by state planning are barely felt as a trickle for many across the country. As Verónica Gago argues through what she calls "neoliberalism from below," conditions of financialized *lack*, like the environment of post-financial crisis austerity which will be described presently, profoundly shapes how people relate to not only the state, but towards one another, meaning that politics must necessarily be theorized and practiced through an understanding of this multi-scalar relationship between state power, global capital, and workers and communities on the ground (2017).

To set the stage, then, for an analysis of this post-financial crisis environment, we must track how Ireland got there in the first place. Thus, relevant literatures must be unpacked, and perhaps updated to understand current conditions of circulation and turbulence. Theorists of postmodernity often admonished the "placelessness" of the globalized landscape, wherein national distinctions and other emplaced phenomena are crunched through the deterritorializing mill of what Hardt and Negri call "Empire." Postmodern society, according to Hardt and Negri, flattens global divisions and constitutes a kind of immanence suggested by the intensified operations of capital under neoliberal globalization (2000, 188). While the two authors recognize the internal striation of these processes, they insist on the constitutive "smoothness" of imperial sovereignty across geopolitical fault lines. But as a global "non-place" (see also Augé 2009), the sovereignty of Empire under Hardt and Negri's conception fails to articulate the actual spatial dimensions of a financialized world system. Labour markets continue to be produced and managed within bordered formations in "real" space, however post-, trans-, or supranational the sovereignty over these spaces may be (see Ong 2006; Mezzadra and Neilson 2013; Tsing 2009). As Doreen Massey argues, the imagination of "complexity theory" (like that of Deleuze, from whom Hardt and Negri borrow heavily) often tends to "move straight through from a billiard-ball world of essentialized places to a claustrophobic holism in which everything everywhere is already connected to everywhere else. And once again it leaves no opening for an active politics" (2005, 77). This skipped step, from so-called "uneven development" across a modern world system characterized by unequal interrelations between regions and nation-states (and imperial mechanisms of colonization, displacement, and extraction from systemic "peripheries") (Smith 1984) to a wholly space-time collapsed global network (see Harvey 1990), looks over the

specificities of transnational relationships, the *particular* state and corporate operations that drive economic development, and more localized forms of politics. This is especially true in formerly so-called "developing" economies like Ireland. Massey, in her critique of postmodern historiography's temporal depthlessness (like that of Fredric Jameson), also applies a similar analysis to uneven development theories, which posit that "residual" formations remain within the so-called developing world as it catches up to (post)modernity (see also Smith 1984). She continues, "The shift in viewpoint, so common in comparisons of modernity and postmodernity, from *one* history to *no* histories, from a single (progressive) story to a synchronic depthlessness, in both eras though in radically different ways, denies the real challenge of the spatial" (2005, 78). Or, as Dipesh Chakrabarty argues, "Just because…capital gets ideally beyond every limit posed to it by 'national barriers and prejudices,' 'it does not by any means follow that it has *really* overcome it'" (2000, 58). Massey's critique proposes a deeper engagement with space as a (dis)organizing mechanism for historical time, especially in the sense that the depthless "non-place" of formulations like postmodern Empire occlude and set aside more than they solve. Holistic systemic analysis cannot ever fully account for emplaced dynamics, thus accidentally ventriloquizing the "smooth-world" ambitions of global capital. Any "non-place," whether an airport or a data center, is a produced space, existing in real spaces and criss-crossed with material circulations. Space, no matter how global, has material life, history, and affective signature, continuously in (social) development (Lefebvre 1974).

Beginning with the history of (neo)liberalization and financialization in Ireland, this chapter builds upon formative theories and critiques of "uneven development" in the context of a "semi-peripheral" country like Ireland (Nitzsche 2013; O'Hearn 2001). After setting up this brief history and developmental context, I examine the implications of globalization on the Irish media industries through formative scholarship on media industries in and outside of Ireland. Finally, as a site through which to expand the discourse on media industries and spatial development in Ireland, the chapter undertakes an analysis of infrastructure, the built spaces through which goods, information, people, and capital *materially* circulate. Specifically looking at the place of "media infrastructure" in post-financial crisis Ireland, and the role of "logistical media" in a process of *naturalizing* of these spatial flows and their extractive mechanisms, the chapter lays the groundwork for the remainder of the thesis, which attends to the roles of built space, policy, and technological infrastructure within the recovery strategies of the Irish state since 2007-2008.

Liberalization and Spatial Governance in Ireland

The history of neoliberal financialization in Ireland must be written in relation to postcoloniality, liberalization, and foreign direct investment (FDI), historically specific conditions in Ireland which both reflect and complicate global theories of uneven development and financialization. The twentieth-century in Ireland has been debated and written about in great detail, especially according to the ways in which the country's postcolonial condition—a European "semi-periphery" with a relatively successful economy that nonetheless emerged as a post-developmental state from under the shadow of the British empire—complicates many narratives, culturally, ethnically, economically, and politically, about postcoloniality and globalization (Cleary 2002; Eagleton, Jameson, and Said 1997; Ignatiev 1995; Lloyd 2003; Kitching 2015; Laird 2015; O'Hearn 2001; Ulin, Edwards, and O'Brien 2013). Unpacking Ireland's specific relationship to the financialized global economy, within which the country has come to be a significant player on a global scale, allows us to map how the webs of interdependence emerged and transformed in the progressive liberalization of Europe and the rest of the world, especially within the intensified interconnections of neoliberal consensus. Hardt and Negri argue that underdevelopment in Italy through the 1970s led to a situation within which post-Fordism followed upon an industrial Fordism which was never fully developed (2000, 288). This echoes a well-worn narrative of Ireland's timeline of (European) modernization: incomplete industrialization gave way to premature informationalization of production in finance and tech services sectors (via FDI), moving straight from a kind of partial-Fordism to post-Fordism, from partial modernity to postmodernity. Sharae Deckard argues that the uneven industrialization of Ireland, and its focus on the agricultural sector due to histories of colonial underdevelopment in the country's expansive rural regions, conditioned Ireland for the financialization that would occur throughout the late-twentieth century (2016). This patchy and unconventional path towards "modernity" contributed to the ongoing separation between rural and urban political and labour organization. Both within and outside of Ireland, along with financialization came the unloading and exporting of risk onto increasingly precarious classes of people and workers along familiar paths of exploitation. As supply chains are decentralized and labour atomized into more disaggregated units across the world (Tsing 2009), labour movements are further dispersed within an apparently decentralized network of production. But as Brett Neilson and Ned Rossiter

argue, in resonance with Ireland's non-conformity with dominant histories of European modernization, Fordism actually appears as an exception on a world scale (2008), within which labour precarity and the exporting of imperial violence to the peripheries has been an ongoing and defining characteristic of the world system. Tsing argues a similar point in relation to emergent precarities across a variety of political economies and ecologies, asking "what if precarity, indeterminacy, and what we imagine as trivial are the center of the systematicity we seek?" (2015, 20). Placing an awareness of the centrality of change and precarity within global systems complicates teleological narratives of progress across historical landscapes.

Ireland's entry as a "semi-peripheral" (O'Hearn 2001) participant in the slipstreams of the global economy is a generative example of the ongoing resonances of and also problems with what gets labelled "uneven development," especially in relation to the spatial development of modernity. Luke Gibbons notes that the liberalization that arguably began under Lemass, far from a smooth, even, and progressive process, was a stilted, fragmented endeavor that further ideologically divided the industrialized (cosmopolitan) cities from the rural (nationalist) countryside (1996, 84). Denis O'Hearn argues that emplaced specificities of industrial and spatial development across urban and rural Ireland are as important within uneven development debates as the global processes that affect them (2016, 203). The Industrial Development Authority (IDA), the semi-state organization in charge of attracting and maintaining FDI in Ireland, has long advertised Ireland as an ideal and competitive place to invest, do business, and re-locate a variety of operations in their industrial parks built all across the urban and rural regions of the country. Quoting Robert Ballagh, Gibbons points to the yoking of modernity and tradition in the Irish state's developmental ideology during early stages of liberalization:

> those who judge Ireland by its promotional images [from the 1970s-1980s] abroad must risk a certain cultural schizophrenia: 'You have the IDA out in the US selling Ireland as a modern progressive go-ahead capitalist society. Invest in Ireland and make a profit. And you have Bord Fáilte eulogizing roads where you won't see a car from one end of the day to the other: it's almost as if they're advertising a country *nobody lives in*.' (1996, 86, my emphasis)

For Gibbons, the Irish state prepared an ideological space through which capital could flow unchecked, over unspoiled nature, with no human life to get in the way:

The location of advanced technological factories in remote, often spectacular, settings

was motivated, not by a love of the picturesque as the IDA's own copy would have us

believe, but by the more prosaic imperatives of a regional policy which guided the IDA's

industrial strategy until the early 1980s. This policy could be described as

industrialization without urbanization. Part of the attraction of outlying rural areas for

industrial investment was that they lacked the strong traditions of trade union militancy

which are characteristic of the urban working class. (88)

These interlocking development strategies of deregulation, the disempowerment of labour, and the opening of national space to global capital, at whatever social or environmental expense, has long been activated across *internal* striations and characterize neoliberalism as an emergent strategy for national economic growth, and created the conditions for the service-based economy of contemporary Ireland.

However, the theory of the "developmental state," in terms of a postcolonial state's ability to intervene in labour regulation, investment in key sectors of the economy, and an overall role of basic economic planning in order to remedy a "gap" perceived by uneven development (Mezzadra and Neilson 2019, 115-132), also holds water in discussions of Ireland's political and economic trajectory during the era of early liberalization and its advancement into the neoliberal measures of the Celtic Tiger. Ireland was characterized by a rapid shift from agrarian industry to post-industrial and FDI-led sectors like finance, technology, and also bio-chemicals and pharmaceuticals manufacturing.[3] But the "crisis" of the developmental state, in terms of the state's inability to *actually* bring in entire national populations under centralized economic plans (swathes of rural areas remained economically cut-off), left countries like Ireland open to neoliberal reforms and widespread financialization, as well as a growth in extractive activities (124-127), which would come to characterize their post-developmental conditions. As Aihwa Ong notices in post-developmental economies in East Asia, "zones of variegated sovereignty," which tend to characterize export-led post-developmental strategies, break up the space of a nation-state while sharing the role of governance with private, mostly transnational, enterprise

---

[3] The pharmaceutical sector in Ireland is enormously powerful to a scale perhaps exceeding the financial and tech industries and is central to much of the industrial development traced briefly here through the 1970s and 1980s. However, these companies and activities are beyond the scope of this thesis, by both disciplinary boundaries and necessity. Nonetheless, there have been many fascinating cases of urban and rural agitation against these multinationals (and their partners in the state), narrated in detail in Robert Allen's *No Global: The People of Ireland Versus the Multinationals* (2004), which have great resonance with case studies throughout this thesis.

(2000). The Shannon Free Zone (SFZ) in the west of Ireland, a tax-free special economic zone (SEZ) established in the late-1950s, pioneered this approach to "developmentalism" in a regional context (for a rosy overview, see Callanan 2000). It also represented an early template for what neoliberal "planning" might look like, wherein the semi-state Shannon Development was given exceptional control over economic measures and even governing control over the entire town of Shannon until 2004. The SFZ, which maintained its exceptional tax benefits until 2003, became an offshore manufacturing hub for US companies, representing an early example of export-processing and supply chain production (see Tsing 2009). Relatedly, the establishment of the International Finance Services Center (IFSC) in the Dublin Docklands as an SEZ in 1987 tested, with EU permission, an exceptional 10% tax rate on the premises, transplanting the export-processing model of the SFZ to Dublin for financial services. As John Urry notes, such offshore financial centers in postcolonial states are often compelled by neo-imperial influences to facilitate these powerful flows of capital in order to "forge a new economic position within the emerging global economy" (2014, 50), demonstrating the simultaneously active and reactive role that states play within world systemic relations. By 2010, the IFSC was the second-largest center for offshored finance in Europe (MacLaran and Kelly 2014a, 24). These de-regulatory measures, both zonal and across the landscape, were supplemented by specific property-tax incentives for private development of the built environment in the late-1980s, which was often centered on the area surrounding the IFSC in the Dublin Docklands (22-24). Along with the location of IDA parks in separated suburban and rural regions (from the 1970s and through today) and designation of demarcated Strategic Development Zones (SDZs) for private contracting (since the early-2000s), these variegated strategies have masked the overall expansion of tax, financial, and planning incentives for transnational capital across the whole of Ireland. By the late-1990s and early-2000s, all SEZs were essentially harmonized when the state implemented a 12.5% nation-wide corporate tax rate, effectively free-zoning Irish space, undertaking a re-making of a supposedly unified national space heterogeneous in its activities via global capital.

The shift in logics which have characterized the slow process of liberalization, by which space opened for FDI increasingly painted the country as a blank slate for the extractive activities of finance and multinationals, echo, if not mirror, the trajectories of postcolonial and post-developmental states in the Global South. But Ireland's deployment of deregulated zoning, from the SFZ, the IFSC, to SDZs, is central to economic development strategies. These modes of

spatial governance can in this way be yoked with those of the East Asian "Tiger" economies studied by Ong (2000, 2006) and to which the Celtic Tiger owes its name. These circulations, existing in all spaces at once and yet apparently nowhere at all, are spatialized by zoning, border mechanisms, and infrastructures of residual state power and multinational corporate sovereignty. Through these spaces, power relations on a global scale are reproduced locally, multiplied across sequestered zones, while being given the appearance of seamless neoliberal utopia. Keller Easterling calls this "extrastatecraft":

> As a site of multiple, overlapping, or nested forms of sovereignty, where domestic and transnational jurisdictions collide, infrastructure *space* becomes a medium of what might be called *extrastatecraft*—a portmanteau describing the often undisclosed activities outside of, in addition to, and sometimes even in partnership with statecraft. (2014, 15)

These zonal infrastructural spaces operate a certain kind of strategic *dis*organization, circulated by conflicting sovereignties, part of a mechanized system of rule that nonetheless relies on the biopower of geographically distributed but highly policed labour pools often strategically divided along class, ethnic, and gender lines to weaken claims to rights and citizenship for most while granting exceptional status to wealthy and powerful capitalists (Ong 2006). Understanding Irish space in terms of these various forms of overlapping and nested sovereignties points to key ways in which the plugging of Irish space into global networks of trade (via tech and financial sectors) has distributed and hierarchized sovereignty over demarcated zones of development. Ong, when describing her theory of the "graduated sovereignty" of such SEZs in East Asian post-developmental economies, notes that

> This patterning of production and technological zones was designed to facilitate the operations of global capital; it thus entails de facto or practical adjustments and compromises in national sovereignty. This territorial concentration of political, economic, and social conditions mobilizes foreign investment, technology transfers, and international expertise to specific zones. I thus use the term graduated sovereignty to refer to the effects of flexible management of sovereignty, as governments adjust political space to the dictates of global capital, giving corporations an indirect power over the political conditions of citizens in zones that are differently articulated to global production and financial circuits. By creating zones of graduated sovereignty,

postdevelopmental strategies make these sites more 'bankable' than other developing

regions. (Ong 2006, 78)

One can see the resonances with uneven development theories, especially David Harvey's discussions of neoliberalism and its generation of interregional competition (2005) which will be unraveled in the next section. But what is essential for Ireland about Ong's argument, beyond the recognition of the public/private alliance to make a state or region "competitive," is that the zoning *for* capital's operations—across manufacturing, services, and knowledge production—manages regional and national labour pools via segmentation and subjugation to regimes of capital accumulation. While Ireland may not have the exploitation and measurable degrees of inequality characterizing other post-developmental economies and their often extractivist governments (Gago 2017; Gómez-Barris 2017; Ong, 2006), the state continues to imagine its own internal spaces via an intensified focus on inward investment which treats space as a source of value extraction, with things like culture and labour either emerging as obstacles to or as fuel for more expansive operations.

Sovereignty and territory transform under the transnational arrangements of trade and finance in contemporary capitalism, as articulated by Ong's notion of the "graduated sovereignties" of zoning mechanisms and their facilitation of partnerships between the state and capital (2006). Through these spatial designations, basic notions of democratic consent and dissent are challenged via spatial technologies and bordering mechanisms that carry a *primary* form of capital's violence. The public/private common-sense carried within such spatial measures, familiar across the so-called developing and post-developmental world, is a characteristic of neoliberalism, as will be described in the following section. But a key precedent was set across these zoning mechanisms and the role of no or low tax rates within them, especially as a 12.5% corporate tax rate was harmonized across the country and special exemptions have been given to intellectual property (IP) and research and development (R&D) profits (which often grants effective tax rates of <5%). With varying levels of Irish state support, primarily US multinationals are offered exceptional spaces and incentives for their offshore operations. However, this also brings conflict with supranational formations like the EU, who exert degrees of regulatory control and oversight of the Irish state and economic activity. In recent years, especially post-financial crisis, the national exchequer has been held hostage by the unpaid tax bills of massive tech corporations such as Apple, who, according to the EU, owe the

Irish state €13.1 billion due to what are viewed across Europe as unfair tax advantages. Ireland refuses to collect this tax bill for fear of losing these tech giants, even appealing the EU's ruling on the matter, not touching the assets transferred by Apple.[4] Thus, while attracted to Irish shores by exceptionally low corporate tax rates, especially on IP and R&D (central to tech services' knowledge economy), big tech corporations like Apple have been lured into staying by a state and planning environment which enthusiastically facilitates their extractive transnational operations and infrastructures. In Ireland and elsewhere, rather than flattening out regional and national borders, globalization has initiated a spatial order that operates across differentiated and "competing capitalisms," with each having their own "specific local, regional, and historical contingencies" (Lee and LiPuma 2002, 205). The formation, ideology, and policy of nation-states under neoliberal capitalism is mobilized for continued intensification of the global system itself.

Neoliberalism and the Financialization of Space

Neoliberalism, along with the historical processes that preceded its implementation in Ireland, tethered Ireland to the fortunes of finance and the turbulent swings of the global market. But neoliberalism, as a market ideology whose spatial and value calculations have defined Irish economic development since at least the early-1990s, is not only a category of governance or a theory of development. Rather, it is a materially specific institutional instrument methodically integrated into economic common-sense across the world, and the subsequent development of global infrastructures of financialized trade, which has conditioned particular subjective responses to the global market and come to define political responses to its circulations. Harvey situates the beginnings of the neoliberal era from the onset of the 1970s, following the slow creep of neoliberal economic thinking into the political mainstream. This was engineered by a semi-organized contingent of economists (including Friedrich Hayek and Milton Friedman), known as the "Chicago Boys," who espoused the principles of neoliberal economic theory, especially its deregulatory measures, through university programs and well-funded think-tanks throughout the mid-twentieth century, reaching practical policy implementations in the US and UK by the mid-1970s (Harvey 2005, 20-23). The decline of the gold standard and fixed exchange rates in 1971 with the dissolution of the Bretton Woods agreement signaled the end of

---

[4] In July 2020, this ruling was overturned as the EU ruled in favor of Apple and Ireland.

Keynesianism and "embedded liberalism" after a series of crises and devaluations (Harvey 2005, 12). The subsequent "disorganization" of global capitalism (Urry 2014, 29), echoing the fragmentation and supposedly liberating messiness of an emergent "postmodern" epoch, coincided with the rise of supranational organizations such as the World Bank and the International Monetary Fund (IMF), the growth of floating exchange rates and money markets, the expansion of global telecommunications technologies, and algorithmic trading. These processes systematically incorporated "external" markets into a global funnel of financial accumulation (via structures of neoliberal orthodoxy) which continues to siphon goods and profits into the rich Global North while amplifying inequality and subjugation in the developing Global South (Urry 2014, 175). As Melinda Cooper describes the situation,

> The integration of financial markets in the early 1970s initiated a period of enduring and structural turbulence in world economic affairs…the unpredictable was, of necessity, factored into the calculus of world economic futures. Henceforth turbulence could not be prevented; it could only be managed. (2010, 167)

Any modicum of economic planning in neoliberal nation-states transitioned them into de-fanged managers of global turbulence in the market (which is often accompanied by political instability, unrest, and outright revolt). The swings of this turbulence are felt more strongly in the so-called developing world (168), as "capitalist power has of course rarely been satisfied to simply let the market do its magic, but rather has always carefully planned the extension of market forces, which it then withdraws or modifies when they are not achieving the desired ends" (Jones 2020, 3). However, in recent years, the decline of liquidity in US funds means that "turbulence that could once be safely exported to the peripheries of the world economy has now returned to haunt the heartland" (Cooper 2009, 169). These periodic shifts and migration of capital to new markets have re-structured "uneven development" debates and new forms of national and regional competition under financialized capitalism (Harvey 2005, 87).

Ideas of uneven development, center/periphery, Global North/South, have traditionally relied on geographical, ideological, and temporal divisions from an ideologically "northern" perspective. Undoubtedly, neoliberal measures structuring the global economy are overwhelmingly centralized in the Global North, and (neo-)imperial power exerted from productive centers and the "global cities" of finance (Sassen 1991). But these hierarchies, while undoubtedly tipped towards these northern financial centers, are reproduced locally across the

developing and developed worlds as capitalism, running out of "outsides" for productive expansion, turns inward on itself and intensifies in all places, at all times, in often imperceptible ways. Benjamin Lee and Edward LiPuma throughout their work write on the cultural imaginations of financial circulation, discussing how the naturalization and "collective agency" of the "market" has proceeded as "circulation-based capitalism" has become the dominant global economic model (2002). Karl Marx argues that "circulation" and "markets" can only occur once the "free worker" finds themselves within a "labour-market…as a particular branch of the commodity market" (1992, 273). This is formative for Marx, especially because this is in no way a "natural history," but rather the product of a historically-specific set of circumstances, of "many economic revolutions, of the extinction of a whole series of older formations of social production" (273). However, the collective imaginations of labour's subjugated and dependent place within a "global market" somehow remain constant even as so-called social totality, and circulation with it, change with progressive cycles of capitalist accumulation and modes of production, as Lee and LiPuma update Marx's concepts to account for the circulation-based capitalism of financial globalization:

> Marx shows that circulation can animate a drive toward social totality under specific historical circumstances: when labor itself becomes a commodity on the market. The totality is constituted by value, realized as abstract labor time, and is characterized by an internal dynamic that, in its 'unfolding' or 'self-positing,' self-reflexively constitutes itself. (2002, 199)

This idea supposes an immanent logic that both conjures and complicates uneven development theories. Neil Smith ties uneven development to the Marxian (via Hegelian) idea of first nature (the world outside human beings, i.e. nature as traditionally conceived) and second ("the state, law, society, and the economy") (Smith 1984, 33). This dialectic falls apart as capitalism reaches the limits of expansion (across all "natures") and turns inwards, and the "source of this qualitative change in the relation with nature lies in the altered relation between use-value and exchange-value" (77). This turn inwards in the absence of a necessary outside requires a series of naturalizations of dialectical binaries and power relations through which all aspects of social life can be subsumed under exchange-value, and ensures that capital "creates a social totality that is in constant motion, that constantly destroys itself in creating and expanding itself" (Lee and LiPuma 2002, 203), driving the total imaginary of the "market" and the constitutive place of

labour as a source of value within it. In effect, it is circulation itself which becomes "the cutting edge of capitalism" (Lee and LiPuma 2004, 9). However, the idea that these temporal processes play out the same but unevenly in different locations elevates the timeline of Western modernity to the driving level of global circulation, which Lee and LiPuma effectively flatten out in describing capital's constant (and self-reflexive) circulatory dynamics.

But the "turning inwards" recognized by theorists of finance and the global economy points to crucial elements of financialization within political subjectivity. As neoliberal capitalism has intensified embodied value relationships, so have workers' and communities' lived experiences of systemic fragility and turbulence, throwing into relief the structural precarity that is exported to the margins of ongoing uneven development. Financialization and the attraction of FDI across the whole of Ireland, along with a series of de-regulatory measures in the late-1980s, conditioned early neoliberal Ireland for more efficient production within global systems of capital, while under the surface dismantling social and economic protections. The zoning and developmental measures of de-regulation have a robust and arguably successful history. Between the IFSC's establishment in 1987 and the 2007-2008 financial crisis in Ireland—i.e., the Celtic Tiger—faith in "light-touch" neoliberalism grew as foreign investment ballooned in the financial, tech, and pharmaceutical sectors and GDP per capita surpassed the UK's (MacLaran and Kelly 2014a, 25). Rose-tinted memories of prosperity mask the operations of global finance operating underneath, its fragile structures in Ireland held together by cheap materials and superficial wealth.

Throughout the Celtic Tiger, prosperity amongst workers ostensibly brought by foreign capital led to the consensus of a "social partnership" model between the state, management, and labour. This reduced the power of trade unions by enticing them into a "social-corporatist ideology" which, for Andrew MacLaran and Sinéad Kelly, "effectively denied the essential conflict of interest between labour and capital and obscured the capitalist state's fundamental role of securing conditions favourable to capital accumulation" (2014a, 26). During this time, they note, "a strategic alliance became forged between urban planning, the economic boosterism lobby and the property-development sector to reinvent the image of the city, to make it 'livable' and more attractive to the middle class" (30). These middle-classes, seduced by the economic "boom," were key actors within the disempowerment of labour at the hands of financialized capital, even if at the time it appeared as though a partnership between organized labour and big

capital was mutually beneficial. As labour stepped aside for capital and the corporation tax rate was standardized to 12.5% in 1999, effectively free zoning the whole of Ireland, the deregulated zones of the SFZ and IFSC harmonized with the rest of the Irish territory. The populace in many ways became subjects of transnational corporate sovereignty, without noticing.

Thus, by facilitating the circulation of offshored finance and its logics of value, the social and political fabric of the country was made more receptive to the "rule" of capital and its ability to provide jobs and welfare, demonstrated by the widespread prosperity and excitement of the Celtic Tiger as much as by the exhausted acceptance of neoliberal reform and austerity measures after the financial crisis. My argument is that this is the result of historically specific transformations at global, national, and local scales. These processes have their beginnings before the Tiger, but their most prominent and altering mechanisms in Ireland were enacted through the spectacular prosperity of the 1990s and 2000s. As Harvey argues, the "speculative and predatory" "wave of financialization" that swept across the world economy in the 1980s means that "no place can claim total immunity" from the discursive and institutional regimes of neoliberalism (2006, 145-154). Not seeking to conflate the differing but interlocking histories of neoliberalism and financialization, however, what I hope to emphasize is that the heightened forms of financial accumulation brought on by a neoliberal world order across and through nation-states instituted the creep of the finance industry's value calculations into economic common sense across the world. Financialization, as Haiven argues, refers to not only the finance industry itself, but also the pervasive socio-cultural implications of financial dominance across the world and in everyday life (2014). However, sometimes the practical implications of financialization—a social process emerging from a shadowy realm of bankers' immaterial trades, swaps, and maneuvers (see LiPuma 2017)—can appear as abstract as financial processes themselves, at least in the sense that financialization "permeates" society like an atmospheric force. But there is a distinct history and an everydayness to financialization and its naturalization, especially in terms of its structural precarity and the subjectification of labour to shoulder its risk, the primary characteristic of what Lee and LiPuma identify as the "culture of financial circulation" (Lee and LiPuma 2004, 23).

In her work on Wall Street bankers and the finance industry, anthropologist Karen Ho identifies the implications of *living* finance (2009). Not discrediting just how powerful the financial industry was—and continues to be—she penetrates the everyday and lived ideologies

that reproduce market good and financialized subjectivity as a cultural formation and activity somehow parallel but influential to actual financial trading and services:

> the values and practices of Wall Street investment banks are not interior to the financial markets because of their unique social position as corporate organizations with particular institutional cultures and arrangements as well as expert evaluators of spokespeople for the market. As such, bankers' actions and their corporate culture have widespread effects, influencing the purpose of corporations, affecting the movement of financial markets, and serving as disciplinary models for how employees throughout the United States should behave. Accessing investment banking 'culture' can give us insight into the workings of 'the market.' (Ho 2009, 184-185)

With the power of finance so vast, the everydayness of financial cultures seems a small-scale factor within its global reach. But the institutional and risk-taking regimes of finance—as well as the gendered, racialized, and meritocratic structures of the industry itself—have enormous implications for the world economy, contribute to its structural turbulence, and are felt (and reproduced) on an everyday basis across a variety of scales. This ideological reproduction defines how certain norms come to affect environments within which decisions and transactions occur within a market, and this happens to different degrees at all scales: whether in board rooms, co-working cafes, or on the job market. As Christian Marazzi reminds us, "The financial economy today is pervasive, that is, it spreads across the entire economic cycle…finance is present even when you go shopping at the supermarket and use your credit card" (2011, 27). Gago has called the modes of political and economic activity that reproduce neoliberal subjectivity in conditions of precarity "neoliberalism from below" (2017). This dissertation tries to work across the various scales of financialization to understand the pervasive ways that its logics operate through spaces and communities. Ho's focus on ground- (or high rise-) level phenomena allows insight into how the larger systems work, continue, or break down. As Ong notes, culture is not "somehow separated from 'rational' institutions such as the economy, the legal system, and the state" (2000, 23). Rather, across the timeline of (neo)liberalization, different cultural logics have taken hold which have contributed to an ongoing conditioning of Irish space for the presence and operations of transnational capital through finance.

But just like any understanding of financialization needs to be attuned to the transcendence of scales, so too must it keep space at the center of discussion. Finance and its

logics do not *overcome* space, they *obliterate it* and *replace* existing ways of living, working, and moving through space with more profitable built environments. Lee and LiPuma puzzlingly argue that financial instruments are largely detached from the sites of their greatest effects and their "abstract symbolic violence" (2004, 28). However, on the contrary, space, and built space especially, is central to how financial mechanisms operate, its logics spread, and its violence is enacted. Ireland's spectacular property crash and its aftermath demonstrate the degree to which any statement about finance's "symbolic" detachment must be filtered through a concrete understanding of its spatial mechanisms, and the immanent logics through which financial machinery operates. And as Chapter 2 will argue, the "symbols" of financial destruction and despair—as well as creation and hope—are often also material spaces.

The spatial distribution of industry in Ireland is and has been for some time activated across a series of deregulatory and financialized planning measures. While the (un-completed) National Spatial Strategy of 2002-2020 (Department of the Environment and Local Government, 2002), written under Taoiseach Bertie Ahern's Fianna Fáil government, spread the national planning gaze from urban areas through regional "gateways" and to sites of strategic rural "hubs," the most eventful planning environment has tended to be Dublin and its surrounding region. MacLaran and Kelly describe the use of Integrated Area Plans (IAPs) (31) as well as SDZs designed to "streamline" development (Murphy, Fox-Rogers, and Grist 2014, 55) in the city and its suburbs in the proceeding years of the Celtic Tiger. In addition, property tax incentives and the de-regulatory environment left Ireland extremely vulnerable to market fluctuations. In the 1990s and 2000s, these and the other spatial and de-regulatory measures listed above effectively "tied the fortunes of [Dublin] to the highly cyclical performance of property-development markets" (MacLaran and Kelly 2014a, 34). However, while Dublin represented a site of multiple and coalescing intensities where market fluctuations were most acutely felt and observed, the rest of Ireland would be equally subjected to these eventful waves of finance, as the 2007-2008 financial crisis would demonstrate.

When the markets crashed in 2007-2008, the financial and supply chain entanglements of the world economy set off a wave of contagion that spared few territories internationally, especially in Europe (Marazzi 2011). Capital either evacuated or dried up, leaving economic devastation and spatial ruin in its wake. As the knock-on effects of debt defaults and toxic assets spread from financial offices in New York, London, and Frankfurt to the coffers of banks in

Ireland, the panic led the Irish government in September 2008 to guarantee the six major Irish banking institutions before recognizing the full extent of the crisis to develop (Coulter 2015, 7). Economic recession at a world-scale, and across other European nations such as Greece, Italy, Portugal, and Spain (the "PIIGS" with whom Ireland would be associated by officials in Europe and bigots in Germany), led to mass unemployment, emigration, and overall stagnation which would continue through the crisis. By November 2010, after sinking astronomical sums of public money into the banks, including €30 billion into Anglo alone, the Government revealed that it was negotiating terms of a bailout with a coalition of institutions, which would come to be known as the "troika" across Europe: the IMF, the European Commission, and the European Central Bank. The terms of the bailout were incredibly lucrative for these institutions, although the conditions for Ireland, as Colin Coulter points out, would have been referred to as "structural adjustment" had Ireland not been one of the world's wealthiest countries per capita by this point (9). The program of austerity that followed, which forcibly slashed public jobs and wages, eroded previously untouchable social services, and cut public funding across the board (9), was catastrophic to the social and cultural life of Ireland, leading to a period of "soul-searching" during which, for a brief period, it appeared as though alternative futures beyond neoliberalism and FDI might be possible (see Linehan and Crowley 2013; O'Callaghan, Boyle, and Kitchin 2014). However, unlike in Greece and Spain, this ostensible structural adjustment was not widely protested, demonstrating the effectiveness of the Fianna Fáil government's austerity rhetorics of "it's our fault" (Hearne 2013), the successful dismantling of labour union leadership (Coulter 2015, 10), and related pervasiveness of neoliberal common-sense within how the Irish middle classes saw the country's economic fortunes as individualized and not necessarily interrelated to a world system which systematically and cyclically punishes the indebted (Lazzarato 2012). What Ong calls the trademark "disciplinary neoliberalism" of IMF structural adjustment protocols (Ong 2006, 93), imposed by debt, transferred economic sovereignty to supranational regulators and further removed the country's economic fate from the hands of its populace. As the chapters ahead will unravel in detail, the wave of coerced privatization that followed continues to this day, often enacted through the contracting, leasing, or selling of public services and assets to for-profit institutions and multinational corporations.

Thus, the cycles and interdependences of the world market and its eventful waves of circulation and accumulation left Ireland in the wake of financial crisis depleted and dejected,

subject to a period of brutal austerity during which labour was further disempowered, space de-regulated, and resources and services privatized. It is within this environment that the tech industries came to overtake finance as perhaps the most visible attractor of FDI (see Brodie forthcoming). Rather than adjusting course and seriously interrogating the value of this system of FDI-driven development, the Irish state doubled down and forged ahead with a neoliberal consensus (O'Callaghan et al. 2015). To do so, it moved into the "recovery" by simultaneously de-regulating space and re-developing Dublin (especially via the National Asset Management Agency (NAMA) and its vulture fund partners), persistently slashing cultural funding, colonizing it with profit-making metrics and incentives, actively coaxing the tech industries, and in doing so increasing their power over spatial development. As suggested at the start of the chapter, things like tax incentives have transformative effects on space as *infrastructural* to capital circulation. Flows of finance travel across and affect territory via such state policies.

In this environment, as culture also came to be subject to the logics of privatization as public funding was cut, the privatizing logic of the "creative industries" crept into the policies of arts and culture agencies, spatial development, and across other top-down government agencies, semi-state organizations, and private companies. The prevalent role of multinational tech companies has coalesced with an overall cultural environment focused on economic motives. MacLaran and Kelly note that "the influence of the 'creative city' concept, which became core to the thinking of many Irish urban planners, underpinned the 'gentrification' of the inner city as a strategy for regeneration" (2014a, 30). The "creative city" through the tail-end of the Celtic Tiger and the recovery, implemented through SDZs and other Dublin City Council (DCC) initiatives, has been concentrated on the Dublin Docklands, former port and industrial hinterlands converted to financial, creative, and enterprise space, starting with the IFSC in 1987 and administered after 1997 by the Dublin Docklands Development Authority (DDDA). In the Docklands during and after the Celtic Tiger, the spatial proximity and incentivization of the tech and finance sectors points to the internalization of creative city initiatives of planning bodies such as the DCC even before the financial crisis (see Lawton, Murphy, and Redmond 2014). Microcosmically, the DDDA was replaced by the Dublin Docklands SDZ in 2012 as part of NAMA's plan to absorb and make profitable toxic assets seized by the state post-financial crisis. As Chapter 2 will argue in more detail, this area, long a place of financial offshoring and high-tech enterprise, represents a key site where, in alignment with pre-crash strategies, culture and "creativity" have become a

central force within the alliances of capital and city planning, as the crisis of culture manifested through the financial crash offered an opportunity to privatize and make-profitable arts and cultural activities by placing them in spatial and conceptual proximity to sectors like tech.

Media Globalization, Emplaced Dynamics

The above situation conditioned the current state of the media industries in Ireland (and across the world), which are characterized by precarious work, short-term contracts, and the overall disempowerment of labour at the hands of an increasingly FDI-driven set of media and cultural policies. As the financialization of the media industries comes to be a greater topic of analysis (Dewaard 2020, forthcoming; Kidman 2019), it is necessary to situate the legacy of the study of film and media within what has been called "media globalization" (Curtin, 2016).

Media industry studies has expanded the field's analysis of what happens in the crosshairs of media, politics, and representation. While the basic focus has been on the production, distribution, and reception of media in given locations and contexts, this thesis concentrates on global media logistics and supply chains, the financialization of the media economy, the privatization of media infrastructure, and the global division of labour as experienced in emplaced sites across Ireland. John T. Caldwell (2008), Michael Curtin and Kevin Sanson (2016, 2017), Vicki Mayer (et al. 2009, 2011), Toby Miller (et al. 2001), Alisa Perren and Jennifer Holt (2009), Petr Szczepanik and Patrick Vonderau (2013), among many others have been instrumental in pushing media industries to the forefront of media studies debates by focusing on the political economies, policies, and technologies of media. The re-structuring of the global economy via neoliberal globalization has seen media become a fulcrum through which information and capital travel, for example, through communications technologies (Harvey 1990). But as scholars of "media globalization" also remind us (Curtin 2016), these shifts implicate both media production and distribution, and thus national and localized industries as much as the global distribution of capital, labour, talent, and content. These are complex and interwoven fields of examination. But through textured analyses of media industries and media policies, especially while also examining the wider supply chains and production pipelines of the global economy, the implications of media globalization—and its particular national and transnational arrangements—come into much sharper focus.

As the previous sections articulate through histories of spatial development, neoliberalism, and financialization in Ireland, the motor of global circulation (and what is exploited and abandoned) is the very spatial diversity that "smooth world" theorists of postmodernity saw dissolving. Analyzing the complex systems of interdependence which drive not only media production and circulation specifically but also its peripheral and spillover economies and ecologies—for example, service industries, environmental externalities, and the export of risk to precarious workers and the Global South—requires making supply chains and finance central to how we understand the infrastructures of media as well as the sited experiences of where media capital "hits the ground" (Mezzadra and Neilson 2019). The turn towards the study of media distribution could now be considered a mainstay in the field of cinema and media studies (Curtin, Holt, and Sanson 2014; Drake 2008; Lobato 2012; Miller, Schiwy, and Salván 2011; Perren 2013), which shifts our conceptual focus to the movement of media as a commodity across the world, and how diverse places and cultures encounter and distribute media (Himpele 1996; Larkin 2008). However, circulatory capitalism has far greater implications for the structural dynamics of media industries. As financialization extends into the very fabric of how we live, work, and relate to another, we must pay close attention to how financial and logistical rationalities and practices come to shape industries and spaces beyond more traditional sites of media encounters.

Building on the previous section, capital's diverse entanglements require centering "circulation" as the core tenet of contemporary capitalism, and this includes within media production apparatuses. As I will argue at length through a variety of case studies, it is the politics of *circulation* which define not only how media moves *after* it is produced, but also how media industries are re-shaped by the global infrastructures of finance, logistics, and supply chains. In media industry studies, this means shifting focus from media production and distribution *specifically* and into an analysis of the "noisy sphere" of circulation and its constitution of labour markets and modes of production (Marx 1992, 270-280; also Lee and LiPuma 2002, 199). In this regard, Mezzadra and Neilson (2013a, 2017, 2019) have proven particularly important to this project's framing, as have Deborah Cowen's work on global logistical infrastructure (2014), Ong's studies of transnational capital and sovereignties in East Asia (2000, 2006), and Tsing's notions of "friction" and "supply chain capitalism" (2005, 2009). Each of these scholars, along with a cohort of media industries scholars studying global media

supply chains (Acland 2018; Curtin 2016; Dickinson 2020; Mayer 2011) articulate how diverse arrangements of labour—from mushroom pickers in the US Pacific Northwest (Tsing 2015) to television factory workers in Manaus, Brazil (Mayer 2011)—illustrate the flexible, diverse, and decentralized nature of global economies. In doing so, they also reveal the ways in which the untethering of labour from the stability of national and Fordist models feeds back into capitalist accumulation far from the source of its production (Neilson and Rossiter 2008; Tsing 2009, 2015).

The political economy of culture and media is increasingly inextricable from financialization and global supply chains, and this has been achieved in no small measure by the prevalence of the "creative industries" (Florida 2005) in public policy and its collapse of cultural good and private enterprise (Curtin 2016; Holt and Perren 2009). In response to these growing consolidations in the media sector, Michael Curtin and Kevin Sanson analyze how

> workers are increasingly caught up in a global production apparatus…the central tension is not one between local laborers in different regions—a perspective that feeds too easily into the hands of producers—but is rather a struggle against the diverse yet increasingly interconnected modalities of exploitation in screen media production around the world. (2016, 16)

These processes constitute what Toby Miller has called the "New International Division of Cultural Labour" (2016). As the labour pools of creative workers grow in Ireland and elsewhere with "disposable human material" (Marx 1992, 786), capital (especially multinational media conglomerates) will migrate to the most profitable centers of production (Curtin and Sanson 2016, 7), whether in search of tax breaks, cheap labour, infrastructure, or location needs (or some combination of these). If local and supranational governments provide the proper incentives and exploitable fixed capital and resources (facilities/tech and workers), this process will continue unless labour solidarity and organization respond to the current transnational arrangement of diverse manifestations of finance capital (7). As Curtin articulates elsewhere (2016), these policies around media build from "creative industries"-focused policy which characterizes the "creative city" and its spatial development, as will be discussed in Chapter 2. But as Aphra Kerr tells us, our focus should remain "relational and, in terms of cultural production, it means that we need to investigate how and in what ways industries, companies, workers, texts, and users get embedded in particular spaces while simultaneously being involved in global flows" (2014).

Resonating with uneven development debates, Chapter 3 will argue through particular local case studies that the global "race-to-the-bottom," as these competitive regional measures to attract production and creative work have been called, generates a diverse and competitive landscape of local incentives to attract foreign media production. Labour pools and populations relate to these global systems in a variety of ways, just as the institutions and regulators of the systems themselves are tasked with managing "human capital." What is crucial, to this study, is that policies, negotiations, tax structures, and other mechanisms and infrastructures exist not in the direct production of commodities for consumption. Rather, they organize the "noisy sphere" of transnational circulation by diverting financial and trade flows, encountering and managing local "frictions" along the way (Tsing 2005). While production and circulation are not necessarily mutually exclusive categories even in traditional Marxist conceptions, what needs to be stressed are their deep imbrications and coevality. The constituent role of circulation within production, and circulation's direct production of value, is key to the extraction of value across distances that orchestrates the global structure of film and media supply chains.

The arrangements of global media supply chains are key to how this thesis understands Ireland's place within the global production and circulation of media content and capital. Screen Ireland (SI), Ireland's national film body, has in recent years re-branded from the Irish Film Board (IFB) in order to reflect its widening remit as an industrial facilitator across a wider range of "screen" industries. The country's generous tax break for foreign production (the Section 481, a 32-37% relief scheme) has attracted a number of global productions and co-productions, from a variety of scales (big Hollywood studios to European "independents") and across the country's diverse landscape, production, and post-production infrastructures. These tax schemes, however, mean that Ireland becomes just one point within wider media supply chains of finance, talent, materials, and information. This has implications for the different places in which these productions actually happen—whether in rural west Kerry or an editing bay in Dublin. As Mayer has memorably demonstrated in the case of New Orleans, these sorts of tax breaks tether places and their labour forces to the fickle and opportunistic flows of media corporations and their calculative and detached decisions for choosing sites of production (2017). While tax incentives mean that jobs are created by incoming productions, these are not permanent—if the tax break goes, so do the productions and jobs "brought" by them, as North Carolina learned upon withdrawing their tax credit in 2014 (Meyer 2018).

Of particular interest, then, for my project are those working in the study of local instantiations of global media industries such as Kay Dickinson (Dubai, 2020), Kerr (Ireland, 2014; with Preston, 2001), and Mayer (New Orleans, 2017), among others, whose work articulates the reliance of global economies of media on highly specific forms of urban and regional development, migration patterns, and labour practices. *Places* of media production are constituted by a variety of external and internal processes, and policy, culture, and labour intersect at sites within which this production and post-production happens. Kerr in particular has outlined the position of media content, games, and animation labour in the context of Ireland (2000, 2014, with Van Egeraat and O'Riain 2013), and especially focused on the media use of migrants (particularly Polish citizens) in the Irish media landscape (2007). Anne O'Brien has produced essential studies of the actually-existing problems of gender and diversity in Irish media work (2014, with Kerrigan 2020). Within this research, we can begin to see an array of conditions that represent the ways in which the wider "creative industries" and their labour dynamics more broadly inform the constitution of the media industries specifically.

The creative industries in Ireland have been central within particularly urban economic development and spatial planning, particularly post-financial crisis (Lawton, Murphy, and Redmond 2014), and there is much work to draw from in terms of analyzing the structures and labour conditions of both their actual and policy logics (Gill and Pratt 2008; Lovink and Rossiter 2007; Neilson and Rossiter 2008). Within the discipline of geography, many have written on tech, finance, and media industries in the era of Irish neoliberalism, paying particular attention to the implications of both macro-economic developments and the on-the-ground conditions of labour in the country (Kitchin, O'Callaghan, Boyle, Gleeson, and Keaveney 2012; MacLaran and Kelly 2014b; O'Callaghan, Kelly, Boyle, and Kitchin 2015; Phelan 2014). Such empirical work details how the above-mentioned spatial implications of finance concretely affect labour environments and political subjectivity. In this sense, studies of labour precarity and "cognitive capitalism," particularly the approaches of post-autonomia theorists, help to understand how the affective elements of everyday creative work—passion, emotional labour, sharing, social reproduction—are continuously subsumed under increasingly technologized systems of capture and control (Berardi 2009; Fumagalli 2011; Terranova 2000). Across and at the nexus of these various literatures, creative industries and labour have been the subject of many focused academic studies (see Gill and Pratt 2008; Lovink and Rossiter 2007).

But while Julien Mercille (2014) and others have analyzed the precise role and complicity of public and private media institutions in failing to adopt a critical stance to the Celtic Tiger housing bubble and the endemic warning signs of property market collapse, the ways in which the broader Irish media industries contribute to and participate within certain spatial practices have gone only intermittently examined (see Van Egeraat, O'Riain, and Kerr 2013). Although creative industries logics are holistically applied in strategic planning and development in both policy and spatial contexts (Lawton, Murphy, and Redmond 2014), I intend to reveal how media (and its labour) are *specifically* mobilized, or slotted into, large-scale spatial and economic plans. National media industries, especially after globalization, are not simply factories for producing film and television representations of place and nation. Rather, they also constitute the broader machinery of representation, from film and TV to design and marketing. As Chapter 2 will argue in more detail, media industries, when we look at the more expansive definitions offered by policy and lobby organizations like PriceWaterhouse Coopers (2016), include the production of promotional materials, the marketing practices of media organizations, and other outward-facing and future-driven development imagery (see O'Mahoney and Lawton 2019; Rose, Degen, and Melhuish 2014), a whole range of productive activities and their visual culture which promote and normalize future-visions of space for capital.

Visual Culture and Expanding the "Media Industries"

As Chapters 2 and 3 will articulate in detail, the politics of privatization are deeply imbricated in the policy language of the Irish state and how it sees media as a social and a spatial force for economic development. This crux is both at an industrial scale—in terms of incentives for the "screen" and audiovisual industries—and also enacted through visual media in a more traditional, representational sense. Justin Carville contends that Irish visual culture has frequently been characterized by an "absence," as images of Ireland have either come from outside of the country or been centrally directed to a touristic audience (2013, 17-18). This idea has implications not only for "Irish visual culture" more broadly, but for how we study Ireland and the visual culture produced of and by the state, its public institutions, and its private partners. Such production of visual culture in and of Ireland actually came to drive and exemplify the simultaneously intensive and extensive development logics of the Irish state throughout liberalization. As Gibbons points out, the visual culture, ideology, and propaganda of central

government planning (with bodies such as the IDA) were important in the development and naturalization of the shifts towards globalization (1996, 86-88). In the media industries, changes from a nationalized support model to an FDI-driven facilitation model either preceded or were spurred on by entry into these global networks, coming at a historically specific point in Ireland's global development that saw the country finally lay down the architecture for ascendance into European (post)modernity.

Media, and film in particular, played a huge role in Ireland's presentation of itself to the world (Pettitt, 2000). Most film productions before the first IFB, established in 1980, were inward-productions, often facilitated by the intermittently-nationalized Ardmore Studios, which was specifically established in 1958 for Hollywood-style productions during Lemass' tenure as Minister for Industry and Commerce. Films like *The Spy Who Came in from the Cold* (Martin Ritt, 1965) and *Zardoz* (John Boorman, 1974) were shot at the studios and in surrounding locales in County Wicklow, and much of the nation's film infrastructure and labour resources are still centered in Wicklow and nearby Dublin. However, pre-IFB production in Ireland was actually most prominent and recognizable at a global scale when it featured rural, idyllic locales, with films like *The Quiet Man* (John Ford, 1952) and *Ryan's Daughter* (David Lean, 1970), shot and set in the west of Ireland, receiving particular international attention. Such films, part of much longer cultural visions of the "wild Irish" coming from the US and England especially, paint Ireland as a place of backwards and regressive people and politics, whether positively or negatively romanticized as a place of quaint simplicity or violence and "boggy mediocrity" (O'Toole 1997, 19). The global "imagination" of Irish culture and landscapes expressed through such films, the "Emerald Isle" trope, has been a straw-person within dominant studies of Ireland as a "national cinema," an action that frames the indigenous industry in opposition to the peddlers of these trite and stereotyped representations (Barton 2004; Crosson 2003; Rockett, Gibbons, and Hill 1987; McLoone 2000, 2008; Pettitt 2000). But such efforts to unpack the regressive representational politics of these films has perhaps turned focus away from complex processes of commodification and broader economic structures at play within media. After all, the above-mentioned films were *offshored* productions, and have also been used domestically to promote tourism and development in Ireland since they were made. Visual culture, media stereotypes included, has been absolutely central to economic development and how Ireland has promoted itself abroad, as a green, wild, but business-friendly society, within which the

stereotypes maligned by film scholars were globalized through processes both intensive and extensive.

Mark Quigley has argued, through the autobiographical writing of Tomás Ó Criomhthain, that Ireland's rural peripheries, specifically Ó Criomhthain's home of the Blasket Islands off west Kerry, were instrumentalized by the postcolonial Irish state as a representation of the "edge" of colonial modernity within a national ideology, in doing so activating and commodifying apparently "precolonial" (or "wild") forms of life within a more apparently "stable" postcolonial nation (2003). Echoing, however, the "wildness" that evades representation referenced in the introduction to this thesis, Ó Criomhthain's autobiography becomes "a lament not for the Blasket islanders alone but for any who might seek in the deterritorialized zone the fullness of life that lies outside representation" (387). Similar to Gibbons' suggestion that the IDA used Ireland's rurality to draw business and Kevin J. James' study of the commodification of land via rural tourism (2014), Anne Mulhall critiques what she calls "Brand Ireland" since the Celtic Tiger, a promotional state which commodifies the nexus between Irish neoliberal (post)modernity and a so-called "pre-modern" or pre-colonial past:

> borders between heritage and spiritual tourism are particularly indeterminate in relation to the marketing of Ireland, at least in part because the 'Celticity' that is a staple of the Irish tourist industry constitutes Ireland as a therapeutic landscape so that the appeal to the 'mystical and the spiritual' is fundamental to Ireland as a global brand. (2013, 147)

She notes that "even as the economic boom was in the ascendance," Ireland was represented as "a refuge from modernity" (Kneafsey qtd. in Mulhall 2013, 147) in Bord Fáilte (now Fáilte Ireland) advertising. So, while global economic flows have driven the spatial development and structure of Ireland's indigenous industries, most attention at this point in the study of Irish film and media industries has been paid to aesthetic and cultural developments in terms of "national" artistry and industry as opposed to looking at deeper entanglements of culture and media industries within these spatial-financial, or "geo-economic," flows of global capitalism.

There are thus different stakes within studying Irish media and visual culture at a variety of scales. Perhaps, then, what this thesis proposes is that using corporate planning and visual media as a tool amongst many is a generative strategy for a media studies approach that understands the intersecting ideologies and cultures of capital in Ireland. Anna McCarthy has influentially theorized the life of public screens as "ambient television," and finds that studying

the disciplinary literature and "visual culture" of capitalist fields, in particular retail merchandising, enriches the study of the different forms of power and absence expressed through televisions' migration into public spaces (2001, 20-21). As Joshua Neves argues, spatial planning in urban environments in particular has its own visual culture, which promotes future visions of space and life in the city through idealized digital renderings and public-facing planning materials (2013). These sorts of images and representations, as Chapter 2 will argue, are transformative in and of the past, current, and future spaces that they signify. As such, I contend, they are *financial* and *logistical* visions of future space, which prepare territories for upheaval and extraction. If cultural studies teaches, in the words of Stuart Hall, the basic point that "conditions of existence [are] cultural, political and economic" (2017, 156), and geography, according to Ruth Wilson Gilmore, examines "why things happen where they do" (2020), I combine these approaches to understand the interconnected industrial formations of media and economic development *through* Ireland. To do so, I use the public visual materials at my disposal, amongst many other tools, to understand the multifarious processes by which futures are drawn into being.

John Horgan, Barbara O'Connor, and Helena Sheehan outline the squabbling between content analysis, Marxists, and postmodernists in attempts to find approaches that most accurately articulate the stakes of scholarship and how best to study the histories and discourses entangled within culture and media (2007, 7). Media promoting spatial development and tourism, on the surface, follow different imperatives than media policy drawing inward investment in content production. However, what this thesis argues is that these are *interlocking* strategies within neoliberal media industries, creating an environment through which capital can circulate and extract value from Irish space. An approach that inserts such interlocking analysis into an array of understandings about the spatial distribution of power across a financialized global landscape can better understand the variety of scales through which capital produces and extracts value from media industrial formations. Media is not only used as a tool for promoting certain projects and economic goals; rather, it plays an active role at a number of levels.

The groundwork is there, even in representational studies of so-called "national cinema." For example, many in Irish film studies have lamented disappearing elements of cultural authenticity upon entering global slipstreams (Crosson 2003; McLoone 2008), but much has also been written about the founding of Ardmore Studios in 1958 as a mechanism for building an

indigenous industry by attracting foreign film production (Barton 2004, 76) and about the spatial implications of Dublin as a representational "absent center" in terms of its relation to global (particularly colonial) currents and industries (Barton 2004; Holohan 2010). To build on these foundational studies, still needed is more on-the-ground, spatially- and labour-sensitive approaches to media industries in Ireland that could de-center recourses to quality and authenticity that continue to plague film studies discourse. Such discussions uneasily reflect the essentializing development logics that draw in investment by advertising the quality of Irish labour, the value of Irish media infrastructure, and the wild authenticity of Ireland's physical and cultural landscapes (see Chapters 3 and 4). The collapse of "culture" and "creativity" within Irish cultural policy and debates demonstrates the degrees to which economic common-sense has entered the entire structure of media and cultural governance. Diverting this focus to industry and policy practices, like the branding and management of Irish labour forces through "talent" and "skills" and the normalization of precarity in the industry, can carefully integrate these discussions of cultural production into the material conditions driving spatial development. The constant and eventful changes in space have profound and disruptive effects on the lives and labour of those living in and passing through Ireland.

But while it may be easy to lament colonization of the media industries by neoliberal regional competition and discourses of "creativity," it is also prudent to recognize how robust these connections between the media and other "creative industries" are. I have already suggested that we account for design and marketing in our understandings of how media functions both industrially and representationally in Irish spatial and economic development. For Paschal Preston, media industries also intersect with other facets of the economy under globalization, such as the tech industries:

> the relevant stakes for the media sector go well beyond the numbers of jobs, important though such considerations remain even in the 'new' Ireland. The combination of technology-centred and commodification logics, as described and prescribed by the neo-liberal knowledge society discourses, pose multiple implications for the media sector. (Preston 2007, 91)

These "multiple implications" posed by the convergence of technology and media in "new" (globalized) Ireland are of course much more pressing at the points where media companies and technology companies converge, as has been the case with Amazon and Apple especially. Each

control their production as well as distribution apparatuses (Amazon Prime and Apple TV streaming), and each have material stakes in Irish space. In this environment, the role of media and culture within society become indistinguishable from profit-orientated and FDI-driven logics put forth for and by the private sector, as technology companies capture value from the immense amount of consumer traffic and content streaming in digital economies (see Marks 2020; Srnicek 2016).

Within the particular Irish histories of (neo)liberalization traced above, technology companies have been a major player throughout. From IBM establishing manufacturing operations in the country in 1956, to Apple setting up facilities in Cork in 1980, to Microsoft locating a small manufacturing plant in 1985, among many other examples, major US tech finance has played an integral role within the development of a competitive, export-led, FDI-driven economic climate in the country (see Collins and Grimes 2011). Connected to transnational flows of capital through the presence of these companies, the country also has a long history as a strategic infrastructural node in the Atlantic Ocean between the US and the rest of Europe. The SFZ was so located initially due to the Shannon Airport's importance as a fueling site for transatlantic air traffic. Valentia Island in west Kerry, one of the westernmost tips of Ireland, was the landing site of the first ever transatlantic telegraph cable, and today the country has a number of fiber optic cable landings along its coasts (see O'Neill 2019b), resonant with Nicole Starosielski's groundbreaking study of undersea telecommunications cables (2015). Ireland's location and global infrastructural connections have led to its consideration as the "gateway to Europe" for data-driven enterprises (see Xu 2018). Since the 2007-2008 financial crisis especially, these companies have found in Ireland a haven for their operations (see Brodie forthcoming). Microsoft first received planning permission to build a data centre in 2007; Amazon Web Services (AWS) opened its first "Infrastructure Region" in Ireland the same year; Facebook located in the Docklands in 2008 and built its first data centre in 2016; Google, after establishing its European headquarters in Dublin in 2003, built its first data centre in 2012 and expanded into its Grange Castle facility in 2016 (among office expansions in the Docks, which are now the company's largest offices outside of the US); and finally Apple, long regionally headquartered in Cork, tried but failed to build a data center in Athenry, County Galway between 2015-2019, in the meantime embroiled in a dispute with the EU over €13.1 billion in "illegal" tax breaks that the Irish state refuses to collect, as mentioned above.

However, in spite of the presence of these companies and the robustness of their financial and infrastructural networks circulating on and off the island, Ireland's public provision of technological infrastructures has not been so sophisticated. While urban spaces like Dublin are among the most well-connected in Europe, infrastructural access is uneven across the country, whether it be to do with technology, water, or other (increasingly privatized) public services. As Starosielski reminds us, "although cable traffic is often destined for larger urban areas…the channels through which it flows nonetheless depend on investments in and reorganizations of aquatic and coastal environments" (2015, 14), pointing to the rural and environmental stakes of global media infrastructures. But these media infrastructures are increasingly controlled by a smaller and smaller number of powerful corporations, leaving the "public good" of infrastructure in the hands of private transnational capital. Controversies surrounding rural broadband schemes in recent years, described in the next section, point to the ongoing infrastructural unevenness which continues to characterize the trade flows of transnational capital. For example, Dingle, in rural County Kerry, reportedly has the "fastest broadband in Ireland" at the Dingle Hub, a media, creative, and co-working enterprise space, due to an experimental agreement with eir (stylized lowercase, a formerly state-owned and now private telecommunications company), whereas much of the rest of Kerry remains unconnected to the nation-wide broadband network. Post-production and VFX companies must locate in areas with good internet connectivity. These technological factors thus have major effects on the distribution of media and creative industries across the country.

Within this circulatory dynamic, where the divisions between industrial sectors (and the public and the private) become blurred across supply chains, different forms of horizontal integration have thrived across the media environment. Media studies has long theorized the "convergence" of media industries with those of technology (Jenkins 2008), and this "information economy" built around broader industrial conceptions of digital media "content" is pressing (Preston, Kerr, and Cawley 2009). In particular, the distribution of media through technological infrastructures like data centers facilitates the collapse of media capital and supply chains, where certain very powerful companies (like Amazon, Apple, and Disney) tend to control both the production and circulation apparatuses of media (see Chapter 4). But the spatial clusters within which these convergences happen are as important as the deregulatory programs that have facilitated the mergers and progressive buying up of entire media supply chains by companies

like Amazon, Apple, Facebook, and Disney. We thus need to understand the global infrastructures through which capital, goods, people, and information of global media economies travel, carrying vectors of value along with them.

Technological Media Infrastructure since the Financial Crisis

The built environments through which media industries function are part of wider systems of power and capital. One of the primary aims of my research is to understand the points at which these systems collide with unruly environments, where they manage to operate in spite of or "break down" as a result of friction, disruption, or blockage. In an era of circulatory capitalism, the principal points of political contention and negotiation are the vast infrastructural networks through which capital operates. Scholars across anthropology, geography, media studies, science and technology studies, and environmental humanities, among other areas, have understood infrastructures as constituting the visible and physical representations of the public and political aspirations of the societies within which they operate. The breadth of inquiries into infrastructural politics emphasizes the pressing concerns of infrastructural provision, especially in terms of locating the precise pressure points of its development. As Brian Larkin defines infrastructures, they

> are built networks that facilitate the flow of goods, people, or ideas and allow for their exchange over space. As physical forms they shape the nature of a network, the speed and direction of its movement, its temporalities, and its vulnerability to breakdown. They comprise the architecture for circulation, literally providing the undergirding of modern societies, and they generate the ambient environment of everyday life. (2013, 328)

This focus on built networks, circulation, and breakdown underlies my own emphasis on built space, the movement of capital and goods, and the lived experience of their operation or failure, especially in times of crisis. While apparently "ambient," they are differentially experienced and governed. Workers and communities across Ireland live through infrastructural operation and development far differently depending on locations, histories, and politics. Film studios and the built space of the "creative city" house the real and affective circulations of media and finance; roads and regional development schemes send money and labour across the country to accommodate production; internet infrastructures through which we communicate take the form of private data centers. In each case, space is a tool for value production, superseding the needs

of the populace living in it. But through this, infrastructure is also a site of consistent contestation *about* the role of space, culture, and labour within the national narrative of progress and recovery. Such growth is distributed and experienced unevenly across the country.

Infrastructure's position within the naturalization of the free flows of global capital through states is as a place where these circulations are facilitated and made to feel as frictionless as possible. Media studies has over the past decade responded to calls to "materialize" these supposedly "dematerialized" networks of global communication and information flows with an increasing focus on "media infrastructure," contributing key insights to infrastructure studies more broadly. As Holt and Vonderau articulate, the politics of media infrastructure tend to occlude the principles of their operation, disavowing their material consequences as forms of governance while pushing forwards strategic forms of visibility (2015, 81). Starosielski warns us of the roots of this friction-free imagination within colonialism and capitalism, within which postmodern theories of "dematerialization" have often accidentally played into the hands of these smooth-world visions (2015, 5) such as those identified and critiqued by theorists like Hardt and Negri (2000) and Massey (2005). As infrastructure studies has demonstrated, and in spite of its association with modernity and scale, infrastructure is designed for ambient circulation, even if these circulations are turbulent, uneven, and intermittent.

In Lisa Parks' programmatic piece "'Stuff You Can Kick': Towards a Theory of Media Infrastructures," she discusses the "infrastructural turn" in media studies in particular, which has seen greater focus on the materials of media: the cables, wires, antennas, satellites, metal casings, anything that is involved in the physical operation of media circulation (2015a). As she theorizes,

> In an effort to develop a humanities-based approach to the study of infrastructure my recent research has combined approaches from phenomenology, cultural geography, and object studies to explore the sites, objects, and discourses that shape and inform what might be called *infrastructural imaginaries*—ways of thinking about what infrastructures are, where they are located, who controls them, and what they do…I have tried to develop a critical methodology for analyzing the significance of specific infrastructural sites and objects in relation to surrounding environmental, socio-economic, and geopolitical conditions. (2015a, 355)

Through these approaches, she argues, one can read media with an "infrastructural disposition," meaning that media infrastructures, technologies, and their distributive power are made visible in

and through the media that they circulate (357). In this kind of politics, silicon and copper intertwine with neoliberal measures to enable both technological advancement and corporate centralization and administer the material and immaterial elements of these "infrastructural imaginaries" whether real or foreclosed (Holt and Vonderau 2015; Larkin 2008; Parks 2015a).

Understanding the particularities of infrastructural politics requires engaging with ideas of the public embedded in these projects and their histories, especially in terms of the above-mentioned unevenness of modernity and its attendant legacies of Enlightenment thought. Ravi Sundaram finds that, as repositories for imaginations of colonial modernity, infrastructures in colonial India were designed to eliminate "dark space," the underside of the Enlightenment projects of rationality and "illumination" which continue to power the imaginations of infrastructural smoothness and free flow (Sundaram 2009). Throughout history, as Stephen Graham and Simon Marvin argue with reference to the US, infrastructure has been designed to bring access to certain areas, keep populations under control, and frequently reinforce existing divisions (2001; also Star 1999). Legacies of exploitation, racialization, class division, and other interlocking systems of oppression within imperial capitalism are embedded within infrastructural histories, construction, and operation. The planning logics of infrastructural development, even in postcolonial contexts, continue to carry residues of colonial power and exploitation, even when bringing certain promises of development and modernity to underserved people and regions (see Larkin 2008).

In a resonant example, British railway networks across Ireland, a symbol of the modernity of empire, were left to ruin in the postcolonial era, and the country's passenger railway infrastructure remains underdeveloped outside of the Dublin commuter belt. Transport infrastructure continues to be a point of contention around underserved regions, especially in the rural west, where motorways are sites of both (usually environmental) contention and real or foreclosed dreams of connection and access. As suggested by the example of uneven internet infrastructure determining the location of post-production enterprises, the distribution of infrastructural networks—and their direction of flow towards certain strategic points on the map, while cutting off others—has profound effects on the distribution of industries as well as the socio-economic conditions endured by communities in different places. The fascinating longitudinal documentary *When All Is Ruin Once Again* (Keith Walsh and Jill Beardsworth, 2018) uses the stalled timeline of the unfinished M17/M18 motorway in the west of Ireland to

look at the town of Gort at the border of Counties Clare and Galway through the financial crisis. Activating a longer cultural and environmental history of "ruin" and cultural relationships to the landscape through a W.B. Yeats poem quoted in the title, the film unpacks the textured public and everyday experiences of locals and social and infrastructural entanglements with the region's environments. Throughout this thesis, I pay close attention to the textures of such public(s) and their formation within infrastructural address—who infrastructures are built by and for, what sorts of goods they provide, and to whom.

Infrastructural provision is typically seen as the purview of states and public services. However, equations of public and private, state and corporation, especially in a context such as Ireland with a long history of public-private partnership (PPP) and semi-state institutions, need reconsideration when studying infrastructures. In Ireland, semi-state corporations and PPPs have been the favored method of infrastructural and industrial development for decades, as private administration of public goods has become the de facto mode of economic and social development (MacLaran and Kelly 2014a, 22). This has occurred in ways both imperceptible and disruptive, from "provision of public housing, hospitals, motorways, schools, rail and water and waste infrastructure" (Hearne 2014, 158) to directly incentivized development of private technological infrastructures like data centers. Corporate governance has become normalized, to the degree that semi-state organizations like NAMA and the IDA, designed to partner with and smooth out space for the private sector and particularly FDI companies, tend to be unquestioned providers of prosperity, jobs, and development. Semi-state corporations and institutions in Ireland have a unique history, with schemes like the SFZ and other zoning mechanisms (like the DDDC, in operation from 1997-2016) demonstrating the semi-state administration of territory as an experiment in regional planning and developmental urbanism. They are often for-profit, closely partnered with multinational companies, and exist as somewhat autonomous from the presiding Government. So, while there is a tendency to chastise the private and appeal to the public for a more equitable and balanced system, in liberal societies, particularly Ireland, the distinctions between these fields (one ostensibly designed and operated in pursuit of profit, the other to provide services and regulate the private sector) become very unclear once you begin to untangle the history of infrastructural networks themselves.

An overarching problematic of the field of "infrastructure studies" is studying this relationship between public use and private ownership. Even private infrastructure (for example,

private roads, cables, or data centers) require public funds and bundling with "official" state infrastructures. Just as "the State came through the pipes" with modern infrastructural systems (Trentmann 2009, 303), so too does the corporation. And even when this is considered, funding, zoning ordinances, taxation, and finally use, all operate as themselves "bundles" of public and private interests and finance. As Shannon Mattern reminds us, infrastructures are "path dependent," and older systems continuously live within current systems and also shape their futures (2017b, xxviii). If the privatization of formerly public infrastructures follows these same routes through our cities, across our transport systems, and into our homes, then we are already past the point of understanding the state as somehow separate from the private sector. The public and the private are entangled across contemporary environments, and within our experiences of them, made to feel natural and occluding the material politics of these imbrications.

Privatization requires a re-consideration of how infrastructural publics are formed, and how corporate entities, generally in partnership with the state, provide access to services that are infrastructural to everyday life (e.g. the internet). To Clemens Apprich and Ned Rossiter, the "spectre of the public" persists around anxieties of "access" (2016, 276), a privatized version of what public "goods" look like when telecommunications infrastructure is wholly administered by corporate powers. Holt and Vonderau also signal towards this in their essay on cloud infrastructure, wherein politics and subjectivity are re-situated within the realm of consumer goods but only strategically visible in such a way that these infrastructures appear apolitical (2015). But as these regimes become standard, we must re-calibrate our politics to account for their infrastructural operations outside of the democratic purview of the "public." In a perhaps too-strong polemic, Apprich and Rossiter argue that "within such architectures of control, there is no 'public'" (2016, 280). However, to build on this insight, the "public" is perhaps woven so tightly with the private as to actually become dangerously blurred through infrastructure. Labour regimes and political subjectivity are fundamentally transformed across these environments. The market comes to take over spaces once reserved for politics as the place for public participation, citizenship, and care. Labour is no longer protected by state infrastructures, but subject to the exploitation of private and transnational ones; politics re-orientates strategies towards private sector inclusion, as the case of Athenry residents mobilizing politically *for* Apple's investment illustrates (see Chapter 4).

Infrastructures and their politics are also profoundly affective, representing and containing the public aspirations of societies and the "promise" of modernization, development, and participation (Anand, Gupta, and Appel 2018; Larkin 2013). Media infrastructure has in Ireland become a site of deeply affective politics, especially since the financial crisis and during the recovery, related to imaginations of progress, public and civil participation, and conceptions of the country's social and economic futures. This is especially true with regards to global media and the tech industry, whose visual cultures—whether landscapes from *Star Wars* or tech's digital renderings of a clean and prosperous future—form an infrastructural allure in themselves. However, much as infrastructure is designed to recede into the background, it is within its invisible underbelly that the uneven mechanisms of its development and operation play out. Political programs struggle to articulate these connections between the public and future-facing visible world of development and the actual material processes by which it occurs. Those "left out" of its development or stuck living off of the "ripple effects" of its construction and operation, as has been the case with FDI-led growth in the country, feel as though they are on the outside of these narratives of progress, leading to dispositions of abandonment, stagnation, and the casualization of many forms of work across the country, especially in rural regions.[5] As Gago argues within her study of the politics of informality and civil organization in Buenos Aires, with reference to Partha Chatterjee's studies of "political society" in India (2004), precarious citizens organize their lives and labours based on conditions of availability, conditions within which the state *appears* to them as antagonistic or even non-existent (Gago 2017). Intimately related to privatization and financialization, in environments of crisis and indebtedness, as those doing empirical studies of "financialized subjects" have articulated (see Beggs, Brian, & Rafferty 2014; Gago 2017; Mulcahy 2017), how people relate to themselves, their communities, the state, and the market responds to particular conditions of what is materially available and how to make claims on it (Gago 2017). Whether expressed through entrepreneurialism (and other pro-business ideologies and activities) or political upheaval, populations are constantly involved in global processes, state programs, and more emplaced conditions of availability at the same time.

From such examples we see that infrastructure and its operations do not recede into the background and become ambient and "atmospheric"; they reproduce or provision consequential

---

[5] This is not to mention the actually-existing digital divide in urban spaces as well, where the un-housed and other precarious or non-citizens are denied access by economic or racial barriers and discrimination.

divisions of access and uneven development. In Athenry, where Apple tried to build a €850 million data center but had not expected a half-decade political fight through both the town and the country's court system, it could not recede into the background—its politics were too eventful, out in the open.[6] In west Kerry, the bottlenecks and undeveloped roads mean that it is de facto cut off, by both landscape and remoteness. Same goes for any location where the basic rights of housing, healthcare, and other former "public" services fail daily (leaky roofs, poor water, electricity). In particular, high-speed internet is uneven, and the state contracts fiber optic infrastructure to private companies such as eircom (stylized lowercase), a formerly state-owned and now privately-operated telecommunications company incorporated in Jersey. eircom, under the trading name open eir, is set to provide 80% of the country with broadband, whereas another company, National Broadband Ireland, controversially received a €3 billion contract to connect the remaining 20% of "rural users." Advertised as a "turning point for the revitalisation of rural Ireland" (Burke 2019), this expensive and clunky project is being rolled out as broadband stands to be largely replaced by 5G within the next few years. The public/private purview of public services development has caused a variety of problems, as these expensive projects leave the state at the behest of companies focused on diversifying profits and public visibility, whereas the state, politically, seeks to provide equitable access to infrastructure across a nation still divided along urban and rural lines. Poor planning and messy rollout are bad optics for the state, leading to further public alignment with the private sector to manage and provide goods. The strategic development of media infrastructure in Ireland is a reminder of the variegation of power and sovereignty in contemporary life, or what Ong has called "graduated" or "variegated" sovereignties (2006), depending on the spatial and economic mechanisms employed. When critical infrastructure is designated to the private sector, and the environment itself becomes increasingly privatized, we need different ways of understanding the places in which we live, work, and struggle. As Michel de Certeau reminds us, if strategy comes from consolidated institutional "blocs of power" that plan and structure life via modes of production, then our "tactical" responses to these exertions of power must attune themselves to these top-down strategies (1984), whether coming from the public or the private sector.

---

[6] Elizabeth Povinelli has written on "eventfulness" and "late liberal governance" in contexts of what she calls "economies of abandonment" in indigenous communities in Australia (2011). The eventful power of state and capital are contrasted with the non-eventful and everyday suffering of abandoned populations. Rural Ireland is a quite different context, but the feelings of abandonment there remain significant.

In my research into Ireland's infrastructural politics, I found many resonances with these existing literatures in terms of how communities and populations relate to these large-scale processes and institutions, both affectively and tactically. Citizens and workers often felt like the state simply could or would not help, its infrastructures not designed for their direct benefit, thus compelling them to rely entirely on private sector inclusion and expansion. In each of the next three chapters, these spatial and infrastructural politics are unraveled in relation to their localized effects. In Chapter 2, as the policy- and FDI-led "creative city" ostensibly thrives, we will see how alternative practices of re-use and the reclamation of space for residents are foreclosed by the state and capital. In Chapter 3, we will unpack the media policy which is *infrastructural* to the operations of global media capital as it circulates through the country, which distributes effects unevenly and leaves workers toiling precarious gigs in the dearth of direct public funding and subsidies. And Chapter 4 will unravel how civil society mobilizes for the private sector infrastructure projects of big tech, in the case of Athenry, appealing directly to a multinational tech company while the state's plans foundered in the courts. In each case, politics are organized in and through the particular *mode of production* employed through *circulatory* infrastructures. We can thus observe how infrastructural politics, in Ireland and elsewhere, are mobilized by the "circulation struggles" (Clover 2016) of workers and communities which necessarily arise from sites of capital movement—whether via finance, media, or technology.

In conversation with above-mentioned approaches to media infrastructure, especially the work of scholars such as Mél Hogan (2015a, 2015b), Parks (2005, 2015a), Starosielski (2015), Julia Velkova (2016), and Asta Vonderau (2019) and emerging out of a tradition of science and technology studies of the socio-technical assemblages of contemporary life (see Bowker and Star 1999), this dissertation also joins a body of work expanding the circulatory logic of technology and infrastructure to account for the term's usage within infrastructures like film studios (Dickinson 2020; Jacobson 2015), VFX hubs and facilities (Acland 2018; Chung 2012), and other sites of production for film and media. These sites facilitate the circulation of people, goods, information, and finance through the country. We can also begin to include state infrastructure—such as roads, railways, airports—into the assemblages necessary to understand the environment of media and its production and circulation. These existing infrastructural routes help determine location and viability for industrial infrastructures. Mapping their distribution and spatial development is a useful tool to study the presence, absence, or struggles of the media

industries across the country. SI and other government bodies advertise public infrastructure as opportunities for companies to locate and perform productive activities, but the ways in which these activities generate value perhaps derive more centrally from efficient and interconnected modes of circulation. Supply chain capitalism demands that productive activities must be coordinated across vaster spaces. The more effective the coordination, the greater the value produced (see Cowen 2014; Tsing 2009). Whether the efficient shipping of filming materials in order to avail of otherworldly landscapes and largely non-union crews in west Kerry, the logistics needed to transport talent to one of the film studios outside of urban Dublin, or the fiber optic networks required to perform and circulate post-production and effects work, these infrastructures are productive apparatuses that contribute to better managing and facilitating the flow of people, goods, information, and capital through Irish space.

None of this is to deny the specificity of media infrastructure. Roads only become relevant to, and *as*, media infrastructure once they enter into an assemblage of elements required for media capital to circulate. For example, deciding to shoot a film at Troy Studios in Limerick means that equipment, crew, and talent will have to be initially transported from elsewhere, at which point, airports, railways, and other transport sites also enter into this network, along with pipes, cables, electricity, and the like. The interconnectedness of labour across all these points within media's supply chains helps us understand how the overall industry operates, including the contributions of transport workers, craft services, catering, builders, engineers. Infrastructural systems, far from operating without friction or management, require tremendous amounts of labour and resources. Supply chain capitalism, in no way a smoothly integrated system, relies on patchy networks of subcontracting and outsourcing. If, as Curtin notes, media globalization has created a "global infrastructure of media labour exploitation" (2016), this project attunes itself to the localized politics and instantiations of its operations, especially in terms of how the actors and stakeholders involved interface with the state and corporate partners.

These imbrications become a geo-economic process by which the landscape of a given territory is produced, transnationally, as a space through which value can be extracted from an already-existing tangle of elements, such as a nation's internet infrastructure, road networks, or energy grid capacity. In data centers, this comes largely from consumer video streaming and enterprise data mining, where extraction withdraws from the apparent abundance of data as a "raw resource." As Apprich and Rossiter posit, "The enormous volume of data generated by our

compulsion or command to participate is tied to the social production of value. The algorithmic mining of data has become one of the last frontiers of economic extraction" (2016, 273). Mezzadra and Neilson similarly outline the reliance of the global economy on the nexus of "extraction, logistics, and finance" as a similar frontier for the social production of value from flexibilized and distributed forms of production (2013b, 2015, 2017, 2019). The extractions *facilitated* by infrastructural logics of course have their own environmental consequences: transport mobility for media production and data centers all burn carbon. Scholars have noticed that within supposedly "green" and technologized global supply chains, extractive activities have actually expanded rather than contracted with increased efficiency, whether in resource frontiers in the Global South (Arboleda 2020) or through intensifying value extraction through consumer and enterprise technology (Srnicek 2016).

Data centers, as one particular and media-orientated instantiation of this much wider system, like mushrooms popping up from miles and miles of underground roots, allow us a chance to see where a particular spectacular version of the spatial development of "logistical media" undergoes transformations and friction via localized infrastructural politics. The "frontier of extraction" of data and smart devices is increasingly infrastructural to how we live our everyday lives, and how we are governed. As Rossiter tell us, the "commercialization of data generated through such devices, and from the technification of the body, also registers the financialization of biopower" (2016, 28). Unpacking data's entanglements with communities, workers, and the "natural" environment, both discursively and concretely, Ireland's media infrastructural politics shows us a series of logics by which "extraction" of value from space and labour occurs *through* infrastructures. This is pertinent to the similar but specific disruptions and issues faced by tech infrastructure development in different parts of the world by large corporations. These disruptions, as will be described below, are both the result of global systemic interdependence, and, increasingly, the turbulence of planetary ecologies. Each of these forms of turbulence are managed by logistical ways of thinking.

Logistics, Media, and Supply Chain Extraction
The mechanization and optimization of logistics, along with the dispersal of production across global supply chains described above, has disempowered labour organization worldwide and increased structural precarity, as much important scholarship has argued in detail (Chua,

Danyluk, Cowen, and Khalili 2018; Cowen 2014; Lecavalier 2016; Tsing 2009). The strategies and technologies through which this has occurred have also been subject to rigorous scrutiny from scholars (Levinson 2016; Mezzadra and Neilson 2019; Rossiter 2016). In a popular account, Marc Levinson traces the history of containerization (2016), by which the standardization of shipping containers across the world's supply chains systematically disempowered labour as a political actor within them via processes of mechanization and automation. The managerial logics enclosed within the form of containers—and their facilitation of greater automation—represent and fulfill a crucial part of the frictionless dreams of capital.

Although I aim to build on this kind of work, I am not primarily tracing these specific networks of trade and their management through this thesis. Rather, I am looking at how *logics* of capital organize certain common-sense ways of governing and managing labour, production, and circulation across global infrastructures and supply chains. In this way, I am interested in how logistics as a "calculative rationality" (Chua et al. 2018)—as a managerial exercise of sovereignty across logistical networks and their infrastructures—shapes certain practices and policies within the states and zones through which corporations operate. Charmaine Chua, Martin Danyluk, Deborah Cowen, and Laleh Khalili in their excellent and programmatic piece for a "critical engagement with logistics" account for this broader reasoning:

> a wide range of circulatory processes—flows of goods, services, bodies, information, and capital—can productively be examined through a logistical lens. Viewed from this perspective, logistics is not reducible to a mundane science of cargo movement or a discrete industry among others. Rather…it is better understood as a *calculative rationality* and a suite of spatial practices aimed at facilitating circulation—including, in its mainstream incarnations, the circulatory imperatives of capital and war. (2018, 618, my emphasis)

The suite of practices which facilitate circulation, for the purposes of this thesis, can include state policy, spatial planning, visual culture, and technological infrastructures, as much as more traditional logistical movements like the movement of raw goods and resources. As Martin Danyluk (2018) and others have argued, the financialization of the world economy has operated in tandem with the "logistics revolution" and its spatial and structural impacts on industries and infrastructures in diverse locations across the world. For example, the re-development of the Dublin Docklands, akin to other waterfront industrial spaces through the late-twentieth century,

followed infrastructural changes and the decline of employment in the Dublin port due to containerization, which moved operations away from the city center and to deeper waters closer to the mouth of the River Liffey at Dublin Bay. But as later chapters will argue, the development of global logistical infrastructure has implications far beyond only the material circulation of goods, as the rationalities of supply chain management and security enter into the media and creative industries and their spatial practices.

Thus, while a materially specific managerial sensibility, the study of logistics provides a way of understanding the material processes by which value is created *by* coordinating movement (and the various strategies and tactics within (see Bernes 2013; Harney and Moten 2013)). This movement does not just encompass raw logistics—i.e., the moving of people and goods on ships, trucks, and planes, across seas, roads, and skies. Logistics connects disparate places across the world, collapsing space and time, as the familiar description goes, and in the process eliminating or disempowering the role of labour. In doing so, the production of value is increasingly organized across these disparate supply chains, as the "circulation of stuff" means that commodities are manufactured "*across logistics space*" rather than in singular locales (Cowen 2014, 2). Neilson and Rossiter call the spaces stitched together by global networks of trade "logistical worlds," and note that increasingly "the 'capitalist world system' is composed of modes of value production that draw on seemingly pre-capitalist systems of governance and social relation" (2017, 13). Between these spatial and temporal fissures, there are alternative, and turbulent, "worlds." For example, in Ireland, the "wild" past activated by current business-friendly discourses often proves an unruly opponent to the smooth flow of capital upon capital actually hitting the ground. In this sense, logistics and its spatial technologies are always navigating a lumpy past and a turbulent present in order to conjure its future world. "Logistical worlds" are not fixed—they are always in motion, and in so being, logistics is constantly encountering (and suppressing) unruly spaces and subjects.

A variety of methods and machineries are employed to manage the "turbulent" and "lively" worlds confronted in logistical operations, and such technologies are a large part of the logistical apparatus. What Rossiter calls "logistical media" (2016), after John Durham Peters (2015), describes the "technologies, infrastructure, and software" that "coordinate[s], capture[s], and control[s] the movement of people, finance, and things" (Rossiter 2016, 5). The expansion of global communications infrastructure culminates in the governance of geo-economic trade and

financial flows facilitated by a variegated and highly privatized network of communications technology, a system of fiber optic cables, data centers, satellites, office spaces, and the hardware and software meant to ensure smooth operation and minimal interference. When software comes to coordinate these global systems, "media become sovereign" (5), subjecting workers and consumers to their private forms of discipline and control. As these infrastructural environments appear ambient and circulated by state and corporate power in shared measure, it grows more difficult to govern by the state's terms (and easier to govern in logistical terms). The "elasticity of space" across logistical territory is "accompanied by modulations of time whose rhythms, pulses, and vibrations" are "synchronized with the financialization of labor and life" (Rossiter 2016, 46). These various spatio-temporal dynamics must be coordinated across points in real-time, leading to the suppressive features of governance which characterize "just-in-time" production and its constant management of unruly workers, spaces, and environments. Such modes of production and circulation intensify the value relationship on the very bodies of workers, calling to mind Marx's assertion that capital circulation—and exploitation with it—is made possible only by the initial alienation of the workers from the fruits of their own labour power. One need only look at the biometric devices that companies are fixing on warehouse workers to measure and police productivity and movement (Brustein 2019).[7] These represent the embodied iteration of the proliferating sensors and atmospheric computing of "smart" environments and cities (see Gabrys 2016; Mattern 2017).

Securing the production and extraction of value across space thus requires a vast global infrastructural apparatus. The process of managing, stamping out, or stitching together unruly "worlds" is a shared experience of circulatory capitalism, whether one is discussing finance or logistics. As noted above, Mezzadra and Neilson argue that an integrated approach to "extraction, logistics, and finance" is necessary in order to

> pursue an analysis that underscores the crucial relevance of capitalist activities within specific economic 'sectors' without succumbing to arguments that position such sectoral activities as exclusive frames for the interpretation and contestation of contemporary capitalism and neoliberalism at large. (2017, 187)

---

[7] Like many logistical operations along the supply chain, this is pitched as a "safety" monitor and being used to test feasibility of automation.

Tsing performs a similarly interlocking analysis, arguing that while "supply chains are not the only forms of contemporary capitalism," which include finance and large corporate entities, they exemplify the simultaneous heterogeneity and standardization that characterizes the diverse operations of the world economy, within which "diversity forms a part of the structure of capitalism rather than an inessential appendage" (2009, 150). These operational logics which Mezzadra and Neilson and Tsing trace across apparently loosely interconnected sectors of the economy are central to the extractive and exploitative activities that occur across their specific sites and centers of power. In this way, the financial extraction of debt by the IMF from countries in the Global South can be linked to the developmental activities of the PRC building ports and roads—logistical infrastructures—as a force of economic development; or the circulation, accumulation, and extraction of value from data in mechanical sheds encircling Dublin can be intertwined with the financial apparatuses that funnel wealth through tax evasion back to headquarters in California.

But as many have pointed out (see Cowen 2014; Mitchell 2011; Tsing 2009), in spite of more intensive technologies of controlling workers and sophisticated modes of operating across diverse territories, the extensive character of logistical networks makes them subject to more disruption across their dispersed activities, including the potential "counterlogistics" of labour struggles (Bernes 2013) and the "unmanageable" contingencies of broader geopolitical disruption. Chua et al. propose that in studying logistics, we must account for both turbulence, characteristic of global supply chains, but also the frictions of spaces through which such logistical flows travel, the "lively" social worlds that logistical infrastructures encounter and attempt to "co-opt, contain, or absorb" (2018, 623). As these authors argue, "the gap between the idealized imagination of logistics and its messy implementation reveals that the project of making the world safe for circulation is always incomplete" (624). Chapter 2 asserts that the visualizations of the city made by digital media companies for developers demonstrate a *logistical* process of preparing the city for financial circulation, but cannot contain the unruly and chaotic spaces of the city. In addition, so-called "fast-track planning" which attempts to remove local dissent from the planning process nonetheless encounters resistant political formations. Chapter 3, then, builds on spatial understandings of global media supply chains by looking at how the state's media policy conditions Irish space for FDI and offshored media production, in doing so failing (or choosing not) to provide care for the country's "labour resources."

Circulatory capital must always manage turbulence—or liveliness—at a variety of scales, as turbulence is a condition of life across both the systemic and the everyday. For Tsing, "Supply chains are harder to control than corporations or state bureaucracies," as they are forged "within the constant flux of boom and bust opportunities" (2009, 150). Supply chain disruptions span "the everyday delays of bad weather, flat tires, failed engines, missed connections, traffic jams, and road closures" (Cowen 2014, 2) and even the growing turbulence brought by climate change. Financial, logistical, and governing systems have a hard time dealing with the largely unpredictable turbulences of meteorological and geological systems. For example, financial systems must increasingly account for and predict climate turbulences (Cooper 2010); undersea fiber optic cables face disruption from both fishing activities and climate change (see Starosielski 2015, 2019); and even the basic chore of getting people and materials to filming locations in Ireland can be disrupted by bad weather, as the treacherous journey out to Skellig Michael in west Kerry proves for both the global film production and tourism that will be analyzed in Chapter 3. At all scales, from protection to insurance to snow tires, financial and supply chain security thus must account for classic as well as emergent disruptions. However, as infrastructural networks providing public and cultural goods are subjected to greater turbulence, so are the administration and governance of these goods, data, and people beholden to the logics of management which attempts to not only control, but to extract value from such conditions.

Similar to Mezzadra and Neilson's identification of the interlocking activities of "extraction, logistics, and finance," Cooper identifies the coalescing security interests of finance and logistics within the US' geopolitical maneuvers on the climate (2010). This includes undertakings in military logistics as well as financialization, as the "scenario planning" of the state includes each of these fields, works across supranational arrangements, and aligns the country's ongoing imperial power with global turbulence (171). Cooper describes these "turbulent worlds" coming under management by climate finance and speculation, extending financial extraction—through futures trading and instruments like derivatives—to the fluctuations of weather and climate turbulence. While this occurs largely within the abstraction of finance, these operations colonize and dictate material territories. Deckard, adapting Jason Moore's "world-ecological paradigm," argues that the financialization of nature in Ireland is part of a much longer metabolic relationship to land and resources via colonial histories and world systems (2016). Adapting Moore's dictum that "Wall Street is a way of organizing nature"

(2011, 43), Deckard contends that "the IFSC is a way of organizing nature, with pernicious consequences for water, energy, and food systems in Ireland" (2016, 158). Its role establishing and continuing Ireland's function as a tax haven has expansive effects across not only built environments but on the very ground and resources through which people subsist. As Chapter 4 will argue, climate and environmental governance are increasingly focused on data centers as a logistical technology within future "green" economies, demonstrating the extent to which finance and logistics operate through the very atmosphere that we breathe and the environments that sustain us. If financialization is a way of "organizing nature," then we can perhaps argue that in its methods of producing value across vast distances and environments, logistics may operate in tandem as a way of "managing" across and via nature by operating through and instrumentalizing certain territories and environments. Shipping vessels traverse the seas, navigating through choppy waters but also working across favorable currents; airplanes weave through complex weather patterns, often using them for leverage and efficiency. These logistical operations, by which value is created by optimizing movement, are enacted despite their status within the unenclosable global "commons" (see Heller-Roazen 2009).

These global commons, supposedly outside of property relations and the rule of nation-states, have not been spared the externalities of global capitalist activities, as the mines, ships, trucks, factories, refineries, dumps, and other toxic enterprises which make up the backend of the supply chain continuously poison the air, earth, and water. As Chapter 4 will explore in greater detail, logistical technologies like data centers also have *direct* relationships to the environmental chaos that Deckard studies, in their utilization of climate conditions for cooling, concrete effects on emissions via energy usage, and attachments to wider energy assemblages. A.R.E. Taylor has analyzed the associations of data centers with "wilderness," both through their popular visualization and the imaginations of their empty, technological spaces ripe for logistical extraction (2019). But within data centers, and in the surrounding "terra nullius" that they must actually and imaginatively colonize, different kinds of labour, politics, and environments interact productively with logistical flows.

It is revealing that data centers and tech companies, in aiming to manage such turbulence, have come to play such a structural role in Irish economic development. Attracted by a "cool" (and stable) meteorological climate often discussed in terms of Ireland's predictably blustery weather and wild greenness, and as infrastructures that are so frequently visualized in terms of

their surrounding natural landscapes (Carruth 2014; Holt and Vonderau 2015), they represent a coalescing of cultural and economic logics of extraction in the post-financial crisis era. As technologies of "logistical media" meant to manage and make smooth the flow of data from a vast array of enterprises, consumer activities, and governing procedures across disparate spaces, internet infrastructures like data centers are uniquely poised to fade into the background of our global life, in spite of scholarly work highlighting where they are and what they do (Hogan 2015; Holt and Vonderau 2015; O'Neill 2018). In Ireland, these have developed in a post-financial crisis environment characterized by systematically disempowered labour, friendly planning and business mechanisms, and a state which has actively promoted the country's natural climate, landscape, and geographical location as ideal for the establishment of data centers. Data centers' use of prevailing business, infrastructural, and natural "climates" in a given place represents the colonization of the very atmosphere within which we live and breathe by the logics of global capital. Whether felt in "atmospheres" of affect studies (Furuhata 2018; McCormack 2018), through the socio-cultural "climates" of history (Chakrabarty 2009; Hulme 2017), or in the toxic particles we breathe, capital's logics are in the air, whether we notice or not, and very little is spared from the machinery of extraction, exploitation, and the externalities of these processes. As climate change continues to generate incredible global turbulence, it is no wonder the financialized logics of tech and media are looking to the atmosphere as a place of future value, hedging their bets on this key common resource as an emergent site of privatization. Logistics as a managerial science and "calculative rationality" is uniquely positioned to ride out coming turbulence, so too are its ways of squeezing value out of optimizing and coordinating movements across geopolitical spaces and environments. It should come as no surprise that logistics companies responsible for labour exploitation in factories, warehouses, and across supply chains the world over like Amazon, Apple, and Alibaba are some of the major players in global data center marketplace, and also develop and test the technologies of automation which optimize these networks.

But contrary to perhaps preemptive statements about the sovereignty of these companies *over* spaces, we must pay close attention to exactly how political subjectivity and governance is re-shaped through interactions with places and nation-states. As the final chapter will argue, US multinational corporations have maintained a presence in Irish public life for long enough to have permeated the social and political fabric of the country. We cannot think of their

"incursions" as somehow fully external to the Irish state, parachuting in unannounced; rather, their myriad partnerships and negotiations with the Irish state means that their presence has become somehow endemic to how the state operates. If finance organizes and logistics manages natural turbulence in Ireland, they do so through the transnational corporations operating through it and in partnership with the state. So, while we may not be seeing the rise of a "logistical state" as theorized by Rossiter (2016), it remains true that the expertise, the training programs, and longer-term contracts that these companies have with the state position them as service providers in an increasingly privatized environment. These "ripple effects" are seen as primary benefits of FDI-driven operations to local communities (see Chapter 3 and 4). These infrastructures only "become sovereign," Rossiter argues (5), after a series of complex negotiations with the state leaves people and workers subject to the coercive power of transnational business at high levels of planning and development. This corporate sovereignty is then felt *within* the everyday struggle of making a living in a place where capital tends to come only in trickles rather than waves.

As the final chapter of this thesis will argue, data centers are not only sites through which extractive activities of logistical media *happen*, they are extractive technologies in and of themselves. Just like spaces where media production occurs throughout Ireland, if extraction across capital's frontiers is intensifying through the logistical organization of its sites of value production, then we can observe that processes of extraction occur not just *within* logistical networks but *through* them. "Calculative rationalities," like financialization, are not simply learned in schools, deployed in boardrooms, and felt by specific workers. They are collective and agential systems of thought through which economies function and power operates. Extractive processes extend into our very ways of seeing and moving through the world.

Conclusion

The diverse and extractive operations of contemporary capital require site-specific and rigorous empirical work, but they also demand transdisciplinary grounding. In bringing together literature from anthropology, geography, media industry studies, and science and technology studies, particularly through the history of financialization, the globalization of media industries, and the role of media infrastructure and so-called "logistical media," I have begun to unravel the entanglements that occur at sites through which capital is operationalized in Ireland. This occurs through a series of ongoing and pervasive naturalizations of the role in capital in bringing and

sustaining economic and spatial development, especially since the 2007-2008 financial crisis, during which the extractive operations of FDI-driven investment intensified through an environment of austerity. In the coming chapters, I will deepen this analysis through engagement with the country's policy and planning environment and recourse to a variety of sited case studies across Ireland.

The conceptual and historical foundation laid out in this chapter does not merely serve as groundwork for the remainder of the thesis. Rather, in bringing together these literatures and navigating through their complexities via the Irish context, I am emphasizing the ways in which certain rationalities of spatial development, policy, and management have transformed and come to appear as necessary and even *infrastructural* to the environments through which they operate. FDI has colonized many elements of public life in Ireland, from culture to politics, as we can see through logics of "creative industries" and their role in spatial planning. The tech industries are central to these ideologies of creativity. So, while data centers and so-called "logistical media" are *new* technological infrastructures dictated by emergent "calculative rationalities" governing Irish space, they actually represent coherent progressions from earlier forms of economic extraction and the management of turbulence which developed throughout Irish (neo)liberalization.

In the next chapter, I bring these issues to a directly spatial analysis of Dublin as a "creative city." Through the ideology of "creativity" and the prevalence of Richard Florida's "creative class" (2005) concept in city planning, new waves of foreign capital have re-animated the ruins of post-financial crisis Ireland. In doing so, alternative ways of living, working, and relating to the built environment have been foreclosed and bulldozed by the technocratic operations of the state and its corporate partners. By analyzing the specific role of media and the media industries within this tumultuous environment, the coming chapter builds on the spatial foundations laid in this one in order to articulate the *productive* processes through which finance operates and creates worlds in Ireland.

Chapter 2 – Ghostly Currents: Crisis, Ruin, and the "Creative City"

> Beyond descriptions of financial market trends and technologies, there is the ongoing and violent tendency of finance to penetrate and subsume economic activity and social life as a whole. The unfolding of the crisis and its management have only entrenched this tendency. Financialization has produced, but also faces, a new landscape, making it necessary to rethink arguments about globalization, the relevance of territory and space, the role of the state, structures of governance and legal orders, and the relation of capital to labor and social cooperation. The analysis of financialization must account for the material interfaces and multifarious devices through which finance 'hits the ground.'
>
> Sandro Mezzadra and Brett Neilson, "Operations of Capital"

> All over Ireland, 'ghost estates' are enveloping many of our towns. Driving back from the West, these spooky ghost estates emerged out of the mist announcing places like Termonbarry, Frenchpark and Edgeworthstown. Anywhere there is a tax-driven scheme, there are ghost estates.
>
> David McWilliams, "A Warning from Deserted Ghost Estates"

> The facades [of states] remain, but they only serve to mask a pile of rubble.
>
> The Invisible Committee, *Now*

On the south bank of the River Liffey, in a corner of Ringsend in sight of the International Financial Services Center (IFSC) and the rest of the North Dock, there is a boat in a car parking spot, out front of an apartment building, resting elevated near the mouth of the River Dodder and the Grand Canal where they meet the Liffey (Fig. 2). This boat, brought to land by some unknown tide, seems apparently forgotten, a ruin of a past time: whether of a time when residents in this portside neighborhood were more seafaring; or perhaps of a time when excess wealth drove some local resident to purchase a leisure vessel, now too expensive to upkeep. But this boat was, on the contrary, not entirely forgotten. It was being laboured over by *someone*, dismantled, neatened, or stripped for parts, either by its owner or by enterprising passers-by (Fig. 3). As an outsider, I never learned the boat's full story. How had it arrived? Did residents consider it an eyesore? A depressing remnant of another time? Or did they cease to notice it, ignoring what might have brought it there in the first place? Whatever the case, returning to the area from 2017-2019, as it decayed and was progressively dismantled, a spectacular high-rise rose higher and higher from the ground across the entrance of the canal. As the boat went through various stages of disrepair, Capital Dock, a multinational mixed-use investment

property, created a new future at the edge of the "Silicon Docks," where multinational tech corporations host expansive operations, uphauling space to build new futures out of ruin.

Fig. 2: A stranded boat, with Capital Dock in the background, in June 2018

Fig. 3: The same scene in February 2019

I never learned the origin nor the fate of this boat, but these histories lived in the material space nonetheless, in vital relation to the surrounding environment, uncontainable and finding unexpected relations and re-use. Throughout my research and fieldwork, I encountered many such sites of unfinished and informal urban artefacts. Building on these experiences of the city, this chapter will unpack the cultural, visual, and affective economies circulating through the built environment of Dublin as a "creative city." As Cian O'Callaghan, Sinéad Kelly, Mark Boyle, and Rob Kitchin argue, there are "topologies" and "topographies" to Ireland's financial crisis—

the former, available to uncover hidden systemic processes and meanings, the latter to excavate deeper local histories and cultural meanings (2015). While O'Callaghan et al. unravel the varied histories of neoliberalism across the country, in this chapter, I will focus on the role of media within the form and experience of the creative city in Dublin. The Dublin Docklands will serve as the center of this analysis, former industrial and port hinterlands in the heart of Dublin re-developed as a cultural and enterprise district. These "Silicon Docks," in reference to the big tech hub of Silicon Valley in California, have been the invented center of big tech capital in Ireland since the financial crisis. Google, Facebook, and Airbnb, among other companies, maintain headquarters in this area, attracted by Ireland's pro-business environment and low corporate tax rate (12.5%). This area was initially put on the foreign direct investment (FDI) map as the site of the International Financial Services Centre (IFSC), established in the north docks in 1987. The area now also houses some of the country's largest cultural infrastructures, like the Bord Gáis Energy Theatre, one of the city's most remarkable contemporary buildings. Administered by the Dublin Docklands Development Authority (DDDA) until 2012, and designated a strategic development zone (SDZ) for re-generation through the financial crisis, the National Asset Management Agency (NAMA), the Irish national "bad bank" set up in 2009 to absorb toxic real estate loans following the financial crisis (see Byrne 2016), has centered much of its Dublin focus since the 2007-2008 financial crisis on this area for re-development (Fig. 4; also National Asset Management Agency n.d.). Representing an increasingly familiar transition from financial to tech services FDI as a motor for the Irish economy (Brodie forthcoming), the presence of US tech multinationals across the river from the ur-site of Ireland's financialization has been long in development.
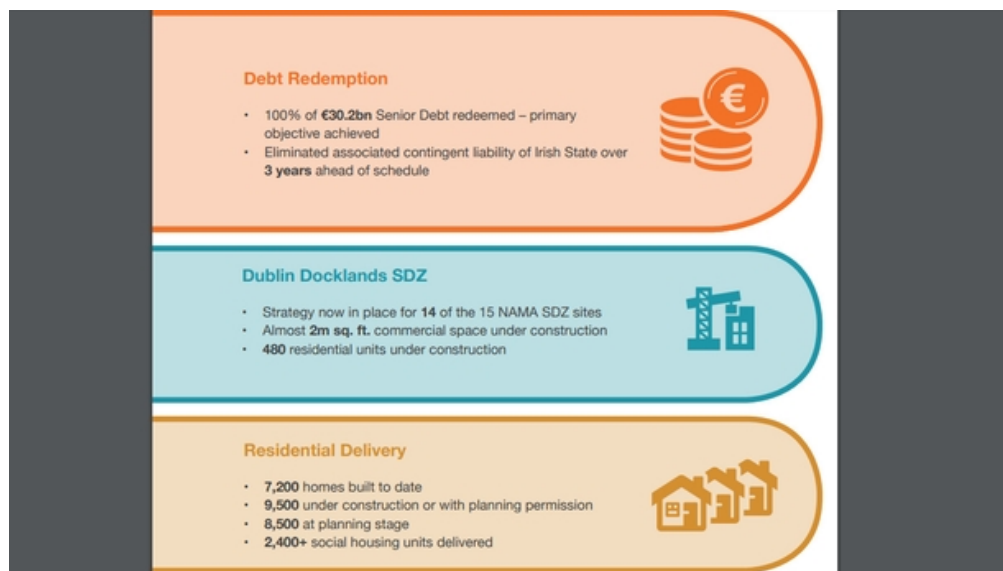
Fig. 4: An infographic of NAMA's successes in 2018 (source: RTÉ 2018)

Today, from miles away, you can pick out the Docklands by the sea of cranes rising into the sky.[1] The area borders several residential neighborhoods not yet overtaken by new development, such as the working-class Irishtown and Ringsend to the east, the latter of which is home to the odd boat described above. Google has reportedly already considered property across these neighborhoods. On the other side of Ringsend and Irishtown, the Poolbeg Peninsula extends outwards into the sea. The Poolbeg West SDZ, consisting of vacant and derelict industrial property, has been earmarked for mixed-use properties by multinational developers, who fought out for the space with a high-profile film studio project called Dublin Bay Studios to obtain permission for the site from the Dublin Port Company (DPC). At the far eastern end of the Poolbeg Peninsula is the Pigeon House Power Station and Hotel, largely abandoned industrial structures neighboring a controversial waste-to-energy plant, owned and operated by US-based waste multinational Covanta, and an active Electricity Supply Board (ESB, a state organization) power station. The Pigeon House site has been the subject of debate as to the location of a "cultural precinct" and "creative cluster" nestled within the loud, smelly industrial zone (Kelly 2018). During my fieldwork, I would spend hours wandering the Docklands and Poolbeg, photographing and observing the constant and profound transformations occurring at staggering speeds. Once, upon realizing my meandering through the buildings, water treatment sites, low-trafficked industrial roads, and paths had made me late for a meeting with my supervisor at

---

[1] Various interlocuters told me that counting the number of cranes over Dublin was akin to reading the stock market.

Trinity, I realized I was over an hour's walk from the nearest bus stop. I called a taxi to avoid embarrassment. Chatting with the driver about why I was out there, he told me, by chance, that he frequently drove for film productions in the Dublin region. The Poolbeg Peninsula, he said, was no good. The infrastructure was lacking, and out of date; it took too long to get out there from the city center; it was ugly. There were far better sites for film studios and production than Poolbeg, he argued, at least from a driver's perspective.

The Docklands, like former port and waterfront spaces in Bilbao, London, and globally, used to be port and industrial hinterlands which fell to ruin and disuse, only to be "rejuvenated" as so-called "cultural quarters" by cultural infrastructures and creative enterprise (see, for example, Simpson 2017, 132-136). Re-made in post-industrial society as a zone for cultural experience, innovation, spectacular wealth, and conspicuous consumption, more port and industrial lands are in the sights of speculative actors both in city council and far away. To identify the structural role of culture and "creativity" within these future-driven initiatives in relation to the activation of past and cultural elements of Irish life and space, I will unpack the logics of development that play out across Dublin as a "creative city" since the financial crisis in 2007-2008. The Dublin Docklands are the setting of most of this analysis. The industrial and warehouse spaces of this area now house the European headquarters of tech multinationals, along with an array of other creative companies. While industrial structures outside of the central areas of this district decay, awaiting a new future, inside of the creative city, this futurity is already there. Few visible ruins remain that are not soon eaten up by the creative city's circulatory machinery. Billboards, construction hoardings, cranes, trucks, artworks, and graffiti co-exist in the same spaces, on the same streets, in the same alleys and public squares, forming an overwhelming and choppy experience of the city and its real and imagined ways of life.

The culture and visuality of constant change and upheaval masks ongoing and violent displacement underneath. These futures leave little room for maneuver, or for alternative visions of what living and working in the creative city might look like outside of endorsed creative enterprises and cultural infrastructures. Media and technology industries coalesce within the financialized landscape of the Docklands, spatially mirroring the convergence of these industries more broadly. Within visions of the creative city, the future is already happening, and alternatives are already foreclosed. Constant and disruptive change is the norm.[2] The media of

---

[2] This, of course, mirrors the focus on and valorization of innovation and "disruption" in tech industries themselves.

the creative city does not see existing communities and residents thriving, or even remaining—it sees new residents, industries, and enterprises growing out of it, from nowhere, leaving the ghosts of former and alternative ways of living to haunt the background (see Ghosh 2004), stranded at a precipice of emergence. As Tim Simpson argues, "Physical infrastructure in and of itself will not be enough to contribute to cultural enlightenment. What is needed is a much broader social and cultural engagement, otherwise culture may simply be used to mask unpleasant socio-political realities" (2017, 133). The "cultural" life of the creative city serves to spectacularly disguise the past and ongoing circulation of finance through the built environment, and its attendant exploitation of the immaterial labour and the displacement of existing residents.

This chapter will build on diverging conceptualizations of "ruin" borne from multinational financial speculation. While the Docklands creative city colonizes the ruin of former heavy industry like shipping, energy, and manufacturing, the built environment across Ireland has been thoroughly colonized by the speculative logics and circulations of global finance. After the financial crisis, the country, across urban, suburban, and rural areas, was littered with vacant and unfinished housing and mixed-use developments, remnants of the Irish property bubble's empty financial speculation inflated at the tail end of the Celtic Tiger between 2001-2006. As I will argue below, what came to be known as the "ghost estate phenomenon" became a cultural touchstone and point of contention, demonstrating the degree to which the financial crisis was simultaneously a spatial and a cultural crisis. Ghost estates exemplify the past and future significations of the ruin, shared with financial markets more generally, as they "functioned both as the ruins of the speculative property bubble and the material manifestation of the 'ruined' future promised by the Celtic Tiger narrative" (O'Callaghan, Boyle, and Kitchin 2014, 127). NAMA was tasked with cleaning up these broken fragments of finance capital's spatial proliferation, absorbing the debt contained within them and facilitating their re-development, largely through FDI. Far from simply reviving toxified assets, NAMA has overall taken on a much larger role in a variety of spatial development projects. So, while ghost estates have receded from the foreground of public consciousness in Ireland, ruin is hard-coded into the social imaginary of the crisis, its management, and now within the actual strategies of recovery, branded the "Celtic Phoenix" in reference to the charred remains of the Celtic Tiger (Regan and Brazys 2018). These logics are profound and pervasive, and demonstrate that, rather than questioning the role of neoliberal development in Ireland, the financial crisis has led the state to

double-down on these forms of spatial governance (O'Callaghan et al. 2015). As described in Chapter 1, they are apparently natural—financialization has led to an environment of widespread acquiescence to these future visions, even if they leave many people get left out of them.

What I want to emphasize about such "ruin" are not necessarily ghost estates in particular. Rather, as I will argue, ghost estates have acted as cultural markers of ruin and points of productive tension in the post-financial crisis era, especially with regards to how the state and national population would emerge from the other end of the crisis. Rather than seeing such ruin as a stark reminder of the fickle and unstable flows of global finance capital, the Irish state— with uneven consent from the populace—forged ahead with FDI-driven strategies of growth, often administered by NAMA through the built environment, partnering with trans- and multinational corporations to do so. Capital and attention was re-directed to urban environments through which FDI could flow with greater ease and visibility. The Docklands have been a major part of NAMA's plans for recovery in the Dublin region, where they are and have been involved in Capital Dock, Boland's Quay, and the Poolbeg West SDZ, among many other properties. We can thus see that far from just administering empty space, as ghost estates were visualized, such agencies are tasked with re-activating space already filled with potential value in a property marketplace. Private companies build and manage these spaces in their own image, demonstrating the cultural logics at play in financialization (see Haiven 2014). While ghost estates are visibly ruins of multinational financial speculation, the Docklands and the media and technology companies based there colonize, occupy, and activate simultaneously loaded and empty space through global capital's aspirational development, often in spaces left behind by former industries and still-existing communities. The state and its corporate partners tell their stories and build their futures through spatial development by masking processes of displacement with more palatable visions of re-use. As this chapter will go on to argue, these narratives are driven by the affect and creativity of financialized production in the form of so-called "immaterial labor" (Lazzarato 1996). Financial circulation captures and contains cultural logics within the property silos of the built environment in the creative city. This chapter will propose a framework, a through-line for the dissertation, for how financialization coalesces with logics of culture and creativity via spatial mechanisms, naturalizing the role of FDI in the country's spatial economies. Similar to the discussions of infrastructure and the politics of visibility in Chapter 1, this chapter will apply a political analysis of the built environment to articulate a key site of

financialization's visuality in Ireland and the logistical processes by which space is made ready to circulate capital. This chapter will also serve to ground post-crisis financialization in the built environment within Dublin, the country's "media capital" and metropole, before opening up to more capacious discussions across the country's rural environments in the following chapters.

Throughout Dublin (and elsewhere), administered by organizations like NAMA but also the Dublin City Council (DCC) and SDZs, as will be traced through this chapter, what we see is not only an uncritical acceptance of certain *logics of re-use* throughout the city, but rather an active and enthusiastic ensuring of finance capital's role in re-animating formerly "live" projects "killed" by financial toxicity. As O'Callaghan, Cesare Di Feliciantonio, and Michael Byrne (2018), among others (Bresnihan and Byrne 2015), have studied in terms of contentions around urban vacancy in Dublin during the crash, and the alternative arts projects and collectives that were formed and then broken up by the coalitions of state and capital, the vagaries of emptiness/excess within ruined spaces are complex, and can be sites through which to analyze the role of culture and media in public discussions of economic and spatial futures. Whether looking at the common practice of renting out ruined industrial spaces and warehouses for global media production due to the *absence* of formal studio infrastructures; to the branding of "heritage" to advertise and put a futuristic veneer on disused buildings; to the bidding wars to activate formerly industrial and port lands for creative city projects; media's role within the post-financial crisis city represents a series of encounters that provide a glimpse into the wider operations of capital in conditions of recession. Using culture and creativity as Trojan horses to promote the "public good" of these sorts of projects, the state allies with capital in effectively *bulldozing* any alternative visions of re-use that might arise in the ruins of capital. In doing so, it shifts the violent turbulence of the market onto its own "public," which co-exists uneasily with the more stable and fixed visions of capital's imagined future. This chapter will locate and trace the contours of a variety of projects centered around the media industries specifically within Dublin in order to better understand how finance capital operates *through* the spatial conduits of media and creativity. In closing, I will take recourse to more traditional analysis of arts and media practice in order to discuss briefly what an alternative form of re-use might look like in the ruined and post-industrial city of finance capital.

Ghost Estates, Property, and the Cultural Mediation of Crisis

At few points in recent memory was the turbulence of global capital visualized more profoundly than by what came to be known in Ireland as the "ghost estate phenomenon." After the 2007-2008 financial crisis, built environments across the country were left in stages of incompletion and disrepair after the abrupt recession of capital from the property and construction sectors. So-called "ghost estates" dotted the landscape, largely suburban and mixed-use properties stranded by the retreating tide in various states of half-construction. Ireland's landscape was—and in some places still is—dotted with these reminders of the crisis, built by national and international developers lured by property tax incentives and fueled by the bad loan practices of both domestic and foreign lenders. When the markets crashed worldwide, as Chapter 1 narrates, the materiality and interdependence of global financial systems was laid bare, as capital receded, construction halted, and those responsible abandoned their investments and were bailed out by the state, leaving these structures behind. Concrete, rubble, overgrowth, disconnected wires and uninstalled pipes, abandoned construction equipment, and skeletal structures characterize these incomplete sites, usually housing estates or mixed-use development projects, ironically mirroring, in a more stagnant way, the chaos of the creative city in Dublin. But the most profound measure of their significance are the eerie, resonant feelings of guilt that haunt them, the spectral presence of foreclosed futures, washed away by the changing tides of an unstable and imbalanced global market (Figs. 5, 6). These abandoned and unfinished spaces are both pregnant with and emptied of the "excess" of the Celtic Tiger, and came to symbolize the "ruin" of Tiger-era prosperity and the "excess" of the Irish populace (see O'Callaghan, Boyle, and Kitchin 2014). There were and remain many discrete and individual sites, somehow also collectively familiar, characteristic of the particular kind of rise and fall brought on by the promise of globalized futures built unsteadily by shadowy and invisible circulations of finance. Much has been made and written, in both fictionalized and non-fiction artworks, accounts, and essays, about their status as a visual representation of the evacuation of Celtic Tiger promise (Anex 2011; Carswell 2017; Haughey 2018; McWilliams 2006; Teicher 2014; Wall 2011).[3]

---

[3] There have been a few horror films that represent the anxiety around suburban ghost estates especially. Lorcan Finnegan directed the short film *Foxes* (2011), a psychological thriller set in a ghost estate, and his feature *Vivarium* (2019), a Twilight Zone-inflected sci-fi set in a faceless suburban estate, debuted at Cannes. Finnegan has claimed that these films are influenced by the ghost estate phenomenon. In addition, I would argue that Ivan Kavanagh's 2014 film *The Canal* should be included in this cluster, a supernatural haunted house story that features key scenes in an abandoned, half-constructed house and whose plot elicits general fear and guilt manifested in the domestic built environment. Kristen Sheridan's *Dollhouse* (2012) deals with post-crisis class divisions of Dublin via housing, by fictionally staging "inner city" Dubliners breaking into, partying in, and wrecking an upscale suburban house.

Photographer Valérie Anex's *Ghost Estates* photo series especially received a good deal of media coverage, and evocatively visualizes these eerie structures (see Teicher 2014; also Anex 2011), hauntingly documenting these largely abandoned environments against the often stark backdrop of grey Irish skies. Ghost estates are the most prominent symbols of Ireland's financial bust after years of "boom" the FDI-driven Celtic Tiger. O'Callaghan et al. argue that the "invisible ideology" of neoliberalism led to both the rise and fall of the Tiger economy, although the term rarely surfaced in Irish life or discourse (2015, 34). Ghost estates were aestheticized in Irish media as visible evidence of the crisis (39), which brought a haunting guilt to these local ruins of global financial speculation. Anex refers to these usually rural and suburban sites as a "topology of the economic disintegration of the country" (Anex 2011). However, this economic collapse, as Chapter 1 details, resulted from finance capitalism's global systemic interdependence. Through these flows, tides of remarkable prosperity had flooded the country, only to recede, leaving behind the broken and empty structures of financial globalization.

Fig. 5: Photo of ghost estate in rural Ireland by Valérie Anex (2011)

Fig. 6: Photo of a ghost estate by Valérie Anex, with foreclosed future visualized (2011)

However, very soon, logics of how to "repair" and care for (Graham and Thrift 2007; Jackson 2014; Mattern 2018) these broken environments of finance capital took on a fascinating life. As O'Callaghan, Boyle, and Kitchin articulate, the media narrative and imagination of ghost estates were a crucial element in the popular negotiation of the crisis and the potential for future configurations out of rubble:

> Within this narrative there were divergent agendas. For instance, community and sectoral advocacy groups suggested using 'ghost estates' for social housing or to accommodate growing homeless populations. Underpinning these proposals was a welfarist agenda to appropriate vacant properties away from the (failed) market to achieve a social dividend. Meanwhile, different groups put forward a series of 'creative' 'alternative' uses the estates might be put to, such as start-up or pop-up space for new businesses, film sets, or test-labs for smart city technologies. (2014, 127)

They reference an article by journalist Gemma Tipton written in the immediate aftermath of the crisis, where she invited architects to imagine unconventional and sustainable re-uses for these sites, emphasizing the ways that the excessive futures of these spaces in the early stages of the crisis were full of hope for possible alternatives to FDI-driven development (2009). The answers range from innovation hubs for creative entrepreneurship to giving the spaces back to local

communities and allowing them to self-determine their future.[4] AbdouMaliq Simone has described the concept of "people as infrastructure" through Johannesburg, where community activities in city spaces subvert the functionality of the planned city and must thus be viewed through specific and emplaced community dynamics (2004). As Nicholas D'Avella describes what he calls "concrete dreams" in Buenos Aires after the 2001 financial crisis in Argentina, thick and varied experiences of urban built spaces are not "concrete" in the conventional sense but rather always under quotidian construction and re-constitution based on local practices and needs (2019). Similar to the series of ground-level and community projects D'Avella describes, different ways of seeing properties and spaces in post-financial crisis Ireland seemed on the precipice of action, taking power and self-determination out of crisis back from the state and the "market." The website *Irish Environment* urged readers to

> identify the nearest ghost estate to you and develop proposals for using those houses for some public benefit. Include in your analysis the cost to finish the houses, the legal ownership of the houses, the needs for houses in the area, and the means for raising funds to implement your plan. If one option being considered in your area is to tear down the houses, what use can be made of the site and who should control that decision—the developer, the local authorities, the banks or NAMA? What should be the role of the local community in such decisions? (Irish Environment 2012)

Such public solutions had gained traction, at least among some communities. However, one proposal, commented-upon by O'Callaghan, Boyle, and Kitchin, was perhaps telling of the actual future that would emerge: Irish blogger Tom Dowling (a former employee at Troy Studios in Limerick) pitched for ghost estates to be re-purposed as outdoor film sets for global cinematic production, as an alternative or competitor to Pinewood Studios in the UK (2011a). Contained within such proposals, and similar to what Shannon Mattern identifies as the future-facing foil to repair—that is, innovation (2018)—is a common-sense logic that can be found across most economic development proposals in Ireland: to "resolve" stagnant assets, they must be brought back to life by new waves of foreign capital.

NAMA, designed as an exceptional semi-state body to clear up these spatial fragments of finance capital without calling attention to its core operations, is ostensibly a state asset

---

[4] In an informal conversation with an Irish expat at a party in Toronto, he told me about living in Dublin during the crisis, and how he and his friends used to go to illegal after-hours parties at suburban ghost estates around the city.

management agency put in place to resolve overaccumulation in the residential property sector. At a basic level, NAMA is designed to make indebted property profitable again: "Unlike most businesses which aim to expand over time, NAMA begins life with a very large balance sheet and aims to shrink it over time. It must do so while obtaining the best achievable return for the State on the assets it has acquired" (National Asset Management Agency n.d.). Designed as a for-profit state agency to absorb financial toxicity through property and redistribute it amongst a variety of smaller ventures and stakeholders, it is largely unclear in what way this emergency organization benefits, or even directly affects, the Irish public. NAMA claimed in early 2017 that there were only twenty-five ghost estates left to be "resolved," down from 668 as of 2015, and that these remaining estates would be resolved by the end of the year (Hancock 2017). By January 2018, NAMA had apparently "cut exposure" on remaining ghost estates to eight (RTÉ 2018). However, the actual visible success of these efforts is ambiguous, and it is unclear what NAMA actually means—and does—when the agency claims these resolutions. Reports and figures have varied since the beginning as to the actual number of vacant units, and what these figures mean (O'Callaghan, Boyle, and Kitchin 2014, 128-129), if anything, which has served to further obscure the "reality" of the crisis and its lasting implications. While the technical definition of a "ghost estate" is limited to "all properties built post-2005 where 10 or more units share the same estate/street address and more than 50 percent are coded as either vacant or under-construction" (Kitchin, Gleeson, Keaveney, and O'Callaghan 2010), other unfinished, ruined, and vacant built spaces characterized the post-financial crisis landscape. Whether empty single-family housing developments in rural Donegal, never-occupied high-rises in Sligo town, the long troubled Pálás Cinema in Galway, un-rented consumer spaces in the north docks, or never-completed Luas (tram/light rail) stops through office parks in South Dublin, during various field visits from 2017-2019, these ruins remained,[5] visible evidence of a crisis that many saw "resolved." During the recovery, with the crisis ostensibly "resolved," NAMA continues to operate. They still control stakes in various property development schemes and projects, for example, Capital Dock, Boland's Quay, and the Poolbeg West SDZ developments in the Docklands (detailed below). Renewed growth has not dis-embedded crisis management from the DNA of Irish development.

---

[5] By the time of my final visit in 2019, the Pálás in Galway was fully operational.

But while state agencies manage the crisis and facilitate the role of capital within it, austerity and lack have everyday effects on the public presumed to benefit from returns to economic growth. The "emotional" and affective dimensions of economic development and the 2007-2008 financial crisis specifically have been widely discussed, both in and outside of Ireland. Maurizio Lazzarato has memorably detailed the subjective and affective constitution of "indebted man" through the insidious spread of debt mechanisms (like those of the troika) and their forms of violence post-2007-2008 (2012), echoing financialization's spread through culture and society as described in Chapter 1. Lauren Berlant argues that the "crisis ordinary" felt across the diverse worlds of neoliberal governance shapes affective responses to structural conditions and how they are mediated (2011, 10). Her analysis traverses various scales of experience: "The ongoing present is also the zone of convergence of the economic and political activity we call 'structural,' insofar as it suffuses the ordinary with its normative demands for bodily and psychic organization" (17). However, in Ireland, the "violence" of finance capital (Marazzi 2011), expressed through the punishing regime of debt, has often been mediated through space and ruin, most significantly through the ghost estate phenomenon. As visible evidence of the finance industry's invasion of a symbol of domesticity—the house—the everyday lives of residents across the country were revealed to be entangled with the ups and downs of global finance traced in Chapter 1, a form of value which permeated the landscape and social relations within it.

Housing, suburban development, and mixed-use buildings are not traditionally conceived of as "industrial" sites. Unlike factories, warehouses, and refineries, for example, they are not sites of visible production, but rather of social reproduction and domestic labour (see Adkins and Dever 2016), as well as suggestive of class mobility and consumption. Poet William Wall has emphasized this gendered dimension of ghost estates especially in his 2011 poem "Ghost Estates," associating the various labours, machinery, materials, and dynamics of the Irish construction boom with the empty, but somehow full, aftermath as visualized and represented in these empty houses: "If you lived here; you'd be home by now." Philip Coleman, in a review of Wall's book, emphasizes his treatment of Gramscian Marxism in other work, where socio-cultural analysis is filtered through a complex understanding of hegemony and relationships between structures (of which ghost estates are a profound symbol) and social base (communities, life, and labour) (2012). Autonomia theorist Silvia Federici has long written about gendered labour and the dissolved boundaries of work and life within the domestic space of the house

(1975) and the intersecting class dynamics of such work (2013). The house in Ireland is similarly evocative of class, especially since the Celtic Tiger and the association of economic growth with the stability and status of property ownership within a swelling middle class (Allen 2015, 67). Housing has also taken center stage during the recovery, as a rampant housing crisis afflicts the country's urban centers and beyond (see Lima 2018). However, prosperity during the "boom" and the aftermath's focus on suburban housing vacancy has perhaps masked long-standing inequality in housing through the Tiger, especially within Dublin (Memery 2001). It should be argued, then, that the urban and suburban construction boom of the Tiger was likewise associated with imaginaries of class ascendance through simultaneous dynamics of globalization and existing social stratifications in the country (see Kennedy 2003) and was built on the back of the "immaterial" and affective labour of social reproduction, actually and symbolically associated with middle class and suburban ways of life and gendered divisions of labour (see Barton 2018). This is crucial to finance's particular mode of value production. By mediating its invisible circulations through the built environment and its financial instruments, it creates its value. It harvests surplus from its sites of production within circulation, through interceding structures like derivatives (LiPuma 2017) and in parasitic relation to industry, labour, and social reproduction. Like the industrial built environments before them which had fallen into dereliction with changing modes of production and social constitution, the decline of these sites, alongside and as part of the "boom building" which had become so pervasive and central to Irish life, opened up profound questions as to the actual and future costs of economic growth to the populace.

So-called "boom building," some unfinished remains of which make up ghost estates across the country, is central to retrospective narratives of the Celtic Tiger. These ostentatious developments, associated with the "out of control" spending of the Irish middle classes,[6] led to public condemnations of the "excess" of the Celtic Tiger. By this logic, "we all partied," and thus the Irish populace could not be trusted with such prosperity, ultimately building defeated consent for austerity—in spite of the clear and multiple social stratifications between those who reaped the success of the boom and those who suffered most in its aftermath. O'Callaghan,

---

[6] A friend from Salthill, Galway, once told me a hilarious example from this period: her older brother's high school graduation party was a three keg, two bouncy castle affair, with a hundred attendees getting obliterated drunk in her parents' quiet suburban estate.

Boyle, and Kitchin identify a focus on excess in public discussion of the crisis as part of this neoliberal method of containment (2014). They claim that "excess" narratives are de facto depoliticized in the neoliberal public sphere (132), tied to personal guilt and consumption, foreclosing politics within affective circulations around development, infrastructure, and built space more generally. The "it's our fault" narrative pushed by the Fianna Fáil government, designed to place responsibility for the financial crisis onto the undifferentiated populace (see Hearne 2013), internalized crisis and austerity to individual faults and poor decisions and attempted to ensure a smooth transition from crisis to austerity to renewed growth. As Colin Coulter understands it, this was translated through the Government as "we're all in this together," as Irish politicians

> sought to suggest that the origins of the present crisis were communal and that the solution will, therefore, have to be as well. With the very sovereignty of the state at stake, everyone will have to make the sacrifices that will in time allow us to emerge together as a nation that can once again stand tall in the world. (2015, 14-15)

Falsely conflating communality with individualism, and ignoring the social stratifications erased within the "we" pushed by public and state discourse (Titley 2015), the state effectively pursued a narrative to make the Irish public feel collectively at fault, and thus collectively responsible for buckling down and recovering in spite of punishing austerity.

As Chapter 1 narrates, Ireland post-financial crisis was subject to the austerity programs of the troika, which imposed debt measures on the Irish state and populace, making the country dependent on their loans and draconian bailout conditions for economic sustenance. Economic decline and lack followed, as capital and at least 10% of young labourers fled the country (Cahill 2014).[7] Many of the troika's conditions, then, were centered on privatization via FDI. However, rather than opening the floodgates for deprived communities, all that arrived outside of the country's wealthy classes was a trickle. Irish popular discourse frequently heralded a kind of return of the colonial repressed, as subterranean currents of uneven development and dependence bubbled once again to the surface:

---

[7] Gavan Titley has outlined the far more complex dynamics of migration that occurred during the Celtic Tiger and aftermath, where negotiations around the "integration" of migrants and multiculturalism complicate the narrative of pure outward migration during the crisis (2015).

One of the ways in which this shame and frustration was dealt with was by internalising the responsibility for the crisis. This position, somewhat ironically, offered a way to reconcile the nation's post-colonial history in a post-Celtic Tiger context…This discourse implied that by stoically accepting responsibility Ireland could demonstrate its ability to stand on its own feet and avoid returning to a position of dependency. The supreme irony here is that by accepting the responsibility to bail out the banks, the Irish Government locked the Irish people into a structural adjustment programme that institutionalised dependency. (O'Callaghan, Boyle, and Kitchin 2014, 131)

The productive logics of finance, and its expansion into the everyday feeling of those living in and through its crisis, had to be filtered through public memory still rife with unresolved post-colonial dysphoria. As Denis Linehan and Caroline Crowley note, the very "soul" of the country was opened up (2013, 4), as a crisis of feeling (pride, heritage, and independence) accompanied a crisis of the national economy (beholden to finance). This cultural and affective dimension of the Irish financial crisis, a real and symbolic (over-)presence, suggests that the 2007-2008 crash became a crisis of culture as much as an overaccumulation of capital. The infrastructures and built environments that housed the overaccumulation of capital (O'Callaghan et. al. 2015, 33), excessive in their own right, showed how quickly capital could abandon spaces deemed no longer valuable, a spatial reminder both of what was and what was meant to be. Brian Larkin discusses the aesthetics of infrastructural projects in terms of postcolonial structures of feeling around technology and development, where roads and other projects "encode the dreams of individuals and societies" (2013, 333). These foreclosed futures, the abjection of failed projects, and resulting feelings on the individual and societal level, are deeply political (333), a far cry from what O'Callaghan, Boyle, and Kitchin identify as the de-politicized affective dimensions of excess peddled by the state and the media post-crisis (2014).

Within this environment, cultural life was seen as a site through which to repair the ruined socio-political landscape. As Linehan and Crowley note, in popular and official reappraisals of Irish identity following the highly emotional feelings of betrayal following the crisis, "it was culture, community, locality and creativity that were grasped as the authentic touchstones of who the Irish are" (2013, 4), as this crisis of the economy was expressed as a financialized crisis of feeling. Public aspirations of alternative futures and re-use were expressed through cultural means, negotiated through the public sphere. But these "shards of hope" (13)

that culture and creativity offered were soon colonized by finance, as the question became not what sort of *repair* or *alternatives* could culture offer, but how could it be made *profitable* through a variety of spatial measures? As Kerry Guinan argues, arts and culture have been "instrumentalized" within Dublin spatial (re-)development since the Celtic Tiger, where social and cultural infrastructures led by artists were foreclosed within top-down re-development, especially in the Smithfield area of the city, despite their concrete role in driving up property values (2016). The financial crisis led not to the questioning of neoliberal orthodoxy in Ireland (O'Callaghan et al. 2015), but rather its intensification in a state of ongoing emergency. The narrativization of ghost estates is a case in point, as they came to represent not a wider systemic crisis but a *particular* social phenomenon in much public discourse. Creative solutions to the crisis were co-opted by the same neoliberal logics that drove the crisis in the first place, by re-situating culture within the neoliberal ideology of the creative industries, which have been uniquely poised to thrive as sites through which privatization and financialization can colonize the "public good" of culture.

Film Studios from Ruin

The proposal to turn ghost estates into film studios is symptomatic of the post-crisis Irish media landscape. The use and development of Irish space for media production since the crisis demonstrates increasingly common slippages between processes of financial speculation and cultural production. In a suitable microcosm of the post-crisis economy, a state-of-the-art film facility in Limerick, Troy Studios, was built on a brownfield former Dell manufacturing site. Dell had shifted its manufacturing operations to enterprise services in Limerick and Dublin, whereas the national film and media industries needed more studio production space for foreign productions. Media and tech industries hold a key role in spatial transformations as property finance migrates to new deregulated sectors for growth. In a meeting over coffee in Galway, Siún Ní Raghallaigh, CEO of both Troy Studios and the historic Ardmore Studios in Wicklow, told me that they had acquired the site on a twenty-year lease from Limerick City Council, and that the primary attraction was the existing structure, as building studios from scratch is not economically viable. The studio has already expanded its soundstages to become the largest in Ireland, with a total of over 100,000 square feet of available filming space, in addition to surrounding supports and facilities (Hamilton 2019). The groundwork is being laid for a future

film infrastructure in Limerick, centered on the studio: like the market more broadly, Troy, in Ní Raghallaigh's words, would bring a "rising tide" to "lift all boats."

Converging headlines pairing planning, development, and media production concerns have been a common occurrence in the national and trade presses post-financial crisis. Dublin Bay Studios, a joint venture between film and TV producer and Windmill Lane founder James Morris and Parallel Films producer Alan Moloney, attempted to secure a brownfield former manufacturing site in the Poolbeg West SDZ that eventually went to Deloitte for mixed-use property development. The proposal was widely supported by the Government (and U2 frontman Bono) (IFTN 2017), but opposed by the DPC, who retain final say over the zone's use.[8] These zoning directives are mobilized on an uneven basis depending on stakeholders. At the same time that Dublin Bay Studios was competing for the Poolbeg West SDZ in early-2017, Ardmore Studios in County Wicklow, long the center/home-base of film offshoring in Ireland, was fighting to avoid demolition and redevelopment as a private housing estate. A revolt among media workers led to pleas for its nationalization as a "going concern," and the government has since recognized its zoning as a "film-only zone," with an initial potential for a workers' buyout of the property (M. O'Halloran 2017). However, in March 2018, the studio was bought out from the previous shareholders (including semi-state Enterprise Ireland (EI) which supports Irish business interests abroad) by private equity firm Olcott Entertainment, who will retain and expand its function as a production site for film, TV, and video games (Bodkin 2018). In this case, the special zoning directives of the Irish government saved a local industry about to be foreclosed to ruin (to be contained within private housing) through full privatization. The studio, as narrated in Chapter 1, has been intermittently nationalized and privatized throughout its over sixty-year history, and was the country's first "Hollywood-style" film studio. This "historic" value of the studios, being Ireland's oldest and most famous film infrastructure (N. Murphy 2018), has consistently been raised by supporters. As we will see below, heritage and culture are frequently mobilized for strategic aims within such projects.

But these negotiations between media industry infrastructures and ruin through property markets, where projects are always navigating at a threshold of near-disappearance or emergence

---

[8] The Dublin Bay Studios venture has apparently now secured a site in the western outskirts of the city. Called the "Grange Castle Media Park," it is backed by a firm called Lens Media Ltd., consisting of Morris, Moloney, and American producer Gary Levinsohn. If it receives the proper permissions, it will share an IDA campus with Google's data center complex in Grange Castle Business Park South (Hamilton 2020).

at the hands of transnational (finance) capital, are not only large-scale. They exemplify a state tendency to see Irish space as something that *must* be instrumentalized for profit, that must be imparted with exchange value in a market, in order to be worthwhile. This is true of Irish state strategy even when they were previously "public" goods and infrastructures like the national film studio, put in place as a public infrastructure but acting as a conduit for private capital to provide jobs. As Chapter 1 introduces, this treatment of space is tied into extractive logics that predate financialization and troika-imposed austerity. However, they are tied up in the country's built space, and media production continues to utilize space in this way. The Irish Film Board (IFB)/ Screen Ireland (SI) website until recently boasted services that find old factory and warehouse spaces to transform into impromptu film studios, directly positioning media production as a post-industrial industry. Dilapidated spaces like the former Player Wills Factory in the Coombe, a former NAMA property controversially earmarked for re-development (Thomas 2019), are used often by film and TV productions. The Pigeon House Power Station on the Poolbeg Peninsula, discussed below, has also been a temporary film set with some frequency. While O'Carroll Mulhern Services Limited, the company once primarily charged with operating as a go-between for the IFB and private productions, has dissolved (DueDil n.d.), along with its permanent studio space, Blackthorn Studios in Sandyford (South Dublin) (Solocheck.ie n.d.), it is telling that these companies were both listed on company profile websites as "management of real estate on a fee or contract basis" as opposed to cultural enterprises. Such is the public/private logic of media production's logistical facilitation in Ireland. Both space and media act as conduits for fictitious capital in the free-zoning of Irish space, dismantling the public purview of culture.

But despite the dominance of the private sector in determining Ireland's spatial futures, especially through culture, the state, far from only disempowered by financial crisis, remains a major player in these processes, introduced in Chapter 1's studies of the public/private history of state infrastructure. As determined by individual or interlocking strategies of the DCC, NAMA, and the state, some spaces face relegation to ruin and others re-direction to the future (and these are often the same space). What is crucial about the property strategies of the state and capital is that, like the words and promises of the state, these re-directions of capital are often empty. Even un-started projects have certain amounts of capital (and affective currency, like hope and prosperity) directed towards them, stories told about what they will bring, as we can see in the fascination around incomplete, un-started, and re-usable built environments like Dublin Bay

Studios (in more detail below). The reader will notice that many sites described in this chapter are still in or never leave the planning stages. If they do, they become far different from their original plans, necessarily adapted through a complex planning process and the political needs and negotiations represented within. Excitement around spectacular new building and infrastructure projects goes widely reported, and then often fades into obscurity as companies leave, planning is denied, local enthusiasm wanes, or, on the contrary, as political dissent is quelled, laws re-written, and construction quietly started. Spaces of development are not planned without the friction and resistance of local communities. As Simone argues,

> Urbanization conventionally denotes a thickening of fields, an assemblage of increasingly heterogeneous elements into more complicated collectives…The potential thickness of social fields becomes the thickness of definitions and classifications engineered by various administrations of legibility and centers of decision making. (2004, 408)

Crisscrossing fields of urban policy and community activity create different sites of intensities transversing scales. Urban geographer Harvey Molotch influentially contends that what he calls the "urban growth machine" runs on the "strategic coalition and action" of differentiated sites and land interests (1976, 311). This goes beyond a simple view of top-down or bottom-up development, and encompasses a range of interests, actors, and sovereignties. Molotch's idea of the "urban growth machine" will be unpacked in further detail in Chapter 4, where I will discuss how data centers operate this territorial logic through the tech industry. The cancelled Apple data center project in Athenry, County Galway, which became a minor media sensation, is a particularly resonant example of the complex politics between stakeholders, community members, and the environment still circulating around a never-finished project.

As these examples demonstrate, finance capital, space, and media industries are entangled across Ireland. But looking at Dublin in particular, NAMA and its partners have administered a spatial fix in Dublin through the continuing privatization of culture and space by siphoning capital into the "creative industries" and logics of the "creative city," and its attendant strategic zones, arts districts, and tourist spaces, which inevitably exploit, extract from, or displace existing communities, labour, resources, and infrastructures. The emotional currencies which culture carries with it—creativity, aspiration, heritage, community—are uniquely positioned to circulate capital through the built environment, and to build consent around the re-direction of public resources into private projects. As Allen J. Scott argues, "economy and

culture appear to be converging together into new and peculiar structures of meaning whose focal points are the great city-regions of the global era" (2008, vii). The explicit colonization of culture with "creativity" within the thought of planning has implications beyond more traditional media industries and production, as will be described in more detail below. They represent the violence of global capital implemented and weaponized towards culture and labour.

Creative Labour, the Built Environment, and the Spatial Fix

The Dublin Docklands are a textbook example of the creative city model of governance, a centrally planned mixed-use development on former port lands. An SDZ, they house the European offices of Facebook, Google, and Airbnb, who set up shop in hyper-modern campuses alongside other tech, media, and financial transnational corporations to channel global profits with little regulation. As Chapter 1 details, the district was deregulated during the late-1980s and early-1990s to attract investment through the IFSC, where a corporation tax rate of just 10% on offshore profits was adopted in 1987. Today, tech start-ups like Airbnb occupy refurbished warehouses. Their workers brush shoulders with both investment bankers and ballet dancers, eating Boojum burritos under awnings to protect from the glares of the ostentatious glass buildings surrounding them. The district undergoes continuous "regeneration" and expansion, in particular through expanding mixed-use SDZs, designated spaces of prime infrastructural and industrial development through which planning operates with less direct oversight, input from local communities, and environmental interests. Within these strategic zones, the state facilitates projects by private developers, whether for residential, mixed, or purely industrial use. The creative industries (particularly high-tech and media) are given special purchase, usually over considerations for the local population. As Simpson argues, so-called "cultural quarters" are created for spatial regeneration across the world (2017). As he argues, "their disengagement from the city […] underscore the fact that they are meant to be displayed as precious objects, to be admired from a distance for the local population, and that ultimately they will serve transient residents and tourists" (133). But far from only the result of corporate invasion, these strategies are written into planning law itself. In Ireland, as Michael Byrne tells us,

> the simplification of the planning system (i.e. 'fast track planning') involves a
> disembedding of real estate development from local contexts. But this also implies that
> local knowledge and local political connections become less important, raising interesting

> questions in terms of the local growth coalitions which are central to Irish political and
> economic life. (2016, 43-44)

Chapter 4 will examine the implications of fast-track planning procedures around "strategic infrastructure," abiding by the same logics and contained within the same planning act as SDZ legislation, as deployed through data centers. Representing the inverse of political programs to put spaces back in the hands of local communities, fast-track planning characterizes the creative city in Dublin. While these mechanisms are effective in subduing dissent and plowing ahead with spatial development, it is important to not erase actually-existing resistance and contingency. Community groups and activism are central to the political negotiations of these spatial futures, how states and corporations navigate and instrumentalize "frictions" (Tsing 2005), and especially to how projects are disrupted (see Allen 2004). As I will argue below, planning procedures and their designs act as logistical mechanisms to prepare unruly spaces for capital's circulation, and the chapter will conclude on political and cultural practices in opposition to these state and corporate developments. But what is important to draw from Byrne's research is that the withdrawal of local concerns from such planning creates political frictions *by* reducing community voice in the planning process, mirroring the favoring of financial logics over cultural life in the operations of post-crisis property management, as well as the logistical tendency to subdue and manage friction via preemptive security.

Richard Florida's "creative class" thesis argues that cities should attract a certain kind of worker, employed in the "creative industries." The creative class, in Florida's conception, constitutes anyone from those working in the arts to those in finance (Florida 2005, 34), arguing that collaboration between these industries builds more robust urban economies. This will then regenerate neighborhoods and create a trickle-down effect for workers across creative and other sectors (2005). Scott, in his own analysis of "cognitive-cultural capitalism," argues that this is a centripetal force, bringing capital into city centers through intensive processes of incentivized development (2008, 6), similar to the Irish state's broader remit of attracting FDI. In an essay on creative city policies in Dublin, Phil Lawton, Enda Murphy, and Declan Redmond trace the mobility and resilience of the "creative-class" and "creative-city" ideas within the DCC's planning policies, whose emphasis on competition "can be seen as a reinforcement and extension of neoliberal policies in Dublin since the economic downturn" (2014, 190). The policy logics, promotional materials, and spatial strategies of Irish state agencies and the industries that interact

with them entangle the so-called "creative industries" in a messy network of public and private interests, deliberately conflating these various industries and their ability to attract capital and generate jobs. These extend far beyond the DCC, and into the policies of state agencies with no apparent role in city planning, seen, for example, in the Fine Gael Government's Ireland 2040 and Creative Ireland policy frameworks, the latter of which features "a five-year plan to put 'creativity at the centre of public policy'" (Slattery 2017). Creative Ireland especially places great emphasis on the "audiovisual" industries and their global growth potential (Department of Culture, Heritage and the Gaeltacht 2017), featuring three primary policy pillars via an Arts, Film and Investment Unit: "Capital Support Schemes and funding for Arts and Culture Organisations; Film including Section 481 of the Taxes Consolidation Act 1997 (Film Tax Relief Scheme); Public Art" (Department of Culture, Heritage and the Gaeltacht 2015). It is a very broad, but very revealing remit: capital support and tax funding for the arts and media, with public art central within urban spaces of redevelopment and "cultural quarters." But these logics are also present across the board, in cultural policy agencies like SI; the corporate strategies of EI; the conversations of managers at film companies or marketing firms; or in planning documents themselves.

These logics, however faulty, are pervasive—"creative" workers want to be in the center of the action, in creative cultural environments, surrounded by opportunities for sharing, networking, collaboration, and conspicuous consumption. This ethos drives both company policies and office designs—co-working spaces, games, free coffee and beer for socializing—as well as choice of location for such companies. Major Irish-based media companies like Windmill Lane reproduce these kinds of organization and management. At Windmill Lane's post-production offices in Dublin city center nearby the Docklands, I had a coffee with a line producer in their open-format kitchen and dining space, with couches, a TV, and a roof deck, a space designed for chatting, meeting, sharing, and hanging out. I was told that although Screen Scene, another post-production company, had not located nearby for any particular reason other than centrality, there was a "well-trodden" path between these offices due to the sharing of contracts, freelance workers, and clients. But this synergy was not due to intentional "industry proximity" (Vonderau 2014) as the abiding logics of what get called "creative hubs" tend to privilege (Gill, Pratt, and Virani 2019). Rather, these companies argued that their central location meant that they could attract the best *workers*—if they were located in the suburbs, for example,

no one would (apparently) want to work for them. Although there was a pipeline between Windmill Lane and Screen Scene in particular, this was more related to the ebb and flow of media (post-)production in general (and its contract-based work across the animation sector as well), the need to be "in the middle of it all" to attract creative workers, and the fact that the infrastructure required for media post-production would not be readily available outside of a city center. Such infrastructures are central to the logistics of digital media and content production, and thus the geographies of supply chains take shape and are felt most prevalently within the labour markets of these industries, which tend to be just-in-time enterprises characterized by short-term and precarious contracts for workers (see Acland 2018). Windmill Lane was essentially empty when I visited, as they were between projects and so most of the people that usually occupied the dozens of editing bays across several floors of offices had recently completed their contracts. These same or new workers would soon fill up these bays once again, I was told, once the new project(s) started. Chapter 3 will more explicitly unpack what this sort of economy looks like for workers on the ground. But relevant to my argument here is that the top-down the sentiment which centers workers and what attracts "creatives" to certain places was repeated to me by the heads of small media enterprises from Limerick to Dún Laoghaire. Location was often chosen to appeal to and satisfy creative workers, whatever the reality of this attraction actually was, as the geographies of creative and media industries tend to follow routes of capital—and exploit available labour pools, in this case bobbing with the ebbs and flows of post-production gigs—rather than draw those labour markets *to* somewhere specific.

After nearly two decades of scholarly refutations and real-life examples of inflated property values and blue-collar displacement in cities, even Florida himself has admitted the limitations of this approach to actual urban development and analysis (2013). The above and other examples, including the speculative finance that vultures over creative city projects, refute the very idea that cultural activity can somehow be both harnessed for capital and also cultivate a healthy living and working environment for cultural workers and the communities around them. But what is perhaps useful to foreground about Florida's idea, if anything, is that it centers *workers* as primary agents of physical and cultural change in urban environments. It is their "creative labour"—and consumption habits—that act as a fulcrum for economic and spatial development, even if in intangible and apparently immaterial ways.

The creative city rests on the assumption that a monolithic class of "creatives" living and consuming in the city is essential to build a thriving social, cultural, and economic environment. But seeing so-called "creatives" as a monolithic unit—and a vehicle for spatial regeneration—from the level of planning ignores class and other stratification within and across given "creative industries," which include anything from finance to filmmaking under Florida's capacious classifications of their workers (which notably exclude traditionally blue-collar labour). While in media industry studies there have been attempts to reclaim this category of "creativity" within the wider productive processes of the creative industries (for example, Mayer 2011), this is nonetheless a category that has been entirely instrumentalized by planners and governing bodies as not just defining workers but as a basis of urban consumption. However, even media industries policy is written for a wide and vague subset of enterprises. As a PriceWaterhouse Cooper report characterizes the media industries, they include anything from "television, film, advertising, publishing, music, internet, video and online games, radio, sports, business information, amusement parks, casino gaming and more" (2016, 1). The luring of this "privileged class of consumers" imagined to populate these industries is designed to accumulate reliable traffic and capital in certain ideal zones, in doing so attracting investors "who see the city not as a living space but as a landscape for profit maximisation" (Lawton, Murphy, and Redmond 2014, 194). To these investors, a marketing executive is more valuable than a film lighting technician, although both work within the media industries broadly defined within state policy and planning. The affective dimensions of these material transformations take darker shape in the experience of built space as another dimension, as Lawton, Murphy, and Redmond note, in the unsettling of actual workers' social conditions, normalizing the flexibility and instability of these forms of work through their reflection and capture in the very built environments workers move through (194).

In tying the "immaterial labour" of contemporary creative work in what has been variously termed "cognitive capitalism" or the "knowledge economy" to the circulation of capital through the built environment, I expand these understandings in terms of what Christian Marazzi calls "biocapitalism" (2011). Such a term can better encompass the range of work associated with contemporary creative industries and the wider supply chains within which they operate, as the arrays of "skills" and labour required represent the increasing focus of capital on extracting value from wider forms of life and labour. Marazzi traces a familiar theoretical genealogy to

"post-Fordism" through many of these thinkers and ties these forms of work to the "cognitive capitalism" of the "Google model" of the managerial revolution. In this lineage, post-Fordism and its modes of labour and flexible accumulation have acted in response to "the crisis of the Fordist model, a crisis overcome by applying productive strategies that are ever more present in the sphere of circulation and reproduction, i.e., in the sphere of *bios*, of life" (54-57). The "fix" for this crisis has involved the re-orientation of entire corporate strategies of capture and value production. This includes the harnessing of social cooperation "between brains" through so-called "cognitive capitalism," in-person, across territories, through networks, and along supply chains (57). Gigi Roggero calls this "living knowledge," where, hopefully, unruly forms of social cooperation can be mobilized to subvert the capture mechanisms of capital (2011). Many have written about the "immaterial," free, and affective labour of workers in the creative industries, and the various ideologies that underpin these logics of "flexible" work (Lazzarato 1996; Terranova 2000; Gill and Pratt 2008; Lovink and Rossiter 2007), not to mention aforementioned theories of the class dimensions of domestic and affective labour (Federici 2013). Post-autonomia theorists like Franco "Bifo" Berardi have underlined the affective dimensions of labour under neoliberalism, where the "desiring energies" of our will to participate in contemporary society and its complex networks of value lead to ongoing and inescapable forms of capture and control by capital (2009). Tiziana Terranova, similarly, articulates how the "free labour" of culture and consumption through digital systems leads to a situation within which value is produced continuously through cultural labour and the "social factory" of collective knowledge and its sharing (2000), which is enacted across technological networks and their logistical coordination of time and space. These forms of work and enterprise are characteristic of the post-industrial, post-Fordist society influentially analyzed by Michael Hardt and Antonio Negri (2000), which not only finds its highest expression through the internet and communications devices—but also drives the creative city and the flexible and precarious modes of work and life that it (barely) sustains. Chapter 3 will unpack the varied experiences of precarious forms of employment that occur within this wider creative economy. But my contention in this chapter is that underlying the creative city, these affective dimensions of work and life are mobilized through the financialized planning frameworks of urban re-development, which use "culture" as a Trojan horse (via creativity) through which to push FDI-driven forms of economic life as essential and natural ways of planning the future. Financialization imposes its

violence, and its production of value through its "creative destruction" of certain forms of capital (in particular "public" access to "social wealth"), through incursions into the built environment with increasingly perverse methods of circulation (Marazzi 2011, 63-64). Logistics, then, acts *in tandem* with financialization, representing an interlocking logic of governance which administers space and territory through the temporal rhythms of supply chain production.

A central claim, then, that I am making is that formative concepts of urban geography can be productively expanded to the intersecting affective and labour dimensions of contemporary life in the "creative city." These can be understood as both experiential and systemic. Some research has already productively theorized post-autonomia thought through particular urban formations (Clare 2019). However, I want to untangle the specificity of crisis and its aftermath as experienced through the creative city. Outside of the Marxist autonomia tradition, Scott has usefully theorized "cognitive-cultural capitalism" as the driver of contemporary urban development, tracing a history of a widely and variously theorized "new economy" of post-Fordism and its modes of production in the late-twentieth century, which have centralized in cities and are driven through intertwined economic and cultural activity (2008, 11-14). But it is useful to speculate on the dimensions of creative labour encapsulated within post-Fordism and its organization and management across supply chains through the particular affective environment of financial crisis and its aftermath. In an environment of widespread job loss and austerity, as has characterized post-financial crisis Ireland, everyday life changes drastically for swathes of people in such environments, as the structural precarity of financial and logistical systems are laid bare by the recession of capital. The financial crisis, rather than untethering Ireland from the extensive world system, actually signified an intensification of these variously theorized modes of production and their spatial distribution, wherein FDI was posed as a necessary ladder out of the depths of the crisis (whether by internal or external logics) and thus plugged the country into even more intensive technological supply chains.

These processes of replacement and the redirection of material flows, of capital's migration from one sector to another in times of crisis, have been operationalized through the built environment. This occurs through planning and zoning designed to re-shape the space, which, intentionally or not, leads to the displacement of communities, cultural practices, and industries. Ireland and NAMA in particular were tasked with dealing with the empty investment of what David Harvey has called the "spatial fix" after the financial crisis. The spatial fix

describes the tendency during crises of overaccumulation to expand investment in property markets. By Harvey's definition, the spatial fix deals with excess capital in a particular way:

> Spatial displacement entails the absorption of excess capital and labour in geographical expansion. This 'spatial fix' (as I have elsewhere called it) to the overaccumulation problem entails the production of new spaces within which capitalist production can proceed (through infrastructural investments, for example), the growth of trade and direct investments, and the exploration of new possibilities for the exploitation of labour power. Here, too, the credit system and fictitious capital formation, backed by state fiscal, monetary, and, where necessary, military power, become vital mediating influences. (1990, 183)

In a post-crisis environment characterized by a *lack* of new investment and an *excess* of sunk capital into built spaces, the state sought out new flows of capital to re-animate the built environment and re-activate the growth that had stalled. Harvey emphasizes the geopolitical elements of the spatial fix, as the strategy can only be a short-term solution to systemic crisis, whereas "the long-run outcome will almost certainly be heightened international and inter-regional competition, with the least advantaged countries and regions suffering the severest consequences" (183). As traced in Chapter 1, states must engage in interregional competition to attract the investment of powerful FDI companies, and to do so, special incentives must be provided—whether tax credits, strategic planning, infrastructure, or labour de-regulation. Dublin offers all of these: from a 12.5% corporate tax rate and 32% tax incentive for media production; to SDZs and enthusiastic state partnerships with NAMA, the Industrial Development Authority (IDA), and the like; to well-connected transport, internet, and other strategic infrastructure; to a de-unionized labour environment. These measures leave countries dependent upon fickle flows of capital, which can recede at any moment. The "spatial fix" is thus only a temporary solution to the endemic crises of financialization and can only lead to new ruin once capital recedes.

While Harvey's notion remains seminal to critical geography and political economy more broadly, it requires some conceptual clarification in terms of its operationalization through the creative and media industries and their organization across global supply chains. Similar to how Lawton, Murphy, and Redmond view the normalization of precarity through the constant changes of the built environment, the modes of labour offered by the creative industries are prime mechanisms through which space can be transformed. This is true whether in the everyday

tumult of the creative city or the wider-scale crises endemic to global capitalism. In tethering a labour market to these cycles of accumulation, however, workers are everyday subjected to the ups and downs of circulatory markets which entail continuous de-valuations of labour. As Marazzi describes, in crises of overaccumulation and speculation like that of 2007-2008, violence occurs in the "*destruction of capital*, a destruction that in biocapitalism strikes the totality of human beings, their emotions, feelings, affects, which is to say the 'resources' put to work by capital" (2011, 74). These same resources are the site at which extractive logics re-situate, as destruction generates certain kinds of affective circulations and drives for greater productivity. "Just-in-time" production logics shape both how space is built—buildings rise with alarming frequency—as well as how workers are expected to perform. As Harvey notes with regards to the violent mechanics of the spatial fix,

> Overaccumulation, in its most virulent form…is registered as surpluses of labor and capital side by side with seemingly no way to put them together in productive, i.e. 'profitable' as opposed to socially useful ways. If the crisis cannot be resolved, then the result is massive devaluation of both capital and labor (bankruptcies, idle factories and machines, unsold commodities, and unemployed laborers). (2001, 26)

If the endemic crises of capitalism entail a never-ending series of labour de-valuations, then not only do the encompassing dynamics of financialization strike the built environment with violent force. They also strike existing ways of living and working through it, with the violent overhauls of property destruction and the ongoing de-valuation of labour within the just-in-time structure of supply chain production.

However, far from eliminating workers outright, the state and their partners often built on existing cultural practices and activities in order to develop consent for development projects. For example, Smithfield, on the north side of the Liffey, has become a consumer center and host to media enterprises like Brownbag Films and the Lighthouse Cinema, arguably on the back of an existing arts and culture scene built up before and during the financial crisis (Guinan 2016), where the use of the existing public space was designed to become influenced by commercial traffic through the re-conceived built environment (Lawton 2014). Similarly, the Docklands, site of aggressive creative city initiatives, transnational high-tech investment, and gentrification since the Celtic Tiger and now the "recovery," factors heavily in the state and NAMA's long-term strategies, along with other enterprise zones designed to attract a particular brand of "creative"

industry, investment, worker, and consumer. Such mechanisms are infrastructural to diverting flows of people and capital into strategic zones, representing the convergence of logistical management and financialized spaces that circulate capital through the contemporary city.

The Dublin media environment, its distribution networks and infrastructures, and particularly its built space, highlight specific manifestations of neoliberal creative city initiatives and redevelopment. However transparent development procedures and their promotional attitudes appear in the press and official websites (as will be unpacked in the following section), their labyrinthine partnerships, special councils, zoning, and financial architectures serve the reverse function. Although the creative sector has grown in Ireland since the crisis, and the hold of the "creative class" logic only became stronger in Dublin since the downturn (Lawton 2013, 108), its privilege in city planning is disproportionate. Capital interests (facilitated by the DCC) are determining growth, not, as creative city planners would lead us to believe, the self-directed internal migration of labour into certain sectors. Investments in space in this creative sector have been a different kind of spatial fix *operationalized* through so-called creative labour and enterprise, succeeding in encouraging global competitiveness across disconnected spaces and forming new spatial markets for surplus capital (Lawton, Murphy, and Redmond 2014, 194). Lawton warns that culture-led regeneration tactics,

> while successful in filling a void and, to a certain extent, challenging official meanings of place, the temporariness of such measures highlights the degree to which they are at the mercy of property market fluctuations. There is a very real danger that without the proper structures in place, the positive role of such initiatives will be sidelined at the first sight of a return to a 'normal' property market. (2013, 109)

This warning has come to pass, in the sense that cultural occupation groups like the Creative Spaces Collective have lost footing in the city center of Dublin, as Smithfield, a largely artist-led regeneration area, has become one of the more gentrified in the city. Creatives act as the footsoldiers of spatial change, only to be displaced themselves once space resumes profitability by re-directing flows of capital into the built environment and certain strategic industrial sectors.

If the creative city represents the turbulence of global markets by re-directing flows of finance capital through the built environment under the guise of cultural good, then we can perhaps also see one of the crucial ways in which the "financialization of everything" (Harvey 2005) has come to be enacted through a "logistification of everything." As Martin Danyluk

argues through what he calls "capital's logistical fix" (2018), the "logistics revolution" in the mid-twentieth century was one of many responses to what has been called "space-time compression" of globalized (post-)modernity (Harvey 1990). This "logistical fix" was thus an ultimately more long-term solution to contradictions endemic to the cycles of capitalism. As he sees it, his account "recasts the rise of logistics as one episode in a much longer history of time-space compression; it therefore serves as a caution against overstating the 'revolutionary' nature of recent developments" (631), downplaying the dominant role of pure logistics but emphasizing its structural role in spatial change and the re-thinking of capitalism's relationship to space. Investment in new property synergizes with these spaces' future role in facilitating production across global supply chains. As the example of Windmill Lane's vacant office, waiting to be filled with a new wave of contract workers, can show us, the supply chains, built spaces, and labour markets of media reflect this spatial re-organization. Chapter 3 will argue how these supply chains of media, in intensive and extensive relationships to spatial policy, affect labour markets and the geographical distribution of media production. Chapter 4 will then locate a particular logistical technology—data centers—within the dynamics of urbanization across Ireland's peripheral areas and the cultural politics of their development. However, while logistics is not necessarily at the center of Dublin's spatial planning, still largely in the grips of finance capital, its logics can be productively looked at as a "calculative rationality" (Chua, Danyluk, Cowen, and Khalili 2018) through the planning mechanisms—which attempt to flatten local dissent—and visual culture of the creative city. I argue that in the Docklands, we can see not only the spatial fix of financial overaccumulation, but its logistical enactment across particular logics of territorial governance. The interlocking projects of finance and logistics recast territory in deeply transformative ways.

As suggested in Chapter 1, visual culture is central to how planning and development operate, whether images, promotional materials, or plans and maps, whether directed towards outside investors, the public, or locals. These materials represent both the ideology and practice of the creative city and its forms of value. As scholars such as Gillian Rose, Monica Degen, and Clare Helhuish have emphasized, promotional materials are important for how these spaces operate and create themselves, whether by advertising tax incentives or certain lifestyles (2014). These promotional methods—and the strategic benefits they advertise—project and re-organize territory in particular ways, but are also industrial formations in themselves, with architecture

and design firms "creating" digital environments or "atmospheres" to be enacted in the city. As Degen, Melhuish, and Rose argue, "The importance of atmosphere as an economic value informing the production and consumption of consumer goods means that the boundaries between artistic work and industrial work are progressively blurring" (2017, 7-8). The designers and marketers of these materials, much like city planners, perform the logistical work of preparing spaces for circulation, imagining a particular future for capital accumulation. However, this visual culture and its affects extend certain dimensions within the creative city deserving of analysis. Ravi Sundaram refers to the pervasive media experience of the city as a kind of "skin," an experiential dimension of the "pirate modernity" that he locates in postcolonial Delhi (2010, 5). Siegfried Kracauer, in his foundational urban studies, as Sundaram points out, saw this "outer skin of things" as key to an urban sensorium that could disrupt bourgeois normativization in technological modernity (8), but was also highly ambivalent in its response to changing collective forms and urban governance. In conversation with this experiential approach, the next section will theorize, by looking at the current and future built environments in the Docklands, how the "skin" of the creative city—and its surrounding assemblages of planning and promotional materials—condition subjects for tumult and displacement at the same time as preparing and imagining a frictionless future. The plans, visual culture, and real environments of the "creative city" paint over the everyday violence of financial and logistical capitalism in urban spaces, which are laden with the extractive and disruptive mechanisms of global capital, especially in a space as driven by FDI as contemporary Dublin. What I intend to look at across the next section are *regimes of visuality* which drive particular imaginations of circulation, spatial development, and politics, representing these future-driven logics of spatial use and governance through visual culture.

The Visual Media of Planning and Development

As emphasized above, built space—via finance and its affective drives—must produce value. Seeing "creatives" as the sole vehicles of gentrification simplifies the complex spatial logics and complicities that operate around and through these industries. While media industries traditionally conceived—film and media production, VFX and post-production, animation—play a role in spatial development by representing the enterprise possibilities of cultural infrastructures across global supply chains, non-traditional media industries like design and

marketing are motors, and can be points through which to analyze the role of visual culture and media within the creative city. The media of these industries, as demonstrated on billboards, construction hoardings, in investor videos and state and corporate propaganda (more in Chapter 4), are a part of the visual culture of the creative city.

The ways in which such spatial politics are imagined cannot account for affective encounter without subsuming them or subjugating them in some way. As Llerena Guiu Searle argues, speaking from the context of neoliberal real estate development in India, "new buildings are predicated on *forecasted* social and economic changes. Concrete and steel obscure the stories about India's growth that fuel construction. Once completed, buildings become evidence that these stories were true" (2016, 2). Development projects are enacted top-down, but must navigate spatial and community politics and histories in order to move forward, which stand as barriers or boosters to their materialization. The visual culture and designs of these spaces, then, narrate a particular "story" about the city, effectively "greasing the wheels" for circulation. In doing so, such images perform *logistical* work in preparing spaces and subjects for particular spatial futures. In this section, I will use two examples of development projects in the Docklands to emphasize the designs of re-development at play through the promotional materials and "grey media" circulating about them (Opaque Media: A Workshop 2017). These media forms imagine a smooth and stable future city. However, as suggested in the early pages of this chapter, something that is not often discussed is the *experience* of the *tumult* of the creative city. Just as logistics manages the "turbulent circulation" of the world economy (Chua et al. 2018), these spaces of the creative city, however much they are designed to direct consumer and business traffic into ideal zones of work and leisure, are chaotic, sites of constant construction, and completely evident of the violent rationalities of displacement that drive them. The Docklands are not only *former* industrial lands, they neighbor existing working-class communities, social housing developments, and active industrial and port and logistics operations. An everyday observer can visibly see the ways in which these developments continue to infringe upon existing communities and structures, as spaces of former employment and ways of life are subsumed under the imagery and space of the creative city.

On a tour of the Docklands with scholar and artist Paul O'Neill in Winter 2019 (for an overview, see Humphries and Kapila 2019),[9] he had invited an artist, student, and Ringsend resident (a working-class community neighboring the Docklands), who described the ongoing attempts of multinationals to expand their operations into the neighborhood. Even without these attempted buyouts, however, he admitted that he would never himself be able to afford to live there, due to soaring property prices in Dublin's widespread housing crisis caused in part by the predatory presence of these companies, cynically nicknamed the "Google effect" by the national press especially in working class neighborhoods like Ringsend and Irishtown (see Gallagher 2017; see also O'Neill 2019a). Creative city development projects like those in the Docklands, and especially data centers (see Chapter 4), justify their private partnerships by "ripple" and "spillover" effects in surrounding communities and industries (see, for example, Tom Fleming Creative Consultancy 2015; also Chapter 3). However, while there is certainly "spillover" happening in terms of the spread of regeneration, there is little evidence that Facebook and Google's presence has had any material benefit whatsoever for neighboring businesses in Ringsend and Irishtown (Thomas 2017), just another part of the corporate sleight of hand that precedes outright displacement.

This Ringsend resident focused especially on a development called "Capital Dock," a mixed-use tower project in the Docklands funded by Los Angeles investment firm Kennedy Wilson, a joint venture with NAMA and Toronto company Fairfax Financial Holdings (Hamilton 2017). The young man told us that he used to wander this formerly vacant lot with friends during the financial crisis, but had recently been accosted by security guards when visiting for a nostalgia trip. This space, he said, was no longer for locals, even though it had been essentially abandoned by the state and capital for years beforehand. At one point prior to the crisis, the site had been earmarked for development by a U2-backed tower project, which would have become the tallest building in Dublin, complete with U2 practice spaces on the top two floors. When that proposal fell apart following the financial crisis, the site was vacant for years until Capital Dock piggy-backed onto the existing planning permission. In this way, rather than activating or accounting for existing community relations with the site, the developers (including NAMA)

---

[9] In the interest of full disclosure, I was also an invited speaker on this walking tour/performance and want to give high credit and praise to how outstanding and generative O'Neill's research practice is.

simply re-animated a stagnant legal decision about the property, demonstrating the favorability of capital within such procedures.

When looking at sites such as this, there is the visible instantiation of the building and construction site on the city, the histories and lived experiences coursing through the site, but there are also the materials being shown to investors, buyers, and boardrooms, which often reveal the deep logics at work, and give a better sense of the variety of actors involved (see Figs. 7, 8). A promotional video for the site (Kennedy Wilson 2016) exemplifies the "grey media" of corporate promotion circulating in a particular wealthy ecology of investors, planners, and high-class consumers (Opaque Media: A Workshop 2017).[10] Beginning with juxtaposed images of sped-up construction with leisure activities like watersports in the Grand Canal, the video presents particular geographic and demographic imaginations of the future living and working environment, as it will be a space for these everyday activities, as well as a "destination" for leisure, a "truly networked urban quarter," "a vibrant hub," corporate buzzwords all associated with the creative city. The video also, to support foreign investors with a local voice, is narrated by a man called Declan Kelly, in a hard hat, explaining the virtues of Kennedy Wilson. Kelly praises the speed of the project, attributing it to Kennedy Wilson's capital-securing capabilities, rather than the Docklands SDZ scheme which fast-tracked its planning and construction.

---

[10] From a CFP for a conference on "Opaque Media" at UC Irvine in 2018: "media produced outside of commercial or academic channels and pertaining to the work of government agencies and departments, NGOs, private companies, consulting firms, and university centers (to name a few). Grey media encompasses the production and circulation—in print or electronic form—of a wide range of objects, including working papers, policy documents, technical specifications, environmental impact assessments, and contracts" (Opaque Media: A Workshop 2017).

Fig. 7: Capital Dock rendering in a promotional video (Kennedy Wilson 2016, 1:10)

Fig. 8: Declan Kelly, regional director for a construction firm working on the site, in front of the
ongoing project (Kennedy Wilson 2016, 1:36)

Visiting the area frequently myself, I noticed graffiti and commissioned murals—usually
on disused industrial spaces—blending together and existing side-by-side with digital renderings
of future environments such as Capital Dock (Fig. 9). These particular design and artistic visions
are clustered in "cultural quarters" and their regeneration logics, which are unfailingly and

uncritically posed as public goods despite the uneven spatial violences enacted, especially in terms of the public and legal legitimation of certain kinds of art over others in terms of spatial use. For example, street art collective Subset has created a variety of mural cycles, such as the "Grey Area Project," in protest of prohibitive and exclusionary public arts policies (see Mullally 2018). As Una Mullally puts it, "Street art moves quickly, local government moves slowly. Creative endeavours are inherently dynamic, local government often seems inert" (2017). By animating what they called "grey areas" of the city and its use, Subset protests both the prohibitive planning policies and re-imagines different kinds of urban use. However, what Mullally's analysis glosses over are the competing but compatible visualities at play, perhaps serendipitously or ironically mirrored across the "grey media" of corporate planning and the "grey areas" of actually-existing urban space, everyday legalities, and public use.

Fig. 9: Construction hoarding around Capital Dock in Summer 2018

Nestled behind the Capital Dock project are Airbnb's Dublin headquarters, where they have set up shop in a disused warehouse space on Hanover Quay, surrounded by other tech and finance companies as well as the leisure spaces along and even in the water, also surrounded by graffiti and murals. This area was—and still sort of is—a quite separated industrial hinterland right in the middle of the city (Morby 2016). Across the canal from the now-completed Capital Dock, its future achieved with NAMA's 15% stake sold, I would frequently photograph the decaying boat from this chapter's introduction in stark contrast to the Capital Dock development. Relatedly, looking even at the 2020 Google Streetview of the end of the Hanover Quay street,

clearly out of date due to the presence of a caravan with washing hanging where I know there to be an entrance to Airbnb's headquarters (Figs. 10, 11, 12), the scale of these transformations is staggering, and imaginably far more significant to those experiencing these spaces on an everyday basis, existing within the "crisis ordinary" (Berlant 2011) of recession, austerity, and now subjected to the violent upheaval of economic recovery. In yet another contestation over urban space, activist group Take Back the City occupied Airbnb's offices in 2018, arguing that companies like these were "colonizing" the city (Breaknews.ie 2018), which could describe both their business practices (which encourages landlords to buy up swathes of properties to rent to tourists for exorbitant prices) as well as their choice of headquarters. Their headquarters in particular had formerly been home to an arts space called Mabo's, a too-familiar replacement of arts social infrastructure superseded by big tech. Mabo's had thrived during the financial crisis, from 2011-2014, when capital had receded from the Docklands and opened up possibilities for different kinds of cultural use (Posor 2014). Whatever rising tide had lifted the boat across the canal had long receded, but a new invisible tide, displacing artists and residents and relying on the labour of hundreds of construction workers probably from the city's working-class neighborhoods, had brought in Airbnb and lifted the materials of Capital Dock above Dublin's horizon. Finance, and its modes of spatial operation and security, can be visualized through such environments but only understood through the histories and processes it masks.

Fig. 10: Out of date Google Streetview in front of current Airbnb offices (screenshot by author)

Fig. 11: Airbnb's offices at 8 Hanover Quay in Summer 2018

Fig. 12: Graffitied buildings beside Airbnb HQ Summer 2018, Capital Dock in background

But corporate media, like that of Capital Dock's promotional video and hoardings, do not simply re-make dead, declining, or decaying space, all of which assume an absence of living and breathing people and spaces within such environments. To argue this is to reproduce capital's favored focus on "greenfield" development, where capital encounters "terra nullius," empty space ripe for extraction. While not all these spaces are "brownfields," former built environments re-made in post-industrial or other industrial formations (i.e., factories becoming film studios, warehouses becoming office spaces), capital must always navigate *existing* spaces, social formations, and natural environments. In the Introduction and Chapter 1, I describe how such visions of "wilderness," residues of colonialism's territorial gaze, have characterized the postcolonial Irish state's own vision of development, attracting foreign capital by painting its own internal space as ripe for extractive investment. Katherine Yusoff traces the origins of colonial extraction through its rendering inert and inhuman bodies and territories for extraction, carried through to the ongoing extractive logics of the "Anthropocene" (2018). These histories "naturalize (and thus neutralize) the theft of extraction through [their] grammars of extraction. Recast as 'development,' the colonial and settler-colonial dispossession of the relation to land and geography was never something chosen without coercion" (12). Such extractive processes of dispossession have always been instrumentalized across imperial and transnational networks of domination. While Yusoff is primarily concerned with the formative role that racialization continues to play within such anthropocentric discourses, the definitions of naturalization and

extraction resonate with how economic development continues to imagine spaces as somehow "empty," in the case of Ireland, "wild" and "green" but absent of human life and labour. On the contrary, underneath financialized rationalities, minor histories and resistances are always on the cusp of emergence. If it is the job of logistics to subdue or subsume such frictions, crunching them into the value calculations of capital circulation, then by imagining a future free of friction, the large-scale projects of the Docklands overpower the futures that might emerge from alternative formations, not to mention existing presents.

We can see how these logics are visualized and enacted through the experience of the creative city, at both intentional and accidental levels: whether in the plans plastered on construction hoardings, or in the contingent forms of proximity and consumption that characterize everyday interactions within such spaces. Each are designed to enclose, manage, and capture value through circulation, conjuring into being new conduits for flows of capital. The chaotic jumble of construction, walls, environments in various states of assembly and repair, are fascinatingly contrasted with corporate media: whether digital renderings of these future environments on walls and hoardings, or in the policy and planning documents circulating in boardrooms in high-rises, offices in Sandyford, and state buildings. These images project shiny buildings, young families and happy consumers, businesspeople and workers co-existing within controlled and idealized environments. Working class, racialized, gender non-conforming, and people with disabilities are nowhere to be found within such imaginations of the city, except where they sell the vision of future profitable space. The interaction between these controlled representations and the actually-existing contingency of the built environment are crucial to how the story and experience of the "creative city" are told, and should be taken seriously, even if their future visions are disagreeable. Searle issues a polemic that

> scholars on the political Left have trouble taking capitalists' worldviews seriously for fear of appearing to condone them…Moreover, [David] Harvey and Marx suggest capitalists' understandings are distorted by the structures of capitalism itself: bankers cannot 'see' what's really going on behind the surface appearance of money begetting money. (2016, 12)

But, she continues,

> Capitalists' stories are not descriptions only to be judged right or wrong; they are 'efforts to re-make the social world'…When people tell stories, they don't merely exchange

information; they create social relationships with one another and conceptually organize the world so as to act in it. Thus, instead of debating whether financiers are delusional or prescient, it is more productive to understand what their stories *do*. (12)

Rather than ascribing value judgments to such plans themselves and their visual renderings, it is perhaps more productive to analyze these stories *as stories* in order to disentangle the political logics that tell them and then enact them into being. By engaging with how capitalists visually narrate the creative city, we can actually pinpoint not only the tools by which these stories are told, but the points of friction and blockage that these tools are always in contending with.

Eoin O'Mahoney and Phil Lawton have analyzed the particular brand of "entrepreneurialism" at the heart of these urban visualities (2019), deepening studies of "place-branding" (see Greenberg, 2004) in order to understand the pervasiveness of these visual renderings and their making-marketable of urban space. Crucial to how they work is a future-leaning ethos, a future free from ruin, as Joshua Neves argues:

> The alchemy or projection at issue here is both the transformation of everyday space into an image and the temporal delay animated by urban renderings: projections thrust and defer the present into the future. In short, design's visual culture permeates everyday life by consolidating an aesthetics of development or progress…and reinforcing neoliberal modes as the inevitable pathway to development—a term that itself conflates modernisation with the improvement of standards of living. (2013, 293)

But particular to Dublin are the ways in which a particular past is thrust into the future, bypassing the ugly present (of displacement, construction, and surrounding ruins) populated by existing urban residents. They also construct a particular, and in some ways total (or, if not, deeply pervasive), social vision of the city. As O'Mahoney and Lawton argue,

> while the developers act predominantly in a self-interested manner so as to differentiate their development, a form of collective image-making can also be identified in distinctive urban areas. Furthermore, although largely adhering to what can be seen as a globalized form of image-making, the hoardings are also highly localized, drawing both upon distinctive mythologies of particular parts of the city and also seeking to reproduce these mythologies, albeit repackaged through the selling of the city as both sensitive to the past, while also looking to an imagined future. (2019, 203)

This particular future-leaning, backwards look—or vice versa—can be seen across Irish economic development post-crisis more broadly, whether in media or cultural tourism (discussed more in Chapter 3), simultaneously erasing inconvenient histories and alternative futures. But specifically, these kinds of visualities—glossy digital renderings within the most financialized and consumer-driven zones of urban areas—co-exist with history and the contingencies of local culture and even dissent, whether they intend to or not. This is not necessarily a negative for the ideals of creativity and culture. Graffiti, posters, murals, and artwork, official or not, on ruined and overgrown, under construction, or new spaces are incorporated into the visual logic of the creative district (Figs. 13, 14, 15, 16, 17). These competing but compatible visualities— contingent or dissenting, however manufactured—work together to enclose possibilities for real resistance against regeneration. My contribution to these debates about urban visualization, however speculative, is that the lived experience of these spaces—as hard to study as they are— are captured within the imagined encounters that they create, and the ones in the past (and the alternative futures) that they foreclose.

Fig. 13: Tag on Boland's Quay design hoarding in Winter 2019

Fig. 14: Future rendering of Benson Street Park near Capital Dock in Summer 2018

Fig. 15: Public art promoting Benson Street Park in Summer 2018

Fig. 16: Graffiti and consumers in Grand Canal Dock in Summer 2018

Fig. 17: An aptly ironic slogan on the garage door of a gym, with Bord Gáis Energy Theatre in the background in Summer 2018

The Boland's Quay mixed-use development project in the Docklands contains an array of histories, and newly developing "stories" told by developers. These are not actively occluding existing and past spaces and social forms—they also demonstrate the mechanisms by which culture and heritage are (re-)activated within spatial development. Boland's Quay is another "flagship project" for NAMA in partnership with global real estate giant Savills and Bruce Kennedy Doyle Architects, among others. It is a re-development of Dublin historical landmark Boland's Mill, known both for its industrial and revolutionary history as a major site during the 1916 Easter Rising. As reported in the *Irish Times*, "The historic buildings on the site, dating from the 1830s, will be 'sympathetically restored' and their heritage preserved adding to the 'architectural uniqueness of the development,' the Nama-appointed receiver Mark Reynolds of Savills said" (Gleeson 2018). In a video promoting the project (Image Now n.d.), NAMA executive Frank Daly appears as a talking head: "Because we're a state body, we don't make commitments lightly." The biggest sources of FDI, he says, "[are] here, but they need more space." Over a dramatic montage of aerial and everyday shots of the Docklands, the video advertises the project's proximity, "right at the water's edge" (Fig. 18), to the various "household name" multinational tech, media, and finance companies located in the Docklands (Fig. 19), "reflecting the past, embracing the future in the most vibrant hub of the city." In a manner familiar from the Capital Dock video, developers, architects, and demolition experts speak about the uniqueness of the site and emphasize the industrial heritage and protected structures, which will be "renovated and brought back to new environment" (sic), brought "back to life" by

"making new interventions" with design and property investment. Towards the end of the video, an aerial map of the Docklands is shown, as the new structures plop down on the Quay from above, colonizing the space with new edifices falling from the sky, indistinguishable in style from the existing buildings (Fig. 20). This bird's eye view, a characteristic of colonial mapping and imperial sight, coincides with a total lack of reference to the anti-colonial revolutionary history of the site, but it ends with an unintentionally pertinent statement: "Available for occupation 2018." Google's purchase of the site for €300 million in 2018 puts a bow on the neo-colonial irony (Gleeson 2018).[11]
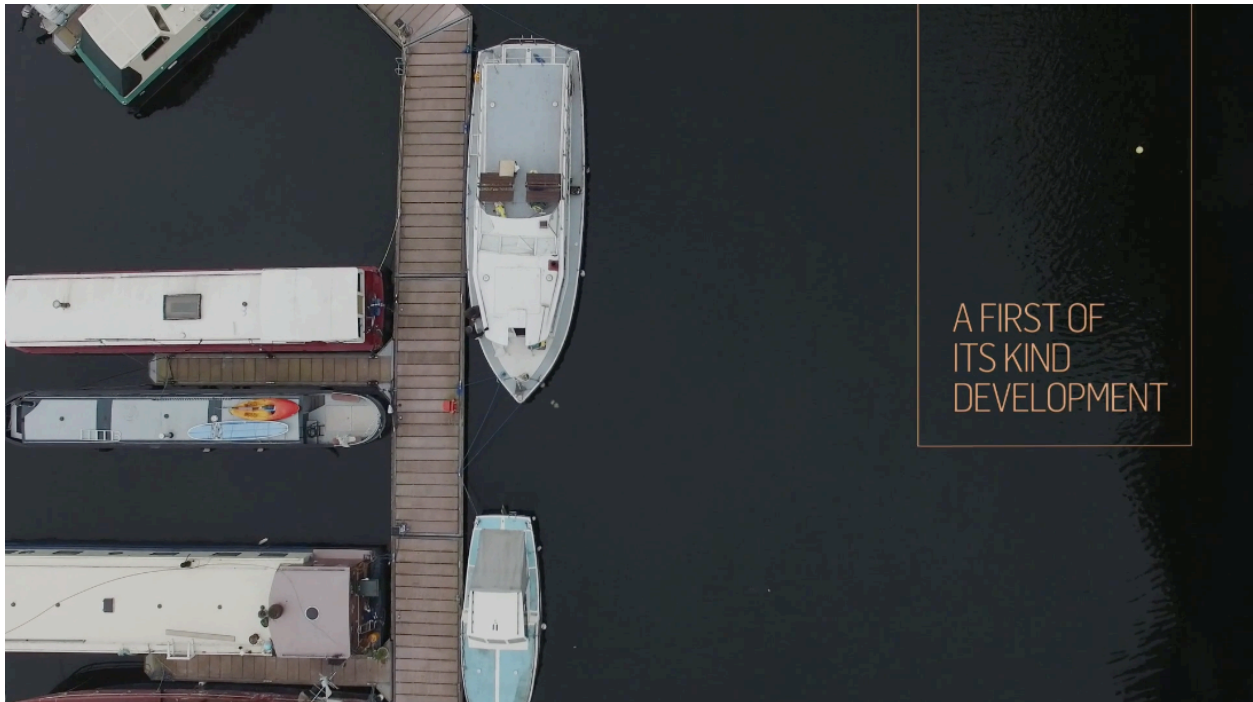
Fig. 18: Overhead shot of the canal, with moored boats (Image Now n.d.)

---

[11] After Notre-Dame burnt down in Paris in Spring 2019, the Irish History Podcast tweeted a popular sentiment, arguing that "If the Notre-Dame was in Dublin, there would be surveyors in the ruins right now figuring how they could convert it into a hotel or a hub for tax exempt tech startups" (sic) (Irish History Podcast 2019). This is both hilariously spot on and also, not terribly far-fetched, as Boland's Quay, which may have once seemed an untouchable cultural landmark before its acquisition by NAMA in 2012 and Google in 2018, can show us.

Fig. 19: Boland's Quay, with all surrounding major FDI firms (Image Now n.d.)
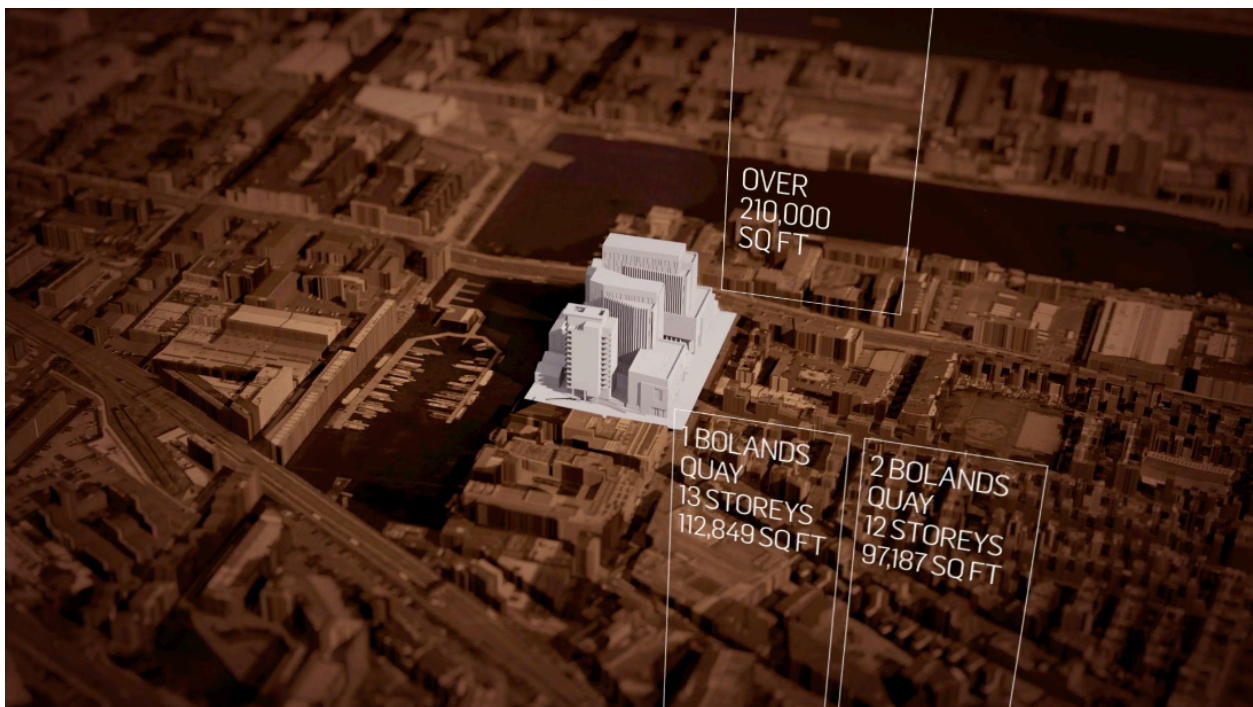
Fig. 20: The mold of Boland's Quay parachuted onto existing territory (Image Now n.d.)

The producer of the promotional video, Image Now, is a Dublin-based brand consultancy that manages creative projects ranging from ad design to stage design to video production, ranging across a variety of creative endeavors and countries (primarily the US and Ireland).

Although there is much to be troubled by in this video, what is perhaps most alarming is that the protection of structures and spaces of heritage—through state organizations like DCC and schemes like SDZs—are directly handed over to these industries under the guises of culture and regeneration. As a page in the brochure for the development advertises, Boland's Quay will be "where business and culture meet" (Boland's Quay n.d., 19). The hoardings around the site are blazoned with the slogans "Reflecting the past. Building the present. Embracing the future" (Fig. 21, 22). The past is a refracted vision of the present- and future-driven enterprise of regeneration. Now that Google has bought the space, we know what kind of future is *actually* being built, and their prior office spaces can already be seen in the digital design images featured in the promotional video (Fig. 23). But something to remember and foreground is that Boland's Mill is a ruin not only as a heritage marker, but of a particular industrial history, an active portside mill until 2001. Encircled on all sides by spatial development, however, cultural heritage could not live out over the logics to "make useful" existing brownfield industrial sites in the Docklands.

Fig. 21: Digital rendering of the project next to the iconic façade in Winter 2019

Fig. 22: Hoarding with renderings and slogans in Summer 2018

A NEW CAMPUS IN THE HEART OF DUBLIN CITY

Fig. 23: Rendering from Image Now video, with Google's prior offices middle-right (n.d.)

The media professionals at Image Now were hired by semi-state and corporate organizations to tell this project's chosen story to potential investors, and to a public perhaps skeptical of its location on an existing heritage site. This is not to suggest that such enterprises (or their workers) are solely responsible for the visual culture of such developments—rather, that they are a cog in a wider supply chain that conditions spaces for future circulation. The

presumably limited-term nature of this contract, through which the brand consultancy and its workers produced an array of visual culture and promotional materials—from this video, to an investors' brochure, to press releases—demonstrates the degree to which supply chain management across a variety of scales and businesses is what makes spaces operational for capital, whether we are speaking of media industries or construction enterprise.[12] As one cog in the machine of the creative city, Image Now performs a vital service conditioning and influencing actors peripheral to how we imagine supply chains and development to function. Seeing Image Now as a media company in particular, based just a stone's throw away from the Docklands (and near Windmill Lane's offices), we can conclude that the expanded remits of the media industries suggested by this thesis have transformative roles within spatial development beyond conceptions of proximity and worker mobility. Media companies often operate within the very same supply chains that create the financialized creative city.

Whatever the political economy of such media enterprises, they are tasked with producing a visual culture that tells the stories with capital as the protagonist, endorsed by the state, and harnessing or excluding existing communities and histories. In particular, in the case of Boland's Quay, we can see the role of visual culture in packaging heritage and design within the logics of finance (particularly property) capital. Such images act as both product and propaganda of planning and development, complete or incomplete. In particular, the kind of visuality put forth by digital renderings of these environments reclaims these spaces *for* capital. They are a direct media/environment collision, and the forms of erasure, demographic imaginations (Fig. 24), and utilitarian ideas of spatial development are motivated by the violence of finance capitalism. Seen all over the sides of billboards, construction sites, walls, and general visual "skin" of the "creative city," these environments imagine a future free from ruin. It is because these images are so pervasive that they necessitate scrutiny, as the visual culture they represent is that of finance capital. From bank websites to construction walls, from government documents to university billboards, these images permeate everyday life. As Neves refers to them, "Images of the projected city are part of the architecture of the everyday—they are spectacularly mundane" (2013, 292). They appear designed to blend into existing environments, naturalizing their visions of the future, stand-ins for a time when it is realized, while the disruption and violence of finance

---

[12] A friend in construction management once told me that most of his job is logistics, coordinating across providers, subcontractors, designers, engineers, architects, and the like.

and development do their work (on the back of construction labour). Occupying "public" space and experienced by many without even noticing, these digital environments project a certain kind of demography, feeling, and aesthetic of economic development. But widely theorized ideas of "non-places" (Augé 2009), and the idea that these types of buildings could be anywhere, standardized as their visual cultures are across space and in terms of how they circulate through offices around the world (see Rose, Melhuish, and Degen 2014), need a heavy dose of specificity. Without emplaced engagements with how they are operationalized and how they are experienced, in textured relation to surrounding environments, studies of such images risk reproducing, on the one hand, the spatial and temporal depthlessness of postmodernity (see Chapter 1), and on the other hand, the logic of terra nullius embodied by pervading colonial visions of empty but bountiful territory for extraction (Yusoff 2018). Speaking from their case study of Doha, Qatar, Degen, Melhuish, and Rose notice that studies of affect and "atmospheres" as produced through urbanism often tend to universalize a singular philosophy of "experience" that suggests a real and affective economy inseparable from western modes of thought and design. They argue that "despite being underpinned by a great deal of locally specific research and negotiations with the Qatari client, the digital-sensory fabrications that produce these atmospheres are shaped by a universalism that assumes a singular western sensibility" (2017, 5). While such a "western" sensibility in Europe is perhaps to be assumed from the level of developers and city planners, the processes of augmentation and erasure enacted through such images reflect a neo-colonial politics of value. These kinds of design images visualize—and administer—territory, in a manner akin to and in tandem with logistics, as the replacement of the affective dimension of infrastructural development becomes that of private property development in the imagination of an urban future through digital media.

Fig. 24: Boland's Quay's imagined demographic on hoarding in Summer 2018, a future plastered directly onto the city under construction

However, they are also part of how different places brand and articulate themselves within a "global economy of images" (Degen, Melhuish, and Rose 2016), and their particular urban aesthetics are intricately entangled with their particular places of expression. Rose, Degen, and Melhuish have been among the few to take seriously and try to incorporate geographical and industrial understandings of how this peculiar visual culture understands city space (2014), as well as how they are then felt, used, or experienced, through the case study of Doha (Melhuish, Degen, and Rose 2016; Degen, Melhuish, and Rose 2017). Financial structures and digital media work together through these visual aids, in partnership with state and local planning, and in negotiation with local frictions. Neves contends that these images "abstract, make static, defer, and rely on the bird's eye view" (2013, 296), even though each navigates through a political economy of actors on the ground to enact such a worldview. There is a variety of perspectives offered by these projections, at least in the physical sense. We may say that eye-level visualizations do nothing but transmute the violence of the bird's eye view—a characteristic of colonial mapping and new digital imperial war geographies (see Parks and Kaplan 2017)—to a more familiar, everyday space, in effect militarizing the ground-level gaze of those seeing the environments (which, crucially, are often plastered on the barricades around construction sites). However, this move should be analyzed in terms of the strategic points-of-view put forward by design firms and planning bodies and the problematic lineages of their aesthetics and then

exploded across the chaos of urban space under construction. Because as Neves also argues, "city plans and urban landscapes are decidedly void of human life" (2013, 296). Echoing the erasure of life and labour from early FDI imaginations of the Irish landscape promoted by the state (see Chapter 1), the logistical imagination of a "smooth world" (Cowen 2014), colonial geographies of *terra nullius* (Yusoff 2018), as well as those of data centers' natural vistas (see Chapter 4), this visual culture expresses the pervasive politics of visibility/ invisibility at the heart of finance, logistics, and infrastructural development.

But this goes beyond the invisible and blackboxed operations of capital, withheld from public view. Hito Steyerl, in her video *How Not to Be Seen: A Fucking Didactic Educational .MOV File* (2013), emphasizes the *privilege* of invisibility behind security, in places like condominiums, versus the violence of being disappeared by development and its top-down visuality. She depicts residents of a housing development, wealthy and mobile urban consumers, as wraith-like, shadowy figures drifting off of the screen from within highly controlled CGI environments (Fig. 25). In the same piece, she traces the military history of technologized bird's eye visuality through the landscape, where satellite mapping (like Google Maps) allows some spaces to be visible and others invisible, forcing some to be visible and others invisible. The other side of this visibility is the violence and hyper-visibility of security, enacted differentially against dispossessed, policed, and surveilled populations like the working classes and the racialized (see Browne 2015). Visualizing the politics of visibility and invisibility by ironically instructing viewers on how to become invisible, Steyerl's work maps productively onto the privileged zones of contemporary cities, where the politics of visuality are experienced primarily through tumult and displacement by local residents and by smooth, easy consumption by tourists and wealthy transplants.

Fig. 25: Hito Steyerl's wraithlike condo dwellers, the inverse of the hyper-visible consumer demographics of the Docklands (Steyerl 2013, 9:28)

But as Cowen has made clear (2014), the military origins of management's "logistical revolution" which this dissertation argues has come to influence much wider economic and governing systems, means that commerce and security, property and territory are increasingly inextricable in practice. Whether in the geographies of creative work which function within much wider supply chains or the violent logics of displacement promoted by spatial visualization, the turbulent logics of circulatory capitalism can be read through the stories that capitalists tell about the creative city. These logics of futures, re-use, and re-development, where the future city is on present display, where former factories become impromptu or permanent film studios, heritage buildings become big tech offices, are seductive and difficult to short-circuit, despite how apparent the exploitative and extractive practices of the state and FDI might appear within even a cursory study. It is impossible to tell what will go forward, what will transform, what will be foreclosed, and what will be disrupted through these analyses. As you read, many of these futures remain in progress or are permanently cancelled. But this is why it remains so important to locate points where negotiations about spatial and cultural futures are still ongoing. In the remainder of this chapter, I will outline various projects of this sort involved on the Poolbeg Peninsula, focusing especially on the Poolbeg West SDZ and the Pigeon House Power Station and Hotel, both of which are in the sights of planners and investors as places for

film production and creative enterprise. I will conclude with what a different sort of re-use might look like, through a more anarchistic and arts-centered approach.

Poolbeg Peninsula: Re-use and Alternative Media Practices

While the Docklands are filled with cranes and media, a new regeneration opportunity awaits east of the area on the Poolbeg Peninsula, with the working-class neighborhoods of Irishtown and Ringsend sandwiched inconveniently in between. The Poolbeg landmass, an industrialized peninsula highlighted by the iconic Pigeon House Power Station smokestacks, a famous lighthouse at the far eastern tip, and the scenic Sandymount Strand buttressing its south end, is an emergent frontier for Dublin's spatial future. Much property speculation in recent years has focused on the peninsula, whether the construction of a waste to energy plant, contests for the re-development of the Pigeon House Power Station and Hotel, or high-profile planning proposals for the Poolbeg West SDZ.

As of 2019, the Poolbeg West SDZ was set for development as a mixed-use complex by multinational Deloitte. The plans, however, have been widely contested. The site initially entered the news in 2016 because of the former Irish Glass Bottle and adjacent Fabrizia site (Fig. 26), in the form a land grab featuring the aforementioned proposal for Dublin Bay Studios. Lobbied by Bono and supported by the Government and DCC, the investors were nonetheless competing with a more familiar mixed-use property proposal (Fig. 27). The site was ultimately picked up for housing development in this scheme to "fast-track planning for up to 3,000 homes on former industrial lands" (Kelly 2016). DCC owns a portion of the site due to its absorption of the share owned by the now-defunct DDDA, and the scheme is also being administered by NAMA as a partial attempt to remedy the housing shortage in Dublin, with a particular focus (nearly 30%) on social and affordable housing (against a citywide regulation of 10%). In familiar fashion, demonstrating the particular class demographics favored by such development's imaginations, upon acquisition of the site Deloitte disputed the social and affordable housing requirements, reneging on an official agreement to provide 25% social housing, citing the citywide standard of 10% (Kelly 2018).

Fig. 26: Portside road along perimeter fence of Poolbeg West SDZ (on right), with concrete blocks to prevent vehicle placement and idling, Winter 2019

Fig. 27: Digital rendering, featured in DCC planning materials, of the future Poolbeg West SDZ (Kilraine 2019)

The Poolbeg West SDZ's proximity to the Docklands means that these various planning agencies and semi-/state bodies have stakes in ensuring the lands' use as a profitable site of FDI, which favors either multinational property development or the film studio proposal, and as an attractive zone for wealthy residence, work, and consumption. Others, like the Irish Glass Bottle Housing Action Group, see the site as crucial for alleviating the housing shortage affecting the local community and Dublin more broadly, focusing their energies on securing social and affordable housing within whatever plan is enacted in the SDZ. The film studio, in this cross-fire

between community needs and state strategies, was destined to lose out. But while the DPC has been so blunt as to call the film studio plans "daft," there is still a thrust for development of the creative industries in these former industrial lands, with the largely vacant Pigeon House Power Station and Hotel also proposed for regeneration as a cultural and creative hub (Kelly 2019).

Developing on and around the port is already complicated. The DPC is balancing a newly post-industrial role as property asset manager, arm in arm with NAMA but also in line with resource agencies like Coillte (see Chapter 4), with ongoing operations as the country's largest port. The semi-state company has expanded its remit as a cultural and planning agency, aligning with the "creative" remit of the encroaching Docklands. For example, they partially funded feminist artist Jesse Jones' *Tremble, Tremble* (2017), a monumental installation starring Olwen Fouéré which premiered at the Venice Biennale.[13] The draft Poolbeg West SDZ planning document emphasizes these multiple roles: "The challenge is to provide commercial and residential uses with a good level of amenity, while at the same time allowing Dublin Port to continue to operate and perform its vital trade route function for the State" (Dublin City Council 2017b, 19). It is familiar, from Bilbao to Belfast, that disused port lands in post-industrial societies would be incentivized for the tech and creative sectors. Obviously, this is the model in the Docklands. However, there is something fascinating about the space of Poolbeg itself, and its environmental specificity (as polluted waterfront property) and proximity to premium sites of development (and displacement) in Dublin. Despite the separation from city infrastructure and an aesthetically unappealing environment—public transit is scarce and the area is loud, smelly, and industrial when not in sight of the sea—the peninsula's location as the last frontier for the Docklands, industrially and physically, is frequently referenced in planning:

> The key growth sectors also relevant to a sustainable city quarter are Information and Communication Technology (ICT), Financial Services, Consumer & Business Services and *Content Industry*. These sectors have a significant presence in Docklands, save for the latter where there is a small but growing presence of the industry subsectors such as *media, music, film, digital and games industry*. It is considered that Poolbeg West can assist in ensuring that the Docklands and the city continue to attract high value economic

---

[13] Relevant to the theoretical underpinning of this chapter, the piece imagines a feminist legal and political order enriched by the unruly "multitude" in the form of a new body, In Utera Gigantae (E-Flux 2018), clearly influenced by autonomia political theory and action.

activity in key growth sectors across a range of corporate entities from start-up to large mature organisations, indigenous and multinational enterprises. A core part of this challenge is ensuring that a range of employment options and skills needs become available, creating opportunities for the local community. Dublin City Council, through the Docklands Forum, intend to work closely with education, training and other agencies to ensure maximum opportunity and benefit from employment opportunities for residents of the wider area. (Dublin City Council 2017b, 20, emphasis mine)

After describing the logic through which media industries must be clustered with these other industries, the DCC extends this idea into the support for the film studio:

Dublin City Council supports uses associated with media/digital media and film production Dublin City Council will actively engage with all the relevant stakeholders to explore the opportunity for a Film Studio and associated uses to locate within the SDZ commensurate with the need to first and foremost maximise housing delivery and secure the strategic development of Dublin Port as Ireland's most strategic and largest port. (21)

As we can see, and as Chapter 3 will elaborate, the connections between the state's media policy and the private sector—in the form of this never-to-be-built film studio—is written into the city's future plans.

That said, this idea was significantly and interestingly amended in the revised planning documents (Dublin City Council 2017a), which double down on social and affordable housing requirements post-appeals from Deloitte, reinforcing that 900 of the 3,500 housing units to be built must be social and/or affordable. This is a basic provision to ensure that people from Irishtown and Ringsend can actually still afford to live in their own neighborhood, as they are constantly under threat and being priced out. However, the plan still seems to leave open a loophole frequently used by developers in public/private agreements: the prevailing method of providing social and affordable housing is to sell the DCC these units offsite, meaning that communities that were meant to be cared for within these plans—locating them in or near their existing neighborhoods—are forced to relocate far away or even outside of the city (Reddan 2019). This highly systematized, violent tool of gentrification publicly zones land to sell its development rights to investment funds and private developers. It is expropriation at work, and yet it is promoted as economic progress in the creative city.

There are groups working on these issues, and there are productive conversations to be had between groups with apparently diverging aims. For example, the Creative Spaces Collective have advocated heavily for more cultural spaces in Dublin outside of typical redevelopment logics and have been part of a campaign to secure forty artists' studios in the current plans for the Poolbeg West SDZ. The local Irish Glass Bottle Housing Action Group, who have conducted protests and campaigns for social housing on the site, put their own protest signage around the zone's perimeter fence. While these groups' aims may appear at odds, each attempt to imagine spatial use differently from what is being forced upon them by FDI-driven development. In the revision to the plans, after public consultation and controversy around housing provisions and the film studio proposal, a mayor's executive report details DPC's opposition to Dublin Bay Studios' desire to use land they had earmarked for port activity, as well as the local community and GAA club's objection to potential displacements (Dublin City Council 2017a, Material Alteration no. 4). Other actors lodging varied complaints and proposed alterations included local community groups, political parties, film producers, film policy officials, industry boosters, arts groups, and transport unions, among others. What this amendment does is provide a basic clarification as to the integration of the enterprise role of the film studios, and the proposed built environment in general, within an actually-existing local ecosystem, full of conflicting or coalescing interests.

The intent of the preceding walk-through of Poolbeg West SDZ's process is to emphasize the lumpy terrain over which planning in Ireland, as anywhere, must navigate, despite the de-regulatory legislation of "fast-track planning." These mechanisms, like finance and logistics more broadly, must navigate a messy array of sited interests. In the final planning document, all above-listed plans for *a* film studio—not necessarily Dublin Bay Studios—remained, as did a focus on the film, TV, and ICT sectors (Dublin City Council 2019). There seems little chance of getting DPC to bend on their decision to leave the film studio out of the plans. As of 2019, Dublin Bay Studios still intended to develop elsewhere on the Poolbeg Peninsula, pending permission from DPC, trying to mimic Montreal and develop film production as well as a "VFX and video games cluster" (Slattery 2016), building off of existing clusters in the Docklands and elsewhere in the city, expanding the remit of the film production infrastructure to include the wider "screen industries" (see Chapter 3). The story of the Poolbeg West SDZ, and "Dublin Bay Studios," is still being written by planners and capital.

Relatedly, the Pigeon House Power Station and Hotel has been bid upon as a site for a "creative industries" cluster deep into these industrial lands, at the far edges of what could reasonably be considered the Docklands (Fig. 28). This site has acted as an impromptu film set on a number of occasions, including for the Matthew McConaughey and Christian Bale-starrer *Reign of Fire* (Rob Bowman, 2002) and the RTÉ direct provision drama *Taken Down* (2018). The hotel hosted temporary offices of Irish Water and a small film production company at the time of my own visit in Winter 2019. The power station, in operation through the 1900s until the 1970s, features iconic smokestacks, a staple of the Dublin skyline.[14] The hotel, a Georgian structure built in the late-1700s, is similarly historic, a place for passengers arriving at the then-colonial port. While portside, the area has been progressively cut off by other industrial developments, including the active port, waste to energy plant, and wastewater treatment site. Nonetheless, five companies in 2018 reportedly speculated on the site as a future hub for re-development (see Kelly 2019).

Fig. 28: Pigeon House Power Station (right) and Hotel (left) in Winter 2019

However, Poolbeg, more so than other sites under investigation here, has seen active dissent and repurposing against its planned remits. The Sandymount and Merrion Residents' Association lodged complaints arguing that the area needed improved infrastructure and environmental protections before any development could happen (MacArthur 2017). More

---

[14] Until Spring 2020, at-the-time Taoiseach Leo Varadkar's Twitter bio read "Saviour of the Poolbeg Stacks. No kidding," reflecting their iconicity and also Varadkar's shameless pandering.

radically, the Irish Glass Bottle Housing Action Group managed to negotiate for the 900 guaranteed social and affordable housing units through the scheme out of a sum total 3,500 (although as mentioned above, this comes with potential caveats) (Fig. 29). I frequently saw signs for community action meetings in Ringsend and Irishtown, along with the Group's renegade signage along the edges of the Glass Bottle site.
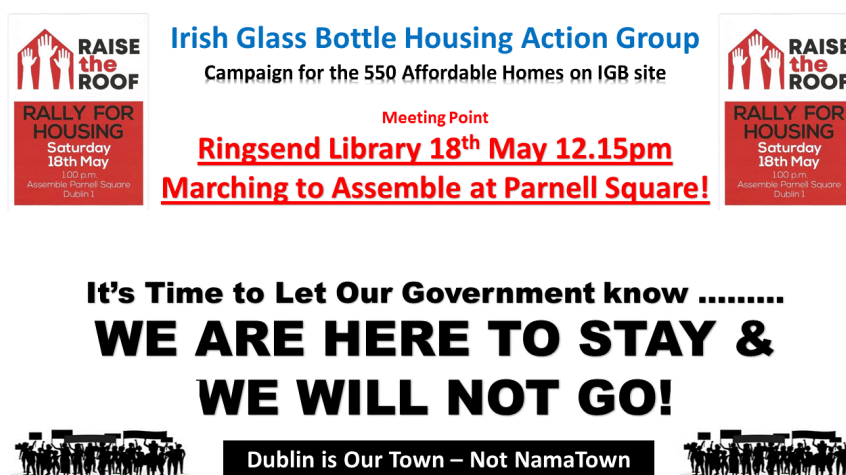
Fig. 29: Demo promo circulated on Facebook (Irish Glass Bottle Housing Action Group 2019)

Closer to the actions of the Creative Spaces Collective, there was also subversive activities in the arts and media space. Artist, filmmaker, and post-production specialist Michael Higgins spoke with me about the different logics of spatial use and relations in art versus industry practice, telling me about some work that he had done out at Pigeon House. Higgins had a far different relationship to this space than that for which the city and state had eyes. He had put on "run and gun" public screenings, where they literally broke into the space to put on one-time expanded cinema happenings as part of a series he ran called Open Nights Cinema. These were short-lived occupations of the space for exhibition and performance. He had also carried out some actual filming out there. He emphasized that the dilapidated power station was a safety hazard, and that while filming with another man and his dog, the dog had fallen into a small pit and nearly drowned in the muck before they finally managed to rig a way to get the dog out. While he was filming, through word of mouth, he learned of a former film production company that had used the site, and even found some old used film in the mud on the floor of the building, from a lost RTÉ and IFB-funded short program called *The Poorhouse* (Frank Stapleton, 1996) about a woman's workhouse during the Famine. This film was characterized as "haunting" by the *Irish Times* upon its release in 1996, emphasizing the almost surreally devastating nature of

poverty and the history of women's exploitation which continues to haunt Ireland (Donovan 1996). The ghosts of the past continue to haunt the present, with very material results. Higgins took this largely ruined and decaying footage, rotted away by exposure, and re-edited and screened it as a performance piece, which he called *The Poorhouse Revisited* (2011).

What I want to look at here is the convergence of re-use and recycling that occurs in Higgins and his collaborators' art practice, antagonistic to that dominating the practice of the DCC and other spatial planning bodies in Ireland, especially in relation to decay, ruin, and (re-)use. The state, via semi-state organisms and public/private partnerships, sacrifices culture and public heritage at the altar of profit on an increasingly regular and cynical basis. The logic of organizations like NAMA and its private partners encloses these ruins of not just capital but culture in the built environment, releasing not the potential of the outmoded, as suggested by Walter Benjamin and developed memorably by Erika Balsom (2009), but violence against the obsolete and the unprofitable. Balsom articulates the concept of the ruin through the art gallery and the politics of celluloid film practice, resonating with Higgins' use of ruined film stock as a proxy for and within existing ruin. Balsom argues, through Andreas Huyssen, that contemporary obsession with ruins "hides a nostalgia for an earlier age that had not yet lost its power to imagine other futures" (Huyssen qtd. Balsom 2009, 421). This nostalgia, however, can be dangerous and regressive. Benjamin argued that the collector "orchestrates 'the liberation of things from the drudgery of being useful,' freeing the commodity from the imperatives of the market" (qtd. Balsom 2009, 422), thus liberating the "use value" of objects from "exchange value." If this is the case, then practices of care and repair can liberate commodities from the market. However, the enforced scarcity of the art market, by re-activating the material of film within the gallery through a reproduced experience of nostalgia, betrays the underlying potentiality of the ruin to remain unprofitable by entering it into an "art market" (425)—undetachable from the circulatory dynamics of capital. Culture is not spared neoliberal logics of (re-)use even within its attempted disruption or activation as a public act, but only if it remains within a certain system of value determined by a circulatory market—whether that of the gallery or of the creative city. But what if, as Balsom suggests, "the affective complex" of ruin and its "uncanny linkage of past and future" creates a different kind of atmosphere, "a [Benjaminian] aura linked to contingency and historicity" (426) rather than use?

The practice of re-use seen by those who creatively re-purpose vacant spaces on a one-off and non-programmatic basis—and ruined film materials of *publicly-funded media*, in the case of Higgins—may possibly envision different and more sustainable ways of living in and moving about space outside of the development logics motivating approaches to space and culture throughout Dublin and Ireland more broadly. This is especially true of spaces in the crosshairs of corporate-friendly government development's regimes of sight. Fugitive and unruly uses of such spaces harken to avant-garde practices of detournement, the visual and lived re-appropriation of space and material for truly creative practice (see Figs. 30, 31). Of course, seeing these images brings to mind traditional notions of the avant-garde as ideally blurring the boundaries between art and life, activating politics through artistic practice (see Connolly 2004). We can remember Benjamin's famous assertion about the politicization of aesthetics in "The Work of Art in the Age of Its Technological Reproducibility," where communism counters fascism with political art practice (2008, 42), with the tactile, avant-garde activation of a collective political subject.
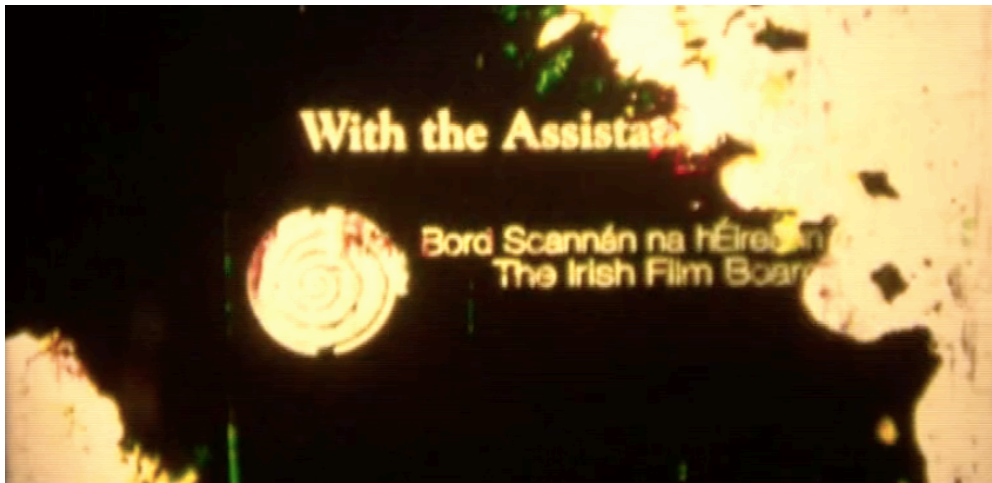
Fig. 30: Detail from *The Poorhouse Revisited* (Higgins 2012)

Fig. 31: Photo from a performance of *The Poorhouse Revisited* (Higgins 2012)

But when looking at spatial development in Ireland, we can also see the feared inverse which occupies Benjamin's mind, through his analysis of Italian Futurists' fetishizing of imperial warfare: "The logical outcome of fascism is an aestheticizing of political life" (2008, 41). Benjamin touches on the simultaneously intensive and extensive processes of imperialist violence, expressed in Ireland through finance capitalism. A Labour opposition TD accused ruling Irish party Fine Gael's Strategic Communications Unit, essentially a state propaganda arm headed by former marketing professional and Wild Atlantic Way and The Gathering mastermind John Concannon, of fringing on "Goebbels territory" with the ambitious Ireland 2040 planning framework (Clarke and Leahy 2018). There are certainly troubling overlaps in the dull aesthetic character of corporate and state promotional marketing of future development in Ireland,[15] especially in pervasive and colonial regimes of visualizing Irish space *for* capital. Comparing the glossy and aspirational Ireland 2040 campaign (Government of Ireland 2018b) as proto-fascism is hyperbolic, of course, but the framework nonetheless plans for a future Ireland by *imagining* it into a particular existence dominated by finance, FDI, and market freedom. This is always in sight of an illusory green, rural past, signaling towards another "green persona" administered by capital (116) (Fig. 32, 33), activating nationalist territorial imaginaries within a global market-led future. "Leo-liberalism," as some have called Varadkar's particular brand of Irish neoliberalism, does have troubling leanings towards market-led authoritarianism in the propagandistic character

---

[15] Shannon Mattern has recently written on the soft authoritarianism of New York governor Andrew Cuomo's PowerPoint briefings during the Covid-19 pandemic (2020).

and mundane aesthetics of his Fine Gael Government (Armstrong 2018),[16] paralleling the digital marketing of the creative city (Fig. 34), and seen perhaps most worrisomely in direct liaisons with Silicon Valley moguls with little public oversight (see Chapter 4). Systemic repression of dissent is achieved through such state maneuvers, the violence coded in marketing and bureaucracy. The state imagines a future Ireland counter to a spatial future that is just and provides for the basic—let alone cultural—needs of the population.
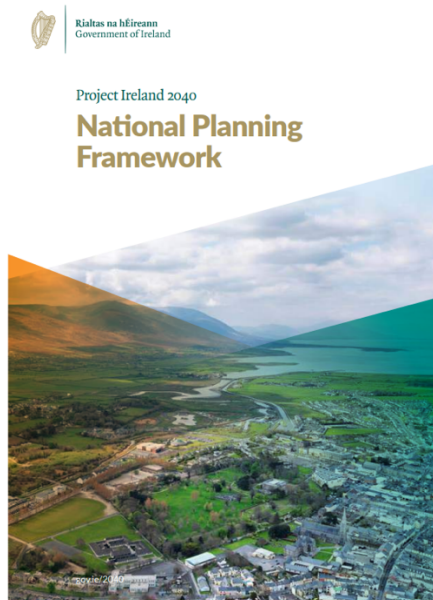
Fig. 32: Project Ireland 2040 National Planning Framework (Government of Ireland 2018b)

---

[16] While Varadkar technically handed the Taoiseach reins over to Micheál Martin of Fianna Fáil in 2020, he is still clearly holding power, and has been sliding deeper into neoliberal authoritarian measures during the Covid-19 crisis, including doubling down on his "welfare cheats" rhetoric and measures.
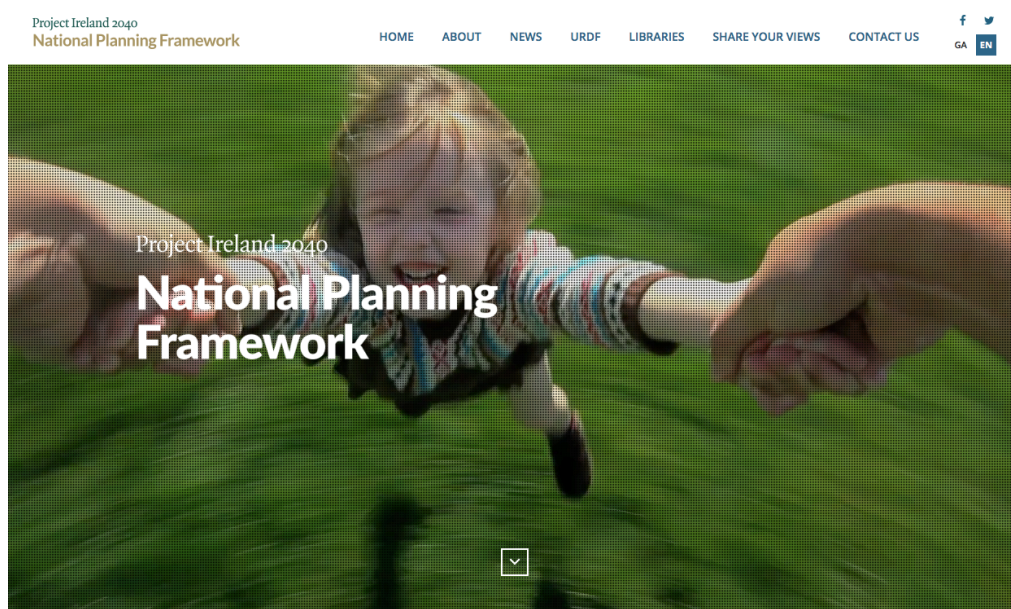
Fig. 33: The aestheticizing of politics in the video banner of the Project Ireland 2040 website

Fig. 34: Advert for Ireland 2040 on the DART (commuter rail in Dublin region) in Winter 2019, with similar aesthetics to Image Now's Boland's Quay design video

Through the visual culture of corporate development and state/corporate place-branding strategies, we can perhaps glimpse the ways in which these public and private actors aestheticize politics, in a manner that fulfills the worst fears of aesthetics permeating everyday life of the

Frankfurt School. What we can see in these competing practices, the cultural occupation and the systemic enclosure of space, are two competing regimes of visuality—that of new imaginations, re-activation, re-purposing, and occupation; and that of green- and brownfields, colonization, regeneration, re-use, and revitalization. Each of these regimes has their own demographic, cultural, and political imagination of what a just spatial future would look like. While we can obviously critique how the former imagines the artist as the harbinger of social change and remember the impotence (and often enthusiastic participation) of art in the face of massive systemic apparatuses (see Steyerl 2017), this is nonetheless a mode of contestation, closer to action that would reclaim space for people and culture from capital and profit.

Conclusion: Culture, Capital, and Struggle

The development of the city-as-commodity and instrument of control, propped up by financial exploitation of culture and the creative economy, is the overt result of creative city initiatives through the promotion and development of particular industries, which use "creative work" to attract ever more lucrative investment, following well-worn Irish government policies of catering to the elite and attracting transnational investment (Lawton, Murphy, and Redmond 2014, 196). The Docklands are a particularly key site for these logics, where financial deregulation has made it both an attractive zone for foreign investment as well as a space for privileged subjects to live and spend money (as suggested in the Capital Dock video, digital renderings, and Steyerl's video art). In the searing introduction to *Evil Paradises: Dreamworlds of Neoliberalism*, Mike Davis and Daniel Bertrand Monk conjure the planetary implications of these environments, the desires enflamed which "are clearly incompatible with the ecological and moral survival of humanity" (2007, xv). While moralistic, and perpendicular to Searle's polemic that we should take *seriously* how such spaces are conjured into being (2016), their sentiment nonetheless hits nerves about high-finance pleasure societies which package "culture" but provide entertainment only built at the expense of the environment, existing communities, and on the back of labour.

Planning in Dublin contains the ghosts of the crisis even as its neoliberal policies march onwards, leading to unseen futures of bubble and burst, growth and decay, structures patched and surrounded by scaffolding but always teetering on the verge of collapse. However, these ghosts do not only exist in the built space, but also take shape in the subjectivities of those directly affected by austerity and financialization in the guilt of collective debt driven by supranational

regulators. One must not forget that the crisis was one of massive debt *in particular*, a structure that has expanded so widely that it "produces, distributes, captures, and shapes subjectivity" (Lazzarato 2012, 32). Henri Lefebvre argues that the "quasi-logical presupposition of an identity between mental space…and real space creates an abyss between the mental sphere on the one side and the physical and social spheres on the other" (1974, 6). This has drastically collapsed into the neoliberal logics of planning and spatial development, which have only been pushed further towards profit maximization under austerity. In the creative city, mental and physical space are constantly being blurred in design materials and "projections" of completed buildings, rendered in glossy, colorful, digital life. Aspirational space becomes real space, but its failure and its violence are enacted upon the face of the city itself and its citizens. Finance's invisible circulations do not necessarily reveal themselves, but take on the mutated form of a neoliberal creative future rendered into real space, a future containing a promise of prosperity and stability that, at best, has already been foreclosed for most, and at worst, whose risk has enacted violence against them. In the condos, offices, and hotels on former ports and industrial sites, ruin lies in the negative space occupied by capital. This is not to suggest that we should desire for a return to previous forms of industry but that any alternative future has already been headed off at the pass. The replacement of living knowledge with the visible evidence of its capture is the consequence of the financialized Irish media environment. In the Docklands, subsumption of urban life underneath the glossy architecture, financial logics, and privileged transnational mobilities are promoted as beaming successes of financial austerity, when in fact its failure and expenditures are simply brushed out of sight, leaving a void to be filled by imaginations of common futures, but which are already circulated by private, transnational finance. NAMA administers these spectacular developments in a state of ongoing exception.

These things should worry us in more ways than rehearsed critiques of capitalism, gentrification, and culture. The political undercurrents of such development logics and approaches to culture are tainted with more sinister circulations than now-familiar neoliberalism. Political dissent must respond likewise. While it is perhaps not radical enough to suggest a Benjaminian re-activation of potential within the ruined and discarded film found by Higgins, as such practices are often as much about decay and nostalgia as they are re-use, it is the *logic* of spatial politics through ruin that motivates artistic and other fugitive practices—such as wildcat strike, occupation, and other tactics of (counter-)planning that operate counter-logistical power

or sabotage against the forces of capitalist exploitation and enclosure (see Bernes 2013; Clover 2016)—that needs to be seized as a way of thinking how to see creative and media practice, within and outside of the industry, otherwise.

While Ireland appears thoroughly colonized by the logics of financialization and logistics, the ideological project of global territorial control by free-flowing finance capital—just like the project of the EU, or the project of the Irish nation-state—will never be finished, and that is the point. If these ideas were to stop being in-process, in *circulation*, they would lose momentum. There will always be resistant, un-incorporated, and uncooperative spaces, people, and environments. We need to start seeing the struggles over space, like the occupation of Airbnb or the re-activation of a power station as a performance space, as not only fights to reclaim spaces, but as what Joshua Clover calls "circulation struggles" (2016), which respond explicitly against the movements of global capital. The disruption of capital circulation, whether in zones of finance or at the "chokepoints" of logistics where flow can be most impactfully blocked (Alimahomed-Wilson and Ness 2018), can all perhaps be seen as "counterlogistical" actions (Bernes 2013). Such an idea can unite struggles across the world, as well as across Ireland, whether housing groups disrupting plans in Dublin, film workers picketing a Bollywood set for better conditions (Chapter 3), or local community members feeling abandoned struggling for the attention of capital and the state (Chapter 4). Especially in film and media work, industries which have been so aggressively and fully atomized and made precarious by post-Fordist practices of systemic deregulation and the distribution of work across all aspects of the supply chain, as Chapter 3 will argue, how can we see workers in these industries as not dispersed but a united force of change? How would refusal to participate in corporate projects of redevelopment, or better, active blockage of these projects, affect how planners and policy makers see those who work in these industries and live in the ruins of their "creative" spatial visions? Chapter 3's focus on labour as a resource will deepen these analyses. By answering such questions, we are encouraged to think spatially about these industries themselves, what they can tell us about these operations of capital, and where best to put our weight in resisting flagrant acts of dislocation and places of enclosure. But this is exactly why we need textured analyses of the interactions between global systems and local encounters, and their specific manifestations and chokepoints. The detailed approach to particular and material instances of planning and the slippages between financial, creative, and other sectors can help us come to a fuller

understanding of the extent to which, in local contexts, financialization has spread into more immaterial logics of the public sphere. These creative transformations can be found in the ruin left in their wake, as much as in the spectacles designed to precede and disguise them.

In the next chapter, I will look not necessarily at the particular "built" environments or infrastructures of the creative and media industries, but rather at the policy and practices that are *infrastructural* to the spatial distribution of film and media industries across Ireland and the circulation of capital through them. Policy has profound geographical implications beyond the lives and afterlives of built environments and the communities that live and form around them. In addition, labour, captured within the planning and imaginaries of the "creative city," is incompletely drawn in as a source of value. In different contexts across the country, labour is seen as a "resource"—like the natural environment, and like infrastructures themselves—for FDI-driven media production. Moreover, by drawing workers *in* as resources within policy designed to attract global media capital, workers are subject to the competitive, precarious, and violent fluctuations of the global market. However, to these workers, such policy and planning feels unattached to their daily lives, in spite of its role in buttressing the precarity of their ways of making a living. Rather than necessarily feeling the effects of this turbulence through the built environment and adapting modes of living likewise (through the practices of occupation and detournement which conclude this chapter), such workers navigate the complexities of global supply chains in locations apparently far from their more eventful operation. In doing so, structural precarity is often experienced as a *given* condition to live with rather than a materially-specific condition to be remedied by the state.

Chapter 3 – Waves of Austerity: Media Sovereignty, Policy, and Labour

> Rather than capital 'incorporating' from the outside the authentic fruits of the collective imagination, it seems more reasonable to think of cultural flows as originating within a field that is always and already capitalism. Incorporation is not about capital descending on authentic culture but a more immanent process of channeling collective labor (even as cultural labor) into monetary flows and its structuration within capitalist business practices.
>
> Tiziana Terranova, "Free Labor"

> The audiovisual industry is a dynamic mix of talent (human capital), creativity (ideas and innovation) and enterprise (adding and extracting value).
>
> Irish state *Creative Capital* report

While the previous chapter works within an expanded definition of the media industries within a wider "creative economy," state and corporate collaboration in post-financial crisis Ireland has not spared more traditional cultural industries. Built space and its infrastructural connections are silos and conduits for circulatory capital, especially those mobilized through the diverse practices of public and private value production and circulation which characterize the contemporary media environment of the "creative city." Media production and post-production companies, as well as speculative actors promoting future projects and developments via technocratic design visions of the city, rely on state agencies eager to attract large-scale investment to support grand plans which erase communities, heritage, and spatial contingency from the Dublin landscape (both real and imagined). Media is also increasingly partnered with the high tech industries in both development strategies and practical overlaps. The state implements corporate spatial development projects through the de-regulation of space, the promotion of "creative industries" values and discourses, and competitive taxation and pricing for the utilization and development of territory for the "growth" of creative and media industries in Ireland.

Building on these insights into the circulatory dynamics of the media industries in Ireland through the built environment, this chapter will unpack the logics of film and media policy that are *infrastructural* to the circulation of capital through the lived and built environments of the country, with particular emphasis on their under-studied relations to labour and culture. In particular, it will focus on the disconnect between top-down systems of policy architectures and their effects on the industry and workers on the ground. Speaking formally and informally with

an array of workers, practitioners, and officials across the landscape of the media industries in Ireland, from producers to tourism boosters, set drivers to policy makers, and marketing to finance executives, I was left with a picture messier than any policy or plan could ever fit into a stamped and sealed worldview. Rather than appearing integral to media workers, most admit that their daily lives and work feel far away from the rooms in which media policy is being written and the bank accounts benefitting from it. Like the ghost estate phenomenon, we can see through the precarity of media labour how the crises of capital are felt most strongly amongst those on the ostensible peripheries of industrial formations. Media policy, ostensibly designed to support and build the industry, may be infrastructural to film and media workers in the sense that it recedes into the background (Larkin 2013), its decisions and operations detached from everyday producers of value within its various channels and pipelines. When looking at policy, those working long hours in front of their laptops at cafes or in their homes, hustling from meeting to meeting in order to secure enough contracts to make a living, carrying equipment and driving talent across rural road networks, or designing graphics for ad campaigns outside of the country, are not only peripheral but largely absent from consideration, except as intangible beneficiaries or "ripple effects" of top-down media and "creative" initiatives. Film and media policies in post-financial crisis Ireland are implemented as trickle-down measures to empower above-the-line talent via the attraction of foreign and transnational investment, with knock-on effects meant to build infrastructure for more secure work prospects among the below-the-line workforce. But to the hustlers and freelancers in the media sector, the Irish film industry often feels about as distant as Hollywood does. Yet, as Geert Lovink and Ned Rossiter quip in the introduction to their edited study of creative industries discourse, "No matter how alien it appears, policy does not drift down from the heavens" (2007, 11).

This is not to say that policy, and how it was written and who it was written for, was not a present concern among many in the sector. Screen Ireland (SI) (formerly the Irish Film Board (IFB)), the national film body which has recently expanded its remit to the more expansive "screen industries" (i.e. film, TV, animation, and video games, although not the latter yet in Ireland), remains present in media workers' discussions as a key overarching infrastructure for the industry, but more as a measure (and pinnacle) of meritocratic success than an everyday consideration. A career working between SI-supported projects is a goal, but not one that most saw themselves achieving anytime soon. Among interlocutors who had applied for IFB/SI

funding, many felt as though there were unattainable thresholds of cultural capital required to even be considered—if you were not on the agency's radar already, funding was less than forthcoming and tended to be given out to repeat successful applicants. As Dublin-based experimental filmmaker Dean Kavanagh told me, "Once you're in, you're in," but getting to that point involved an arduous and often impossible everyday endeavor of research, networking, and luck. How could one get into this orbit without first obtaining funding? In Galway, regional funding was similarly competitive, and although I met many who applied and received funding for projects from organizations like the Galway Film Centre and Údarás na Gaeltachta (ÚnG) (a state agency supporting economic and cultural development in Irish-speaking regions), these provisions were meritocratic, one-off, could rarely be counted on as a resource, and usually would not pay the bills other than those essential for completing any given project (especially if the work involved a crew).

Thus, media workers with aspirations of working in film tended to spend most of their time employed by contract to contract gigs, corporate projects, and or even full-time work in other industries. On the ground, among media workers, the film and TV industry and the promotional and industrial video industry look very similar, especially in terms of basic skills, softwares, who you work with, what your days look like, deadlines, and the like. Styles obviously differ, as do things like the quality of catering, but a transferable set of skills is essential. Even when looking at policy and training literature, like Pricewaterhouse Coopers' series of industry manuals guidebooks (in this case, for film financing), characterize the media industries quite widely, as Chapter 2 argues, encompassing a wide variety of media activities from business communication to radio to film production (2016, 1). Each are generally characterized, at the bottom level, by short-term and underpaid work, although work for freelancers in marketing, for example, or seasonal work in sports media, may be better paid depending on the quality of the project and employer.[1] This seems common sense, but when it comes down to it, increases in FDI and business more generally mean nearly as much to the industry more broadly as changes to tax policy. US and other European corporations hire Irish production companies for promo (Image Now), post- (Windmill Lane), and co-production work (like the investors of Dublin Bay Studios), and this is often the bread and butter of successful

---

[1] Sports media were frequently a source of secondary income for media workers I interacted with, especially the GAA in supporting its national and community remits.

media companies in the country. Building on Chapter 2's focus on semi-state corporations and US multinational interests in Ireland since the financial crisis, I here am focusing also on EU-specific cultural economies, especially the ways in which home-grown public institutions interact with EU regulatory agencies and cultural interests. However, for the most part, I have chosen in this chapter to foreground the cultural (artistic) remit of these kinds of production due to the tradition of the public role of culture within nation-states, which are thus supported by public institutions. That said, workers are not beholden to national cultural distinctions in a globalized environment in the same way that "national" media systems imagine their indigenous industries. Workers channel back and forth between public and private supported projects and areas of these industries based on the work—from corporate videos to short films and back again. What happens when this is so normalized as to change the ways that media workers see what they are helping to produce? Does this alter the characteristics of what they are producing, or is it more of an attitude of flexibility that is imposed across all kinds of work? Workers are subject to the sovereignty of national media systems and their relationships to more transnational forms of rule and policy; however, in the kinds of cultural work they do, these are far from clearly defined.

Nonetheless, despite the time constraints just-in-time and contract-to-contract gigs create for workers and the overall difficulty of securing funding for film work, among friends and interviewees, many still aspired to a career in cinema, and often spent nights, weekends, and stolen time at their day jobs working on "passion projects" building towards this goal. Many sacrificed comfortable living conditions, residing in crowded houses or overpriced apartments in Dublin and Galway. Most, in the absence of consistent funding for creative projects or qualification for limited artists' subsidies, engaged in multitudes of side hustles, smaller artistic initiatives, and other work outside of film and media. The passion and creativity involved in making a living in these industries appear operational to, as John T. Caldwell phrases, "why we as creative subjects and cultural workers continue to *voluntarily* participate in our own apparent subjugation within the new, flexible, neoliberal economies" (2013, 106, emphasis in original). What he calls "stress aesthetics" may move us towards an understanding of how this sort of everyday precarity actually looks within these industries, in terms of the just-in-time and project-to-project hustle "culture" of the media industries on a global scale.

However, focus on ground-level flexibility must account for the complex channels that form between the state, capital, and workers, especially within a nation-state with public media

policy and infrastructure. In spite of reports (and common sense) citing the utility and basic need for artists' subsidies (Barton and Murphy 2020), the reality of such funding is that it tends to maintain artists on subsistence salaries without clear paths to better opportunities. In addition, direct subsidy seems to be centered on "prominent creatives" whereas most of the film and media sector is characterized by low pay and overall precarious employment (6-14). However, many below-the-line workers and struggling creatives do genuinely always see themselves as just a step away from their big "break" into becoming a "prominent creative" which will get them noticed by the funding agencies and big companies. As Luke Morgan, lead member of the Galway-based filmmaking collective Project Spatula, sloganed, "We'll keep shouting as loud as we can until someone pays attention." This meant that his organization would continue to produce work, including a microbudget and completely self-funded feature film called *Sooner or Later* (Luke Morgan, 2017), until their visibility was too great to rely on their more lucrative contract gigs that kept the creative collective afloat. That "someone," in his mind, could either be the funding bodies or investors—however, he was rapidly losing faith in the former, leaving his hopes hinged upon an even more competitive international market. While he and his team remained hopeful, such consistent difficulties to navigate funding infrastructure breeds cynicism and exasperation. But in spite of consistent failure to obtain funding from any public sources, he requested that I check with him before publishing any findings in case the collective finally got lucky with a grant he was waiting on.[2] Despite his reasonable and justified bewilderment at the system, in the absence of security, he did not want to jeopardize his chances of success by biting the hand that might potentially feed.

Everyday relationships between precarious workers and the state are mediated through complex policy mechanisms which are developed in response to prevailing and entangled cultural, economic, and political climates. This chapter will build on the previous chapter's focus on built space in Dublin by expanding our gaze to other regions of the country, attuning ourselves to the uneven geographies of media policy across the diverse contexts of media industries in Galway, Limerick, and Kerry. But first, in the following section, I will outline the particular relationships between these media industries and the Irish state in order to lay the groundwork for a deeper analysis of how policy (mis)aligns with labour.

---

[2] As of last time we spoke (February 2020), no such grant was forthcoming.

Media Industries and the State

To articulate why policy matters to everyday media workers, perhaps it is time to re-activate a stagnant debate about the now much agreed-upon division between art and industry within film and media studies discourse. Media industry studies approaches in particular have unpacked this debate either by looking at how "production cultures" lead to a kind of industry self-theorizing (Caldwell 2008; Mayer, Banks, and Caldwell 2009), where the cultural aspects of media production are more practical and everyday than felt in grand artistic ambitions; through legacies of the "culture industry" discourses of the Frankfurt School, which argue that popular media and its modes of production are always tools of ideology (Horkheimer and Adorno 2002); cultural studies approaches which foreground the role of labour, reception, and the popular (Hall 1982; Hesmondhalgh 2007; McRobbie 2002); and finally, the social sciences, which tend to measure the "success" of cultural enterprise or, conversely, critique the planning and spatial policies behind it (see Scott 1999). Jennifer Holt and Alisa Perren lay these first three fields out in the introduction to their 2009 edited collection *Media Industries: History, Theory, Method*, an indispensable resource for researchers situating their work within longer histories of political economies of media. Petr Szczepanik and Patrick Vonderau point out that these discourses (post-Janet Staiger's pioneering work in the 1980s and 1990s) are discursively as well as practically geographically-distributed: the US has tended towards more economistic approaches to the industry, while European scholars have tended to criticize the theoretical basis of "production" as an area of media studies more broadly (2013, 1-3). David Hesmondhalgh similarly identifies schisms between organizational and political economy approaches to media production, which reproduce facile disciplinary divisions and overlook the central and nomadic role of *power* within the globalizing media industries (2010). One of the particularly pertinent points (via Toby Miller's *Global Hollywood* (et al. 2001) model) in Holt and Perren's estimation is that the globalization and national deregulation of media industries across the world has led focus away from cultural policy and towards "creative industries" models of research (see also Curtin 2016; Hesmondhalgh and Pratt 2005), which to my mind corrects a certain centrality of "production" within the study of film and media's industrial "cultures," and of course buttresses the more expanded work on media distribution which has even more recently broadened the field of industry studies and led to the expanded studies of infrastructure which inform this dissertation (see Curtin, Holt, and Sanson 2014; Larkin 2008; Lobato 2012; Miller, Schiwy, and Salván

2011; Parks 2005). In fact, the increasing ethnographic and anthropological focus on *cultures* of film and media in a more global sense informs (or has more to say about) these approaches (for example, Himpele, 1996; Larkin, 2008) even more than traditional studies of state policy, corporate governance, statistics, and discourse analysis within the realm of film and media studies of industry (especially from a more communications studies tradition). As the brief snapshots from media workers in the chapter introduction can tell us, and I will articulate later on, the knowledge economies and cultural elements of making a living in the post-financial crisis environment reflect the apparent recession of the state's presence in everyday life and the experience of public institutions. However, rather than throwing the baby out with the bathwater, so to speak, and saying that deregulation, privatization, and neoliberal restructuring means that the state has less of a role to play as architect of the media landscape on- and off-screen (in the fields of creative production and its modes of circulation), the state remains enormously important—complete with aims and projects of its own—*within* the deregulatory framework.

When discussing the regulatory measures that states take in response to turbulent global conditions like financial crises, Sandro Mezzadra and Brett Neilson articulate the ways in which the role of the state is pervasive, if altered, under shifting regimes of capital. Seeing global capital as a political actor, "the inability of the state to fully control or regulate the nexus of capital and politics becomes evident" (2019, 52). However, to understand the political power exerted by capital under emerging conditions, we have to remain attentive to how capital "crosses existing political forms" (52) in its multifaceted enactments across time and space. As they explain in more detail,

> Recognizing the role of the state in the production of such conditions, as well as in the management of the challenges that become manifest when these conditions are destabilized, does not mean ignoring the wider array of government entities and actors involved in this process. However, the testing of government capacities within the crisis of the past decade has at once made states prominent again and revealed the limits of state actions and interventions as a means of restarting growth in a global situation characterized by the intermeshing and interdependence of economic systems. (49)

Policy and regulatory agencies, as we know, exist across borders as much as within them. Even ostensibly "national" bodies like the MPAA in the US work, in overtly imperialist ways, to exert influence abroad. But this extends to film commissions and cultural semi-state organizations as

well. Thinking in this way, the uncanny and place-agnostic operations of state, semi-state, and even corporate soft power make sense: that SI holds offices in Los Angeles; that Siún ní Raghallaigh, CEO of Ardmore Studios in County Wicklow and Troy Studios in Limerick, has representatives in LA and London to promote Irish production facilities; that semi-state body Culture Ireland promotes and funds Irish cultural activity abroad at a variety of international festivals, events, and conferences; and that Creative Europe holds two "desks" in Ireland, one in Dublin and one in Galway, the former of which shares a building with SI's central offices. The intensive and extensive operations of corporate media policies and industries demonstrate that "soft power," which relies on cultural, economic, and civil society processes to influence international movements and relations (such as investment patterns) (Nye 1990), has a concrete geography, working across territories and scales of governance.[3] Its politics represent multilateral movements and agreements across territories and actors, where the power of capital and sovereignties are experienced and enacted differently depending on where you are standing (and/or working).

Pertinent to Mezzadra and Neilson's articulation of the role of the state in managing crisis, cultural policy post-financial crisis in Ireland has been a site of contestations around austerity and the use of space (see Guinan 2016). During the crisis and subsequent austerity measures, funding for cultural production in Ireland has contracted, to be replaced by mechanisms for "cultural enterprise" and an expanded tax break (Section 481 (S481)) for media production and post-production on Irish soil (between 32-37%). Irish cultural and regulatory agencies acting abroad are designed to build Irish influence, or at the very least awareness of Ireland's media production sector, within other (capital rich) places like the US, Canada, and across Europe. This soft power, in the case of Ireland traditionally exerted across the active migratory routes out of Ireland to the east (UK) and west (US), carries vectors of capital along with traditional cultural diplomacy and holds increasing sway over European politics post-Brexit. With this national and cross-border operation of policy in mind, we can come to a greater understanding of how nation-state organizations and policies are, far from acting only in response to transnational forces and pressures, entangled with the very same flows of capital and

---

[3] Ireland ranks highly in abstract "soft power" metrics and is known for wielding this influence (see Brodie forthcoming; Charlemagne 2020).

influence that they are designed to regulate and keep in check, in the case of the film and media sector, by cultivating an active cultural scene and workforce within their borders.

With this understanding in place, it is easy to see the circular thinking that drives the transnational logics of media production—the media sector has to make money domestically to provide jobs and ensure a constant workforce; which means that foreign productions have to be attracted; which will eventually build native talent and enterprise; which will then create jobs. Infrastructure will emerge from the "ripple" and "spillover" effects of this cycle, which will crystallize into a more robust and secure environment for workers and cultural production. But the ongoing presence and influence of the territorial expansion of corporate media operations, intensive and extensive, will never release media policy from this double bind, as even the most resilient infrastructures built out of this cycle will still be tied to the roving fortunes of global media capital driven by competition between territories and shifting transnational policy and regulatory conditions (see Mayer 2017). What Mezzadra and Neilson's framework can provide us in the study of film and media policy are the ways in which "interdependence" drives particular state responses that have just as much effect on territories as do the nomadic operations of global capital, whether we are speaking of EU "cultural cooperation" or what has been widely critiqued as "cultural imperialism" in the case of relations between the US and the rest of the world (and pertinently, Ireland) (McLoone 2009, 17).

Thus, in relation to how cultural and regulatory agencies are deployed to engage in operations of "soft power" and "cultural diplomacy" in response to "media globalization" (Curtin 2016), we can perhaps use the terms "media diplomacy" and "media sovereignty" to discuss the cultural and political economy of how media policy affects workers and cultural producers on-the-ground. While complicated arrangements of transnational finance and treaties dictate the high-end of the media production and distribution spectrum, the battles for funding and work that occur in locations across Ireland often feel disconnected from this sphere. Debates about "national cinema," while long out-of-touch with the reality of cultural production at a global scale, can at the very least remind us that struggles of "sovereignty" do not escape cinema and media, especially in the midst of post-financial crisis and austerity-era concerns about the "economic sovereignty" of Ireland. National film industries have long been sites of struggle over privatization and de-regulation, especially in terms of how policies of "protectionism" like quotas, import tariffs, and embargos are enacted to assert national self-determination in the

cultural sphere to maintain "national" integrity and protect against transnational forces of imperialism (see Betz 2001; Dickinson 2012; Parc 2017; Rockett 2013). In fact, arguments about sovereignty—especially how sovereignty is organized across transnational networks of power and influence—can help us to better understand, for example, how cinema producers in Galway are beholden to certain sovereign discussions happening in Brussels, or how the everyday exercises or understandings of sovereign ownership relate between workers in the tourism industry in west Kerry and for artists struggling for space in Limerick. Transnational cinema studies teaches us that a transnational approach responds to the "decline of national sovereignty as a regulatory force in global existence" (Ezra and Rowden 2006, 1) under globalization, while also keeping tabs on the perseverance of national formations and nation-state actors within a more global sphere of influence. If the "creative industries" focus of state policy and cultural institutions is another name for the Trojan horse of corporate governance and privatization, and "policy draws on a set of presuppositions around the borderless nature of cultural and economic flows, situated creativity is anything but global" (Lovink and Rossiter 2007, 11). Whether we are discussing the contours and divides between "cultural activity" and "creative industries," the economic and rhetorical ties that bind them are often enacted via a strategic activation of nationalized and exceptionalist discourses around heritage and the innate vitality of the environments within which people work.

As scholars such as Michael Curtin argue (also Mayer 2011, 2017; Miller et al. 2001), film production has participated in a global race-to-the-bottom in terms of various service-points along its supply chains. While cinema is a "highly-skilled" medium by governing job standards (as though there are not a multitude and layering of jobs and tasks in the media production ecosystem), there are other ways to cut corners than simply moving to de-skilled, underpaid environments, and the structure of uneven development still dictates that workers in the Global South are paid less than their Northern counterparts (see Mayer 2011). As Curtin elaborates,

> Media and markets have long conspired to privilege some places over others. These inequities have prompted some governments to persistently assert their cultural authority and political sovereignty by intervening in the realm of popular communication, the result of which is that political capital sometimes counts as much as, if not more than, economic or creative capital. In extreme cases, media have at times become instruments of the state or of an autocratic elite. At their very best, however, public media institutions

and enlightened media policies have provided the means by which common legacies have been maintained, policies debated, and futures imagined. (Curtin 2016, 675)

The dominance of bidding and its supposed fostering of "competition and innovation" based on project-logic which dominates the actual film industry has facilitated at the ground-level a globalization of production and the implementation of a logic of race-to-the-bottom (677), which has expanded territorially to encompass entire nations and regions bidding against one another. The soft power of nation-state cultural diplomacy becomes not a struggle for territory but a competition for private transnational capital. The creep of private economic management of "cultural" activities has thoroughly infiltrated common-sense arrangements of media policy and the everyday operations of the global industry. In this global environment, nation-state interdependence also manifests into competitive place-branding (see Greenberg 2004) and progressive de-regulation and privatization, with the state and above-the-line creatives and organizations bending over backwards for foreign investment while precarious workers are beholden to fragile policy frameworks at the whims of transnational flows of capital.

All this is to say that policy studies must necessarily keep the state and territory at the forefront of discussion. Even if media policy at first glance is designed to cultivate a healthy and active socio-cultural environment, ingrained geographical biases, promotional logics, and economic forces imagine territories in certain instrumental ways and color responses to crises. This is particularly important when looking at so-called creative economies, which contribute strongly to public ideologies of economic and spatial re-development within not only urban (as Chapter 2 describes) but increasingly suburban and rural environments (for a policy report in Ireland, see White 2010). In these registers, space and culture must generate value by serving particular forms of production and/or consumption. Creative industries policy as mobilized through the film industry, as my fieldwork made clear, only differentially accounts for the place of "culture" within its profit-making metrics, especially when considering workers within its calculations. The transnational thrust of film and media policy has become a formative factor in the spatial distribution of the media industries without necessarily building infrastructural capacity for local prosperity in most places.

The Irish Film Industry and National Infrastructures

In an environment of economic austerity, cultural funding is always at risk. In the case of Ireland, this has constituted a shift from largely a rhetoric of local cultural support from the institution of a national film board, first in 1980 then again (after a hiatus from 1987) in 1993—in the building and maintenance of an indigenous cinema culture, organized around a (however outdated) ideal of a "national cinema"—to one of financial incentives, industrial facilitation, and logistical coordination post-financial crisis. In 2011, a steering committee for the "audiovisual industries" released a report, modeled after a 2008 Pricewaterhouse Coopers analysis of the Irish "audiovisual sector," entitled *Creative Capital: Building Ireland's Audiovisual Creative Economy* (Department for Arts, Culture, and the Gaeltacht 2011). This report, beginning with a quote from creative industries guru Richard Florida, outlined a series of policy recommendations to build capacity and capitalize on the economic growth potential of the sector. While direct references to the ongoing economic recession are limited and claim that the audiovisual sector remained "resilient" in spite of the downturn (2011, 32), one can infer the degree to which public incentives would have to be justified via economic growth, privatization, and foreign relations. Asserting that the sector was sustained on FDI and that "creative and cultural industries are a powerful motor for jobs, growth, export earnings, cultural diversity and social inclusion," the report recommends "specific policies that will equip the industry to successfully enter the next phase of its growth from a predominantly domestic platform into international markets" (i-ii).

To sustain this growth, any such policies would have to build off of existing infrastructure and "potential" (i.e. talent, skills, labour pools). These for-profit and market-orientated initiatives are newly explicit and can be traced to post-financial crisis austerity during which public and cultural funding was being slashed in a widespread way. This applies to other cultural funding agencies as well, in particular the Arts Council, whose budget cuts have coincided with a familiar rhetorical shift towards profit-making since the crisis (Olsberg SPI with Nordcity 2017; Slaby 2011). However, these FDI-driven logics have been the guiding hand in the background of Irish film and media policy for some time, if not the arts more widely. Within this legacy, rather than as an exception, Irish media policy and its transnational arrangements of labour and identity have operated strategically within the post-financial crisis recovery. They have signaled a wider shift in global media industries towards the horizontal integration of finance, logistics, and the geo-economic exploitation of labour markets via privatization and creative industries-driven discourse.

The infrastructures of film and media in Ireland are typically situated within a readily-rehearsed overarching narrative of Irish film historiography. While there can be various markers placed on the births and false starts of an "Irish" film industry,[4] including the largely foreign-led productions of the silent era (like the Irish American "O'Kalem" films of the 1910s) and Hollywood and British productions of the 1940s and 1950s (e.g. *Odd Man Out* (Carol Reed, 1947), *The Quiet Man* (John Ford, 1952)), of particular importance is the establishment of Ardmore Studios in 1958, during the tenure of Seán Lemass as Minister for Industry and Commerce, which, while forming the basis of a media production infrastructure in the country, was also largely an offshoring destination due to its US interests and financial incentives from the British government (see Barton 2004; D. Murphy 2018). Much later, in the late-1970s, the development of the IFB was a contentious and protracted process, involving various actors from the film industry both within and outside of Ireland even after its official establishment in 1980 (Connolly 2003; Rockett, Gibbons, and Hill 1987). Artists, workers, and scholars since the 1970s and until very recently have been primarily invested in a largely public and anti- and de-colonial project: of establishing and cementing a public national film infrastructure, reclaiming the cinematic means of production from the cultural imaginations of Hollywood and the UK (which had claimed an effective monopoly on representations of Ireland from the earliest days of cinematic production), along with inserting themselves as an *Irish* filmmaking scene into a global conversation around art cinema and the avant-garde (see Barton 2004; Connolly 2003; O'Connell 2010; Rockett, Gibbons, and Hill 1987). This work, both at the time of its production and especially in later evaluations, conversed with both European "new waves" and avant-gardes as well as postcolonial Third Cinemas from the Global South (Connolly, 2004). The films, and their institutional contexts, could readily be argued within either framework, and often seemed to exist in both worlds at once: whether looking at RTÉ-trained Bob Quinn's Irish-language, Sinn Féin/The Workers Party-funded *Caoineadh Airt Uí Laoire* (1975); English university graduate Thaddeus O'Sullivan's experimental British Film Institute (BFI)-funded docufiction *On a Paving Stone Mounted* (1978); or Laura Mulvey protégé Pat Murphy's Belfast-set feminist and

---

[4] Of course, there are regional micro-histories that are important to note, which do not typically feed into the grand narrative traced here. For example, the occupied six counties' media history is far different, and is often written in terms of immediacy/liveness, documentary, and experimentation due to the political circumstances since the late-1960s; Galway's micro-history might be written about in terms of both Irish-language state TV network TG4 and Roger Corman's international film studio in the 1990s; and Cork has production apparatuses that were beyond the remit of my fieldwork.

postcolonial narrative *Maeve* (1981) (also BFI-funded). However, while these filmmakers were largely concerned with dismantling both external and internal national narratives and institutional problematics, politicians at the time were invested in different nation-building ideas through culture. These were centered around the organization of means of production within the hands of those with the capital to employ Irish workers—in effect, in generating a top-down industry from what was essentially an ad hoc, ground-up community of artists and practitioners. This project, as Seán Crosson notes, was also suspected by many filmmakers and critics to be tied to an ideology of cultural projection, which saw officials reluctant to fund projects critical of Ireland's dominant institutions and tied up within the Church's theocratic ideological regulation (which was often protectionist in nature) (2003, 4-5). It also hinged, like all public infrastructures, on the current cultural policies of the ruling Government, culminating in 1987 with its dissolution under the return of the (at the time) more conservative Fianna Fáil to power. Even if arguing for the role of culture in critiquing the nation and checking its institutions, it is difficult to imagine a "critical" cinema successfully challenging the dominant institutions of Irish life and politics under either system, whether that of absent or ad hoc (either British or Irish nationalist) funding in the 1970s, or the limited funding offered by the Film Board in the 1980s.[5]

Through further shifting tides, the IFB was reestablished in 1993, on the three legislative pillars to expand the Broadcasting Act (ramping up RTÉ productions), S481 of the Finance Act (incentivizing international filmmaking with competitive tax breaks), and the re-activation of the 1980 Irish Film Board Act. These three pillars "laid the foundation for the creation of an Irish audiovisual content production industry" (Department for Arts, Culture, and the Gaeltacht 2011, i). Through this legislation, which followed the international success of *The Crying Game* (Neil Jordan, 1993), increasing global recognition for other Irish films and filmmakers (like Jim Sheridan), a progressively skilled workforce, and a thriving FDI-driven economy in the early-stages of the Celtic Tiger "boom" years—in short, the further dismantling of economic and cultural protectionism and the ushering in of neoliberal globalization—the structure of the Irish industry changed from a false start to a fully-fledged cinema producer at a global scale. This growth of the film industry thus serendipitously coincided with the economic "boom" of the

---

[5] The avant-garde was certainly more active in *cinema* in particular before the establishment of the national funding board, and since its first dissolution in 1987 has only existed in fits and starts in the country, with the most vibrant cultural movements more connected to the art world than cinema circuits (see Connolly, 2004; Foreman, 2014), whether by necessity, convenience, and/or market factors.

Celtic Tiger during the 1990s, when primarily foreign investment in technology, pharmaceutical, and financial sectors fed economic growth. The growth (or invention) of the "creative class" driven by these industries represents a crucial fulcrum of contemporary Irish development, even if the government would not explicitly target these workers and their industries until much later, once the industrial base and workforce in the country's urban areas was sufficiently molded in this image (see Lawton, Murphy, and Redmond 2014).

In this regard, the near-simultaneous emergence of the Celtic Tiger and the second IFB in 1993 should not be seen as a coincidence—in the same way that the built environment had been opened up for foreign investment, media production used the same spaces for its own circulations and public/private partnerships. Media thrives on these lucrative contracts and relationships (often formed in transnational arrangements). Media work (and workers) are ideal conduits of public and private interests collapsing into a project that promotes industry, culture, and foreign investment (via finance capital and spatial development) at one and the same time. Now-Uachtarán (president) and then-Minister for Arts, Culture and the Gaeltacht Michael D. Higgins claimed in 1993 that the IFB was meant to "exploit the technical facilities available in Ireland at present and the *imaginative and creative* skills which exist in that industry which have been underemployed" (Republic of Ireland 1993, my emphasis), linking built space to creative labour as a primary avenue through which the IFB would operate and attract investment, falling into line with neoliberal common-sense as to the progressive privatization of "public" goods such as media and culture. Foreign productions like *Braveheart* (Mel Gibson, 1996) took advantage of Ireland's newly open economy (and tax incentives), feeding the Irish film economy with finance and jobs, and an influx of national productions reflected a newly globalized film culture (see Crosson 2003). As Crosson notes (6-7), it actually may have been Ireland's lack of national film infrastructure up until the 1990s that preconditioned both filmmakers and audiences for the formal conservatism in its cinema (reflecting largely Hollywood attitudes and styles) as well as for the neoliberal modes of production that characterized the Irish economy from the 1990s onwards.

As the 1990s went on, Ireland was further integrated into global circuits of film production, and through the 2000s developed a lucrative transnational industry through various progressive tax incentives (which have since become among the most competitive in the world) and the development of various more advanced local infrastructures for production. Growing on

the work of the 1990s, which often concerned itself with national questions in the face of epochal changes (i.e. the "boom," secularization, the 1998 Good Friday Agreement), there was an influx of films addressing this newly "globalized" Ireland, coinciding both with various opportunistic co-productions with other countries (see Hjort 2010) as well as a kind of commodification of Irish identities through the media.[6] However, as has become more and more the case, this growth has financially relied on US and other co-produced successes, usually with other EU countries but also states like Canada and Australia, regardless of box office and audience numbers at home (see Drake 2013, 229). In part due to recent international hits and their significant box office and awards engagements,[7] SI currently focuses primarily on these lucrative productions as sources for investment and proving grounds for skills training for Irish film and media workers, while maintaining limited and tenuous control over their sustained job provision and investments.

Keeping in mind how the transnational order re-shapes the relationship between the nation-state and cultural production, we can thus see how viewing government and transnational policy as *infrastructural* to the contemporary arrangement of Irish media industries can help us build a better idea of its everyday functionalities for media workers. How do sovereign discussions and diplomatic arrangements that respond to transnational movements affect (or appear not to affect) those working in "national" film and media industries? And what happens to ideas of "public" and/or "cultural ownership" when these cease to be the primary source of value in policy discourse? Or, more simply, do transnational modes of production *actually* sustain Irish media workers? The answers, at first glance, may appear obvious. However, by foregrounding the testimonies of an array of film, media, and cultural workers across sites in Ireland, collected formally and informally between June 2017 and May 2019, I will paint a very different picture than the one promoted by official state bodies and media. That is, I will articulate how workers relate to public organizations, whether with gratitude, indifference, or antagonism, in relation to their perceived conditions of media and cultural industries, work, and funding.

---

[6] Films include *Intermission* (John Crowley, 2003), *Goldfish Memory* (Elizabeth Gill, 2003), *Adam and Paul* (Lenny Abrahamson, 2004), *Once* (John Carney, 2006).

[7] Films include *The Guard* (John Michael McDonagh, 2011), *Brooklyn* (John Crowley, 2015), *The Lobster* (Yorgos Lanthimos, 2015), *Room* (Lenny Abrahamson, 2015), *Star Wars: The Force Awakens*, *The Breadwinner* (Nora Twomey, 2017), *Star Wars: The Last Jedi*, among many other films and TV shows under SI's and the S481's expanded remit.

Social Infrastructures and Regional Specificities

Walking around Galway city, the seat of County Galway and the fourth largest city in the Republic of Ireland, one is struck by the presence of the arts, with the main paths through the city center populated by buskers, performers, and the revelry of its compact tourist center. Pop into any pub or event space in the evening and there will likely be some sort of live event, from cover gigs, to DJ sets, to performances, poetry, and film screenings. Seasonal festivals regularly enliven the cultural scene, and many are employed or rely on revenue generated by large-scale yearly events like the Galway Film Fleadh and the Galway Arts Festival, among many others. Work bleeds into leisure, and days off are often spent in one of the city's dozens of pubs drinking pints and chatting culture, arts, and politics. Many of my friends used to call Galway the "graveyard of ambition," a general feeling within which I often found myself completely seduced during visits. Much of my general insight also comes from extensive time spent having pints and discussing the general arts scene in Galway and across the country, and thus, like much of the fieldwork for this chapter, may appear experiential in nature.

That said, to reduce Galway's arts economy to that of a bohemian party town is obviously to enormously diminish the social role that these sorts of environments play within broader regional, national, and transnational economies, in addition to the socio-economic character of such work and the realities of living in a "creative city" in post-financial crisis Ireland. After all, Galway is a UNESCO designated "Creative City," which implemented the "Galway City of Film" initiative since 2014. The buzz created by such policies and the economies they are meant to support do not spare the space from the more familiar undersides of the uneven effects of the "creative city" described in Chapter 2. Having spent a good deal of time amongst film and arts professionals in Galway, I have met dozens of artists, performers, and workers in this space, most of whom work on contract-to-contract, freelance, or otherwise non-permanent, flexible, or precarious bases in their fields. Buskers perform next to rough sleepers. Artists and media workers struggle to make rent. College students lodge with middle-class families subsidizing mortgage payments with sublets. Many young people contemplate leaving the country on short-term visas for economic opportunity and work experience, and those who return find the job environment inhospitable to those who have not put in their time networking and ingratiating themselves into the local or national scene.

Especially in the creative and cultural industries, many people went abroad during the financial crisis to look for work due to lack of funding and opportunities.[8] During the recovery, emigrés started to trickle back into the national workforce. However, in spite of the promises of opportunities and skills development abroad, some had come back and found that they had lost a step in the local industry that is supposedly there to build a more robust on the ground labour pool and technical infrastructure. A friend of mine, a native Irish-speaker from Spiddal, had spent two years in San Francisco, gaining a producers' credit on an award-winning documentary, but came back to Galway and found herself near the bottom rung of a quite long and shaky ladder. Another friend spent the same period in Toronto before returning to Galway some time after her and had found himself working under her on contracts for whatever gigs she could secure through her recent contacts. Darach Ó Tuairisg, Gaeilgeoir and the founder and director of Spiddal-based Irish-language theatre troupe and frequent TV producers Fíbín, had spent time abroad in the US working when he was younger, but emphasized that the struggle for funding and work in the Irish industry was a long game. To him, you needed to know the community, meet funders in person, repeat meetings, and build relationships in order to maintain a public-funded media and arts practice. As it turns out, time spent on-the-ground and in the community was more important for subsistence work than flashy foreign credentials.

In a conversation with filmmakers Liza Bolton and Leeona Duff at a small café in Galway one afternoon, they both characterized the professional media environment of Galway as one of conversation, networking, and deal-making, whereas the majority of the country's major media production and post-production still occurred in the Dublin region. This was in spite of recent regional uplifts added to the S481 tax relief scheme, a 32% nation-wide media production subsidy which provides an additional 5% tax relief for projects undertaken outside of the Dublin region (meaning such projects can receive a total of 37% tax relief on eligible spend). As several told me, the S481 had less effects on local productions outside of Dublin, tending to subsidize the higher scale of production and post-production, and even suggested that it was really designed to draw workers *from* Dublin rather than necessarily employ local talent.[9] Other

---

[8] This is of course related to long cultural histories of Irish emigration, and it is very normal for young people to emigrate to the US, Canada, and Australia especially (but increasingly places like the UAE) to work, either seasonally or on one- or two-year visas, as well as to other European countries.

[9] Union rules for film production in Ireland operate a pretty typical rural/urban divide in terms of "production bases" and "production zones," which must by mandate be within 24km of the urban production company's location, which of course becomes complicated when these companies are temporary special purpose vehicles set up for a single

regional initiatives and subsidies include the Western Region Audiovisual Producer's (WRAP) Fund, a subsidy provided by the Western Development Commission, ÚnG, local county and city authorities, and the only regional film center remaining in operation (as of 2019), the Galway Film Centre. The fund provides up to €200,000 for any

> feature film, television drama, animation or game that undertakes a significant portion of its production (including post production) in the Region (Clare, Donegal, Galway, Mayo, Roscommon and Sligo) and can demonstrate a strong prospect of generating a financial return on our investment. (WRAP Fund n.d.)

The fund also cites local infrastructure, from production companies, studios, locations, and transport, suggesting that it is open to attracting inward productions.

But these types of funds could not be counted on by everyday media workers, nor could the amount of productions supported by them to provide work. Many of the most successful media professionals brandish a self-promotional entrepreneurialism, forged by necessity. The small-scale and intimate social environment of the arts also means that projects dwell in association with other art forms, organizations, or companies. Luke lamented the difficulties of securing funding and said that he and his team had established themselves from the ground up based on what limited work was available around them and an entrepreneurial and innovative ethos. Project Spatula made great efforts to pay all their staff for every project (including passion projects), which counted among its members theatre professionals, writers, non-professionals, as well as film and media technicians, but it was difficult to do so relying only on contracts. Darach had started his company after establishing himself and working his way through the public TV system. Liza was heading up a mini-film festival called "Shot By the Sea," funded by the Village of Salthill and the Small Towns Big Ideas project of the Galway 2020 European Capital of Culture initiative, which at the time was undergoing a period of turbulence in its management

---

production. But even though these rules are ostensibly in place to protect workers and provide payment for additional commuting, and while there is a highly open-ended stipulation for work outside of the 24km radii of Limerick, Galway, Cork, or Dublin, it is nonetheless troubling that Ireland's greatest draw for foreign productions in terms of space—that is, its landscapes—seem to fall outside of the purview of direct union regulation. These rules, as they stand, are designed to be flexible towards the "logistics of the production," in the coordination of people and stuff within a given geographic proximity between the centers of production and the spaces of production, which are then coordinated by finance, passed down from the production companies and the strange hybrids of public/private finance, especially in the case of international productions. Post-financial crisis, especially in the already corporatist "social partnership" environment (see Chapter 1), unions have been systematically disempowered by ostensible structural adjustment and FDI-driven measures (O'Callaghan, Kelly, Boyle, and Kitchin 2015, 34), and with the growth in foreign media production, the media industries are no exception.

and personnel, meaning that many felt unsure of its actual direction. But while Shot by the Sea's credentials appear large-scale, what Liza described to me insisted otherwise. What she wanted out of the project was a community-centered initiative to celebrate the local coastal landscape through short films, and the funding from Salthill—a small coastal community and resort town just outside of Galway City—reflected an arrangement mutually beneficial to both creative expression and community enterprise. Little Cinema Galway is a similar initiative deeply grounded within the city's film scene, hosting a monthly exhibition of local short films at the Róisín Dubh bar and a yearly 48-hour film competition. Such community-orientated endeavors exist in tandem, tension, and independently from broader schemes. Féilim O'hAoláin, a leading member of the Theatre57 collective, was also involved in the documentation of TechSpace, an Irish-language hub for teaching high-tech skills through Irish. He said that top-down projects like Galway 2020 (through the European Capital of Culture initiative) tried to engineer the creative industries, but he was actively trying to collectivize arts and media workers to forge alternative infrastructures (like Theatre57). So, while initiatives and institutions like the S481, WRAP Fund, and Galway 2020 reflected the economic necessities of creative work in a traditionally rural region, incentivized at the public level, smaller-scale projects more directly involved local communities were cobbled together from whatever else would be available at any given time, whether small funds, community participation, or individual expenses.

Thus, the crucial elements of film and media in Galway are not just the formal infrastructure put in place by the state or civil society arts organizations. Rather, just as, if not more important are the informal exchanges that occur in the community, within arts events, meetings in pubs and coffee shops, and the everyday hustle of getting by, making work, and moving up in the national film and media industry. The co-existence of networking and entrepreneurialism, often by necessity, with community-orientated practices, more explicitly political in their aims, reflects a broader tension between industry and arts practices within the media industries. My experiences with filmmakers in Dublin reflected a more business-like and competitive environment, a place where perceived competition for funding often led to the atomization of individuals and crews, even if funding was not forthcoming, and many told me of an "everyone for themselves" attitude that characterized the funding environment. Few wanted to reveal trade secrets in their funding applications, because to do so would risk further competition. But in Galway, it often seemed impossible not to work together, even if there was

still competition across different individuals and groups for project funding available. As Liza and Leeona said during our long, relaxed conversation over the course of an afternoon, institutions like the Galway Film Centre and the yearly Galway Film Fleadh remained somewhat apart from the arts community that sustained the city's bustling film and media scene, even though many worked for them, sent work, or counted on them for networking. While they obviously and necessarily overlapped, most work was made and contacts created through existing social networks. Even the apparent lottery of achieving public funding could not be gamed properly if you were not socializing with the right people. In Galway, if you want to avoid bumping into a friend or colleague, you simply have to avoid the town center, and even then you have to be careful—a friend referred to a look over both shoulders, practiced by most before gossiping or shit-talking, as "the Galway shuffle." In the arts community, everyone knows everyone, and anyone could be anywhere. I have seen countless gigs awarded over an evening pint, where last-minute short staffing or serendipitous connections lead to collaboration or gainful employment. In such environments, you meet far fewer people who have ever been awarded any kind of direct state support, unless of course you count the dole.

However, in spite of the apparent disconnect between the everyday lives of workers and the government programs in place to support media production, there were constants that stretched across the disparate spaces of production in Ireland. Whether speaking with a post-production manager in Dublin, an editing technician in Galway, a tourism operator in Kerry, or a freelancer in Limerick, I heard variations on a familiar phrase: "481 spend."

Taxation, Finance, and the Logics of FDI Facilitation

In a now familiar set of arguments, made back in 2009 during the financial crisis, then-Minister for Arts, Sport and Tourism visited the set of US-Irish co-production *Leap Year* (Anand Tucker, 2010) in Dublin and took the opportunity to extol the virtues of the recently re-vamped S481 tax scheme, which today provides 32-37% tax relief to eligible expenditure in Ireland. The minister said that

> The film industry is the cornerstone of a smart and creative digital economy and with the
> improvements to Section 481, the Government acknowledge [sic] its importance at this
> time. I was pleased to be able to get the agreement of the Minister for Finance to amend
> Section 481 to increase the individual investor cap for those wishing to invest funding in

film in Ireland from the previous limit of €31,750 to €50,000 and to also increase the

investor relief from 80% to 100%. These changes will bring Ireland back into line with

many of its major competitors and will put it ahead of quite a number, including the UK.

Film, especially with stars of this calibre, provides a global window to Ireland…There is

an inward investment pipeline for Ireland of well in excess of €150 million in film and

TV projects under negotiation at the moment and I believe that the recent adjustments to

the tax investment regime will be the catalyst in securing these opportunities for Ireland.

(Qtd. Gaiety School of Acting 2009)

Over the next several years, these caps and financial structures underwent periodic adjustment

and loosening, just as the language and outward policy of SI (then IFB) would shift explicitly

towards that of a facilitation body for inward investment (complete with the activation of an

outward soft power infrastructure to bring this investment in) (see Murphy and O'Brien 2015).

Since the 2007-2008 financial crisis, the policy language of SI/IFB has shifted drastically.

Such economistic treatment of the film and media industries does not come from nowhere. While

in the case of Ireland, such changes appear due to austerity and the need to justify public support

for cultural enterprise (and the workers that make a living through it), policy recommendations

from transnational firms like Pricewaterhouse Coopers (responsible for a number of reports on

the Irish "audiovisual sector") (i.e. Minister for Arts, Heritage and the Gaeltacht 2011; PwC

2020) subjugate cultural content to profit-making and return on investment:

At its heart, the film industry is about great content – that is, developing and producing

films to capture an audience that can be monetised through theatrical release or DVD

sales and by licensing to distribution channels such as television or digital platforms. It is

the timeless appeal of this content – of great films – that continues to drive film industry

growth. (PwC 2016, 3)

The shift from culture to "content" echoes creative industries logics surrounding the place of

production within vital creative economies and discussions around "convergence" in film and

media under globalization (Jenkins 2006). This practical and rhetorical shift followed by

Ireland's public bodies is evident from simple promotional materials and the IFB website's re-

branding as "Screen Ireland" in 2018, which advertises the country's infrastructure, tax breaks,

and available creative labour as reasons to invest and produce content. In expanding the scope of

their operations to projects outside of the typical banners of feature, documentary, and short

films in order to incorporate a more wide-ranging idea of the "screen industries," they have plugged into a more diverse set of creative industry sectors and corporate development strategies.

Moreover, finance capital is uniquely primed to circulate through an environment so often thought about in terms of cultural capital and national self-determination, as the "public" purview of cultural enterprise allows these logics to operate largely under the radar and in the service of public interests and benefits to the population (for an example of economic impact justification, see PwC 2020, 19-26). As argued in Chapter 1, the financialization of media is a central tenet of media globalization and references the permeation of financial logics into spheres apparently disconnected from the financial industry (see Haiven 2014). Financialization can be seen across the diverse geographies of media: tax incentives are put in place to attract foreign media capital, which extracts value from space and funnels profits through financial instruments back to its productive center (in the case of film offshoring, usually to the US). Until 2015, financial instruments, such as special purpose vehicles (SPVs), short-term companies put in place to accommodate FDI and avail of tax benefits, acted as conduits through which media finance circulated the space of Ireland.[10] In the 2011 *Creative Capital* report, the policy recommendations especially include greater engagement with the banking sector, attraction of "angel investors" and "venture capital," asserting that "strong relationships with the banking sector are important and should be a key function of enterprise development" (Department for Arts, Culture, and the Gaeltacht 2011, 7). The S481 tax scheme especially is designed to put these financial conditions in place. Previously, the S481 allowed a variety of actors to invest in a media property as part of speculative investment portfolios. However, in a 2015 re-adjustment, the scheme transitioned from, as Denis Murphy and Maria O'Brien describe, "investor-led" to "exchequer-led" (Murphy and O'Brien 2015), meaning investor risk was replaced by Irish tax-payer money to these global projects. While it ensures that companies do not take liberties with the benefits, for example, by mandating that all FDI must partner with an Irish production company, or establishing a long-term subsidiary in Ireland, as a lawyer for SI told me on the phone, productions like *Star Wars* buy shell companies to still avail of the benefit. As Chapter 1 argues, financialization generates an environment within which workers are subject to the whims of circulatory markets, where Ireland's competitive incentives operate. Chapter 2, then,

---

[10] SPVs, perhaps not coincidentally, reside in the finance sector, a contributing factor to the 2007-2008 crash.

demonstrates how these logics re-develop space in the interest of finance capital, capturing value from the immaterial labour of workers, under the guise of "culture" and regeneration.

But while these logics are familiar within the geography of financial globalization and spatial planning in Ireland, they are newly explicit within cultural policy, especially since the financial crisis. The geographies of such financialization, as Chapter 2 also argues, reflect and perform in tandem with global media supply chains and their coordination and management across spaces. SI has essentially re-organized itself as an agency designed for facilitation of and in deference to FDI and the logistical enablement of its operations. In a section called "Why Film in Ireland?," SI's website reads: **"**Ireland is a world-class dynamic filming location. We provide logistical on the ground support for film and television projects filming on location in Ireland" (Fís Éireann/Screen Ireland 2020). "Why Ireland" is a question local and national economies are forced to answer in order to draw in foreign capital and create jobs and revenue in the short term, justifying the existence of the public agency by inserting it within a variety of buzzy, circulatory dynamics key to the functioning of a successful creative economy. In a section called "Filming in Ireland" it states: "Ireland is a dynamic and world-class location for international production. Our excellent crew base and technical infrastructure combined with our breathtaking scenery and generous tax credit make Ireland a central hub for TV, feature film, and animation" (Fís Éireann/Screen Ireland 2020). All text is positioned across backdrops of existing productions and breathtaking landscapes. As Chapter 1 argued and Chapter 4 will develop in terms of the Irish "business climate," industry and scenery have coalesced in the visual and promotional culture of industrial development projects in Ireland since the earliest stages of liberalization. Landscapes, financial incentives, labour pools, and technical infrastructure form an apparently thriving film industry machinery in spite of an ongoing financial crisis, requiring only periodic influxes of transnational capital to fire into action.

This embrace of the profit-making potential of Irish cultural enterprise creates an investment market where Irish film and media can "make you money," the "you" being the government bookkeepers as well an abstract potential buyer from an unspecified global place looking at Ireland to make media products. Obviously, such shifts coincide with slashes in funding due to austerity and the lasting effects of the 2007-2008 financial crisis, in many ways imposed by different wings of the same supranational structures of the EU which govern how Ireland co-produces and manages its film production and wider cultural industry environment.

This is an inescapable double-bind: an exceptional shift towards profit-motivated policy language due to external economic pressures which then leads to a decline in cultural sovereignty over media output but an immeasurable rise in employment and "externalities" through infrastructure developed at this time, which cannot then accommodate localized production without continued foreign investment. In effect, while "institutionalizing dependency" (O'Callaghan, Boyle, and Kitchin 2014, 131), such mechanisms are the only way for the industry to stay afloat under prevailing logics of cultural governance. Reflected in the language of these public bodies are what Mezzadra and Neilson refer to as the interlocking logics of "extraction, logistics, and finance," which, they argue, thrive in an environment of austerity and the slashing of public services (2013b). The screen industries are but one casualty of this private sector creep during Ireland's long period of austerity.

At a basic level, the S481 is structured like other state, regional, and national media production tax breaks, in that it offers tax subsidies on money spent in production (see Mayer 2017). While the scheme is fairly standard, Irish taxpayers ultimately issue thousands of Euro in tax rebates to global media companies each year. This is justified through jobs and the idea of "eligible Irish spend," or money put directly back into the local economy (although this is often a loose distinction). This 32-37% tax return on eligible film production mirrors and supplements the already exceptionally low corporation tax (12.5%) and generous "research and development" exemptions through which foreign investors harvest intellectual labour for immediate export. This R&D tax credit is advertised by SI today:

> It is also aimed at achieving technological advancement directed at new or improving existing materials, products, devices, and systems. In order to qualify it is necessary to achieve scientific or technical advancement and involve the resolution of scientific or technological uncertainty. As the film industry converges with technology, this may be used by companies advancing research and development in technology. (Fís Éireann/ Screen Ireland 2020)

While perhaps more pertinent to the development of streaming platforms and their technological infrastructures as discussed in Chapter 4, the film and media sector remains uniquely poised within the Irish tax environment to avail a generous program of returns, money which funnels back out of the tax revenues (and domestic economy) to accounts far away or offshore. As producer Larry Bass argued when advocating for the film industry's central inclusion in the

Creative Ireland policy scheme, "We need to start recognising that investment in television, investment in R&D, needs to be treated the same way as investment in pharma, and should have the same tax treatment" (qtd. in Slattery 2017). Similar to *Creative Capital*'s positioning of finance as crucial to the coming media economy, SI cites the presence of other industries, particular big tech and digital companies, as a reason to invest in the Irish film industry (along with tax breaks, skilled workforce, good locations, and general infrastructure). This machinery is fed by a wider ecosystem which includes the overall friendly tax environment, something advertised by production companies and studios for a while now. This convergence is more explicitly referenced in the *Creative Capital* report, which, in a subsection entitled "Building Partnerships in the Convergence Space," states:

> Who are the new partners for Irish content companies and individual content creators? They are platforms, content aggregators, telecommunication companies, multi-nationals, advertisers, web developers and gaming companies. The presence in Ireland of many of the major media multi-nationals is a *resource* Irish content producers have not yet used to full advantage. (Department for Arts, Culture, and the Gaeltacht 2011, 7, emphasis mine).

This is echoed in SI's page devoted to attracting inward investment to the film sector via tax incentives:

> This has been the cornerstone of Government policy in attracting inward investment into Ireland across the industrial sectors. Companies in Ireland trading in this space which have crossover activities to the screen industries are eBay, Google, Yahoo, Universal Vivendi, Alliance Atlantis and Beyond Films. This low tax rate may be of particular attention to US/European sales agents. (Fís Éireann/Screen Ireland 2020)

What ostensibly is still situated as a cultural policy agency appeared, at this point, re-designed to facilitate nationally-subsidized production for private companies and capital interests.

Apart from relationships with Hollywood, which rely on the S481, Ireland is also a partner in all of the EU's major co-production arrangements, including the European Convention on Cinematographic Co-Production (signed on in 2000), Eurimages (since 1992), and the MEDIA Programme, which as part of Creative Europe and Digital Single Market Initiatives, of which Ireland has been an active member since 2014. Much work has written about the implications of transnational co-productions on national cinemas, focused in particular on economic and industrial protectionism (see Elsaesser 2005), the hybridization and affinitive

transnationalism of co-production arrangements (see Hjort 2010), and the implications of trans- and supranational cooperation on "cultural identity" (see Betz 2001; Elsaesser 2005). This work has been enormously productive in shifting the conversation from one of "cultural identity" (and its associations with certain essentialist or individualistic notions of representation and expression) to "cultural competence" (Elsaesser 2005, 510), in terms of film scholarships' negligence in acknowledging the histories and political economies at the heart of co-production arrangements, especially within the constantly negotiated (and internally contradictory) space of "Europe" (Betz 2001, 20). While EU cultural policy does in some instances focus on a unified multicultural European "identity," it is primarily structured to ensure the free flow of capital across its internal borders and enact certain strategic initiatives (for example, the Digital Single Market). In contemporary discussions, it becomes impossible (and pointless) to discuss the cultural "identity" of films without accounting for the policy mechanisms (like "cultural tests" and skills metrics), funding agreements (like treaties and tax incentives), and labour economies which exist in transnational formations, are controlled by nomadic flows of capital, and are governed by shifting centers of power unbeholden to national governments.

Co-production and offshoring, and the material production practices occurring in pre-production deals, production funding, and production and post-production cultures, present a two-fold problem for the study of Ireland's film and media sector. On the one hand, there is a need to understand wider infrastructures of media production and circulation at a transnational scale through the geographical contexts through which these infrastructures must pass. These vectors of power and influence *do* land on communities and workers in ways that force scholars and advocates to always keep eyes on them, lest they shift into even more troublesome territory. To this end, the ways in which they interact with the everyday lives of communities and/of media workers is a focus taken up by an emerging range of media infrastructure scholars through site-specific fieldwork and influence from geographical and anthropological methods (Caldwell 2008; Lukinbeal 2011; Mayer 2011, 2017). However, this re-localization risks, on the other hand, contributing to ongoing and conservative focus on the "cultural identity" of Irish film and media in spite of the realities of transnational production and circulation as the defining characteristics of the contemporary media landscape, especially through the manufacturing of the creative industries via strategic activation of cultural heritage and arts traditions.

These tensions are felt across media and cultural policy as well as scholarship on it. As Huw David Jones asserts in a study of UK/EU co-production agreements,

> even though most co-productions are financially driven, the logistics of co-production inevitably have consequences for a film's cultural identity. Official co-production treaties often specify that each co-production partner must have a creative input in the film which is proportional to their financial investment, even if this is not always appropriate to the film's narrative. (2016, 5)

This ongoing focus on cultural identity in policy—espoused in policy arithmetic by cultural tests (examined later) to determine not just funding but also the advertised identity of a film based on majority and minority co-producing partners—is an economistic mechanism by which space and labour frictions are eliminated within co- and offshored productions. Apart from much-maligned erasure of cultural specificity, such policy aligns identity with a register of capital investment and above-the-line talent. It irons out the granularity of diversity within a much wider film and media industry supposedly represented in the credits of globally- and co-produced products. Studies of the actually-existing diversity of the Irish film and media industry notwithstanding (see Asava 2013; O'Brien 2014; Kerr 2000; Kerr and Preston 2001; Kerrigan and O'Brien 2020), the transnational policy arithmetic of Irish state and EU agencies is an imaginative mathematics that ignores conditions of precarity and exclusion at the heart of film and media production economies. So, while studies of small national cinemas tend to focus on policy and output, this chapter supplements (and hopefully in some ways supplants) focus on above-the-line cultural identity to trace conditions of media production and the implications of such policy math for workers on the ground, especially those said to thrive on the "ripple effects" provided by large-scale FDI in media. Production cultures, whose study relies on taking seriously the cultural logics of "creatives" on either side of the imaginary budget line, also dynamically interact with regulatory and funding frameworks. This dynamism is an everyday condition of possibility, adaptation, or entropy for workers, and its concrete entanglements must be unraveled.

Ripples in the West

Troy Studios, a global film studio built on the brownfield site of a former Dell manufacturing plant (see Fig. 35), is at the center of Limerick's top-down project to cultivate a local industry. The studio is ostensibly in place to attract large-scale foreign productions and workers from

elsewhere in the country to re-locate for long-term work and to use S481 projects to train a local labour force (as the next section will describe). However, these sorts of projects and their "ripple effects" are left to the fragile whims of the global media marketplace, even if successfully managing to attract new talent to the area. Using a similar strategy, Ashford Studios in Wicklow, established in 2012, lucked out with its first client, History Channel's *Vikings* (2013-2020), having such a long and successful run, employing hundreds in the region for a period of several years. However, *Nightflyers* (2018), Netflix's George R.R. Martin-adapted television series and Troy's first major production, was not so fortunate. Pitched as a potential workhorse for the local industry, its abrupt cancellation immediately after its poorly-received release left the studio without a constant tenant for the near future, leaving the proposition for local industry and workforce built on the back of purely foreign funding tenuous at best.[11] In spite of the recent growth in studio infrastructure in Ireland, a thinly coded message from a Disney executive at a public talk at the Dublin International Film Festival in 2019 felt very meaningful: he said that the skills were getting there, but the technical infrastructure was not there yet for the country to become a real powerhouse (Bailey 2019).

Fig. 35: Troy Studios, Limerick in Winter 2019—the studio building is too big to contain fully in frame from any available vantage points, and is surrounded by security fence

While much focus on Limerick's media industry has been focused on the new Troy and its facilitation of large S481 projects, the cultural environment of Limerick is centered within its

---

[11] Troy was shopped and became the location to shoot a program in Apple TV's initial content line-up (the upcoming *Foundation*), much like the company's aborted data center in Athenry was reported to be building capacity for streaming traffic in Europe.

vital arts scene. In a jaunt through the city in 2019, I met with a variety of artists and media workers, getting a limited but revealing insight into a cross-section of the cultural activity in a city that, according to several of my interlocuters, had never really experienced the "beneficial" growth effects of the Celtic Tiger boom, thus leaving it in a unique position post-financial crisis. That unfortunately had not spared the city from the housing crisis and spatial inequalities intensified during the recovery. Kerry Guinan, an artist and graduate student who had recently moved to Limerick from Dublin, balanced her arts practice with tenant organizing. Her arts practice, she told me, felt completely inadequate to actually address the depths of Ireland's everyday and crisis-level problems with housing and inequality.[12] She put me in touch with several colleagues and institutions, including the Ormston House, an arts center established during the financial crisis in 2011 as a cultural resource center and developed further as part of Limerick City of Culture (2014), the last remaining artists' space in the city center operating from this period. While started as a city-funded initiative, it took on a life of its own, even buying its current space out from under the speculative gazes of US vulture funds guided by NAMA. Unlike Troy, which had been established with a particular infrastructural purpose in conversation with government policies, Ormston House, as an ad hoc arts studio and performance space in the ruins of the former Dell factory during and after the Creative Limerick program, responded directly to community needs.[13] As the company's mission statement reads, "Our core question is: *How can we support artists better?*" (Ormston House n.d., emphasis original). The center prides itself on embeddedness in the Limerick community, especially as a space for diverse audiences and participants cutting across the city's stark socio-economic divides. Mary Conlon, the co-director with Niamh Brown, was certain a space like this (and a cultural scene like that in Limerick) could not exist in Dublin or elsewhere in the country. Limerick was uniquely-sized, with its own micro-history of economic development and social stratification, and any true community arts space needed to behave accordingly based on community requests. Their projects, even those geared towards professionalization and arts training (two of their main remits), were grounded in community wisdom and public interfacing.

---

[12] As an artist, she has tried to secure arts funding to pursue activist projects, but has not been successful in securing funding for any major political action, including a very funny détournement in which she tried to secure Dublin City Council arts funding to pursue a court case (Guinan 2020).

[13] And resonant with our studies in Chapter 2, the Creative Limerick – Connect to the Grid program encouraged "creative" and arts businesses to temporarily occupy vacant urban spaces, which are now for the most part returned to the "normal" property market (Limerick.ie n.d.).

Creative industries discourses often marginalize the critical role that such community knowledge practices provide, unless employed towards explicitly profit-orientated goals. One sector within which this is particularly pertinent is tourism, and the service industries in general, which are situated uneasily within cultural policy and its economistic measurements (except in the official "heritage" sector). The landscape and people's relationships to it are central to how governance is unraveled, especially in more rural spaces. In fact, in Ireland, industrial policy enfolds the "natural" landscape more often than not (see Chapter 4), even in cases of natural heritage. From 2014-2016, Disney and Lucasfilm secured permission—under controversial circumstances—to film scenes for *Star Wars: The Force Awakens* (J.J. Abrams, 2015) and *The Last Jedi* (Rian Johnson, 2017) on UNESCO heritage site Skellig Michael and later surrounding locations like Ceann Sibéal in west Kerry. Although the Dingle Peninsula has long been visited for sweeping vistas made famous in *Ryan's Daughter* (David Lean, 1970), other sites in west Kerry like Ballyferriter, Portmagee, and Skellig Michael are now destinations for *Star Wars* tourism, and have been advertised as such both locally and on the corporate website of Wild Atlantic Way (a drive tourism route encompassing the western coastline of Ireland) since before the release of the first film in the new trilogy (Episodes VII-IX) (see Figs. 36, 37, 38, 39). As Ruth Barton observes in her essay on the dubious tactics used by the *Star Wars* production and their partners in the state (including the Irish Film Board) to film on the UNESCO World Heritage Site Skellig Michael, this sacrificing of public heritage at the altar of profit is widespread across Irish economic development (Barton 2019, 307; see also O'Toole 2015). The "devil's bargain" (see Urry and Larsen 2011) of such facilitation applies to both production and tourism, as local hands are expected to enable and reproduce a particular touristic view of space that may have completely distinct local meanings or values (for full analysis, see Brodie 2020a).

Fig. 36: "The Last Beehive Huts" in Dingle in Winter 2019—a farmer had re-created ancient monastic structures featured prominently in the *Star Wars* franchise, charging €3 for admission

Fig 37: Sign for Dunmore Head on the Dingle Peninsula, a famous landing point for boats from the now-abandoned Blasket Islands, same day

Fig. 38: A placard put up near Ballyferriter by locals memorializing the *Star Wars* shoot that occurred at Ceann Sibéal, the prominent cliffhead in the background, same day

Fig. 39: Sign advertising *Star Wars* Skellig Boat Trips near Ballinskelligs, Kerry in Winter 2019

Key to arguments about the sustainability of film and media industries when justifying public subsidy are ripple or spillover effects of tourism. Crucial for this argument, especially around the economic sustainability of media-driven tourism (as a justification for foreign productions), is that its justification is initially production-driven. Based on industry reports detailing strategic recommendations for the Irish audiovisual sector (Olsberg SPI with Nordicity 2017; Department for Arts, Culture and the Gaeltacht 2011; Crowe Horwath 2017; Irish Film Board 2016), the 2017 Audiovisual Action Plan published in conjunction with the Creative

Ireland program recognizes the already-existing synergy of film production and tourism, and that film incentives draw future tourist traffic:

> the Section 481 tax incentive will continue to contribute to the development and sustainability of the Irish screen industry, supporting jobs in the domestic economy, a strategic cultural industry and the tourism sector in Ireland. (Department of Culture, Heritage and the Gaeltacht 2017, 10)

However, less prevalent throughout the policy literature are concrete measurements of these benefits in tourism, which are found in abundance regarding investment, tax revenue, and jobs in production. The Olsberg SPI with Nordcity report argues that

> Whilst this analysis indicates that Section 481 is breakeven on a [Fiscal Net Benefit] basis, it is important to keep in mind that the scope of this research has not quantified some of the spillover effects—particularly screen tourism—which can often add a significant amount to economic contribution and resulting tax revenue. For this reason, the breakeven result should be viewed as conservative. (2017, 27)

In two cases in the report, the estimates to this benefit are viewed as "conservative," while tourism is cited as a predominant contributor without accompanying figures. In a more recent report from Pricewaterhouse Coopers, "screen tourism" is given an entire chapter, with frequent vague references (visual and written) to the "success" of *Star Wars*, even though most of the success stories come from case studies outside of the country (thus encouraging development in the sector while not outlining many existing benefits) (2020, 35-40). In my research, it was difficult to actually measure the spillover success of tourism.[14] Most I spoke with had yet to see the results beyond dedicated *Star Wars* fans and unplanned encounters by tourists already there for the heritage and scenery. In 2019, Rory, a tourism operator who took me on a *Star Wars* location tour across the Dingle Peninsula, estimated that about 2% of his inquiries were *Star Wars*-related, despite a dedicated page he made about for his website roughly a year before my visit (Dingle Slea Head Tours n.d.). However, he said that this tour was essentially the same as his other Dingle day tours, because there was not much left to see from the production at the Ceann Sibéal or other minor sites around the peninsula due to environmental agreements to leave

---

[14] In a conversation with Irish film scholar Pat Brereton, he suggested simply standing at the boats in Portmagee and surveying each patron to ask how big a factor *Star Wars* was in their visit to Skellig Michael. Without Fáilte Ireland funding, however, I was hesitant to perform such an instrumental sociological chore.

no permanent trace on the landscape. Sites across the peninsula had informal signs branded with *Star Wars* insignia indicating where production had occurred, including competing claims to cliffside locations between landowners, but as the site was a stand-in for Skellig Michael, most tourist traffic had been directed there (and was an existing clientele due to the natural and monastic heritage of the island). The manager of the Ceann Sibéal Hotel in Ballyferriter gave a similarly small estimate to Rory's, saying she had received about a dozen guests expressly interested in *Star Wars*. While there was community pride and enthusiasm for the production, as seen in wide commemoration and vernacular merchandizing of the brand between schoolchildren, craftspeople, and small merchandise companies (which sometimes brought them into interesting conflict with Disney's copyright rules), widespread tourism of the kind seen in other locations had yet to follow. Local providers in Ballyferriter could easily recall most of their *Star Wars* inquiries in detail, amongst imaginably thousands of visitors they received each year.

Spillover figures aside, there are more unexpected synergies between film and tourism infrastructure, particularly below the line. For example, drivers and boat operators that circulate tourists around to particular sites in the Dingle Peninsula and Skellig Ring (where trips to Skellig Michael usually departed from) also drove crew, equipment, talent, and provided other services during the *Star Wars* productions, including Rory, who helped recruit other local drivers. Despite the construction crews and materials largely being brought in on lorries from Dublin with crew mostly from there and the UK, tradespeople and manual labourers across the peninsula reportedly made money on the shoot, along with those in the service industries. Many of the "young lads" in manual labour services in the region around Portmagee helped carry materials up Skellig Michael, working industry-standard 16-hour days to load crew and materials in and out. The skills transfer in these jobs moved seamlessly between transportation and labour in both film production and tourism, emphasizing the importance of blue collar and below-the-line work in the creative and cultural industries. These types of work are not accounted for within policy, a surplus labour pool and "resource" taken for granted. A boat operator I met in Portmagee, who had a license to ferry tourists over the treacherous patch of sea out to Skellig Michael, had to be called down to the docks from another job he was working in the offseason. Vicki Mayer critiques the gatekeeping of creativity by dominant "creative industry" models by looking at media workers excluded from dominant narratives of creative and cognitive work (2011). Studies in this area have also been predominantly urban in character, spatially biased and thus

failing fully account for the rural or suburban. But in spite of a lack of scholarly focus, the Ireland 2040 framework articulates increasing rural focus to traditionally creative industries:

> Rural areas have significant potential in these sectors, and as digital links and opportunities for remote working and new enterprises continue to grow, employment is likely to increase in areas such as agri-tech, ICT, multi-media and creative sectors, tourism, and an added value bio-economy and circular economy. (Government of Ireland 2018b, 75)

Policy reports like those of Creative West (White 2010), released in the depths of financial crisis, inform state decisions about by what policy to govern rural regions and demonstrate the stakes of stimulating Ireland's expansive rural areas in the face of global financial turbulence and other industrial changes. As the report states, "Given declines in rural employment in agriculture, traditional manufacturing and construction, the creation of alternative employment options in rural areas is fundamental to their continuing viability" (82). But within this rural creative ecosystem imagined by planners and policymakers, the enterprise of local operators and artisans should be seen within the wider remit of creativity which typically includes more traditional media, high-tech, and "highly skilled" work. The language employed polices between more traditionally creative (and profitable) cultural work, foreclosing potential aid to these so-called ripple and spillover local blue-collar industries.

This is not to say that more localized proposals and enterprises to make the industry more permanent, robust, and beneficial to local talent and operators in the region are not afoot in Kerry. A film studios project, endorsed by the county council, sought planning permission in an industrial park outside of Tralee, but I was told by its backer that "the site is parked at the moment" (as of Winter 2019). Endorsement by government authorities did not necessarily translate into the required investment. Screen Kerry, an active local film commission funded by Kerry County Council and the Kerry Education and Training Board, is also promoting skills training and location management in the region. The 5% regional uplift to the S481 is seen as a huge boon for a county-wide project of growing the film industry among those I spoke with, but the novelty of the scheme meant that few projects had yet made use of it.

Dingle is also home to Dingle Hub, an enterprise and co-working space that boasts a diversity of projects (Figs. 40, 41). A creative industry outpost nestled against the small fishing and tourism port in Dingle's town center, the building, shared with the Dingle ÚnG offices and

which visibly resembles a community center more than a tech and media start-up hub, was hosting workshops and actively advertising itself to the attendees of the Dingle International Film Festival (DIFF) and Animation Dingle being held when I visited on a March weekend in 2019 (Fig. 42). At that time, it was shared by workers from journalists to composers to biologists and even a software developer working in just-in-time software logistics, among a hodge-podge of other industries. As Chapter 1 details, it boasts the "fastest broadband in Ireland" due to eir's experimental presence in the area. They were also advocating to expand into the disused Dingle Hospital and Workhouse, proposing that current administrators, the Health Services Executive, transfer the land and facilities to ÚnG to host a new "creativity and innovation hub" housing media workspaces, arts studios, and other community and tourist facilities.

Fig. 40: Entryway to the Dingle Hub office park, which it shares with ÚnG, in Winter 2019

Fig. 41: Entrance to the Dingle Hub space, advertising eir connectivity, same day
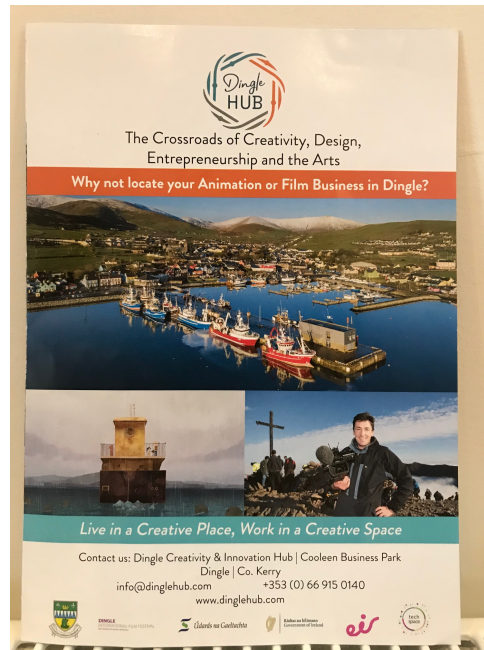
Fig. 42: Brochure handed out to attendees of Animation Dingle and DIFF in Winter 2019

But even without such incentivized development, Dingle has a long history as a cultural hub, both from local talent and transplants settling there, tied to the region's spectacular landscape and Gaeltacht culture. Film and arts festivals regularly enliven the town. However, these short-term events have more to do with service and tourism industries than what are typically considered within creative industries policies, which require an ongoing series of such events in order to sustain such an economy. Any harmonious picture of an artistic community inviting new visitors to a burgeoning tech and media ecosystem masks significant underlying problems. Rory informed me of the difficulties in settling there for both new arrivals and local community members. There was a serious housing shortage in Dingle, and even tourists often found it difficult to secure accommodation in the small town during festival season.[15] Acquiring property across the peninsula had been made more difficult by the boom-era landgrab which saw Irish city-dwellers and European holiday-makers buying up property for new builds and vacation homes. A planning loophole was closed which made it more difficult for this to happen, in response to a quite unregulated period of building. In addition, the fact that nearly all Irish coastline is regulated as "green space" and no new builds are allowed (although old famine

---

[15] Anecdotally, friends and I tried to get a place in town during Dingle Arts Festival and would have had to stay up to a 30-minute drive away from the town in an even smaller neighboring community across or off the peninsula. It is widely known that if you do not book accommodation long before a bank holiday weekend, Dingle is a difficult bet.

cottages can still be modified in original footprint), and the small size and thus limited availability of housing in towns, meant that the gamble to build a creative hub in Dingle was much more complicated than getting media workers and holiday-makers to stay for good. It would require a fundamental change to the area's housing situation and spatial planning, which was facing a perfect storm of tight regulation due to heritage and local protection and a country-wide housing market favoring short-term rentals and vulture property investment. Airbnbs are dotted across the peninsula, but permanent housing was somehow scarce and expensive. In this small town about as far west as you can get in Ireland, the spatial economy of the "creative city" in Dublin described in Chapter 2 had unexpected resonance.

By typical creative industries logic, like Troy Studios, Dingle Hub needs to attract a core pool of creative workers to sustain its enterprise goals. While the region has its share of artists and craftspeople, film and media industries needed to be imported, along with the requisite workers to sustain them. As Pauline White reports in her policy paper on rural creative industries in the west of Ireland, "the most critical questions are what attracts creative talent to rural areas and how the creative sector can be supported and developed to become a more significant component of the rural economy" (2010, 82). The Dingle Hub would ultimately need to attract new "talent" and "skills" to the region in order to stimulate the ecosystem, and one of the primary draws was the idyllic location. Maggie Breen, Creativity Consultant and Project Manager at Dingle Hub, had moved to the peninsula for exactly this reason. While several of the folks in Dingle Hub were locals, even more were blow-ins and transplants. But nonetheless, global productions (and tourism-inviting events like Animation Dingle and DIFF) were disruptive to the very "rural color" that attracted people there in the first place, let alone to the locals that make a living in the service industry, tourism, or otherwise in the region. Maggie lived in Ballyferriter, near Ceann Sibéal where *The Last Jedi* filmed its scenes on the planet Ahch-to. She said that the filming operation was massively intrusive to the very rural area, with helicopters and lights igniting the night for several days. While the large production was a boon for local business in the short-term (and the wrap party at Foxy John's in Dingle celebrated everyone involved in the wider community), the month-long set construction was punctuated by a short shoot (around a week). During periods of heavy traffic, local infrastructure tends to break down. On a bus from Tralee to Dingle, the driver had to ask locals to disembark and find local transportation in order to accommodate the DIFF and Animation Dingle passengers (including

myself). Rory warned those of us on the tour to watch out for American drivers rocketing around the turns when we would make roadside stops around the peninsula, as the narrow ring-road's inclusion on the Wild Atlantic Way drive tourism route failed to mention an informal local agreement to only drive in one direction depending on the time of day.

This raises important questions as to strategies for cultivating local talent and infrastructure by first attracting outside investment—whether from FDI, tourists, or permanent transplants—with "local flavor." The limited infrastructure and "wild" landscapes of the region cannot be expected to accommodate a sustainable abundance of large-scale productions. While *Star Wars* made use of Kerry's spectacular landscape as a stand-in for otherworldly settings, global production overall follows place-agnostic logics of circulation and movement which nonetheless must manage conditions on the ground. This is typically achieved by either flattening contingency or extracting value from local labour, culture, and landscapes, but is not always a one-way process: the tourism economy in west Kerry has created some community-led and uncanny encounters between Irish-language culture and the global brand of *Star Wars*, through a kind of "branding from below" employed by local tourism businesses (see Brodie 2020a). However, looking at a larger scale, one can scarcely imagine a Hollywood production sensitively and ethically employing the cultural specificities of the Gaeltacht for profit. It simply cannot be expected. The same goes for other global forms: Bollywood blockbuster *Ek Tha Tiger* (Kabir Khan, 2012), for example, capitalized on a growing Indian diasporic connection in Ireland by featuring a plot largely centered on a researcher at Trinity College, Dublin, boasting an extended song sequence complete with hurls, Kilkenny GAA jerseys, a parade of green leprechaun hats, and bagpipes. While the film's production in Dublin faced perhaps predictable friction, with a large sequence being filmed on the day of an All-Ireland GAA final and facing demonstrations by local union craft-workers over poor pay conditions and lack of regulation in the Irish film industry, these contingencies obviously do not appear in the film. Disruptions were condemned by the film's Irish production partners and government officials, who touted that *Ek Tha Tiger* would mean that Ireland would reach a predicted audience of 100 million and boost film-related tourism, and they worried that disruptions would damage the reputation of Ireland and scare off future foreign productions (Dowling 2011b; Rampazzo 2017). Like spatial development designed to "fast-track" planning and subdue local dissent, contingencies in global production are dealt with in order to secure the proper location, as long as the risk is offset by

local conditions (i.e. cheap labour, good tax credits, audience considerations), a risk which tends to be shouldered by "rank-and-file workers" (Curtin and Sanson 2017, 12). Global film production, especially from the institutional frameworks of Hollywood and Bollywood, is essentially mobile FDI, treating space as part of an array of raw material for value production. The logistical operation of these productions acts in tandem with the spatial development and policy logics of the Irish state, which consciously reduce the role of labour and dissent within their enactment.

What film production and its externalities in places like Kerry (as opposed to Troy) can tell us is that what the global race-to-the-bottom looks like, then, is not necessarily place-averse global productions and enterprises simply using a space for its placeless and modular properties, like in the case of film studios' role in the race-to-the-bottom and free zone production in the Global South (see Curtin 2016, 677; Dickinson 2020). It appears as the high water mark of capital investment left behind, the residual industries and economies that form, and the resulting labour implications and exploitations that arise in the vacuum of investment, as much as it does the ongoing ebb and flow of global production and its more eventful forms of exploitation. As a tourism page for *Star Wars* on the Wild Atlantic Way advertises,

> These stirring, otherworldly landscapes were not the only thing that made a lasting impression on the cast and crew, though. When filming ended, LucasFilm took out no less than eight advertisements in local papers to thank the people they'd met along the way for their warm welcome and genuine enthusiasm. (Tourism Ireland n.d.)

The widespread association between landscapes and Irish character collapse workers into a relationship of dependency to economized versions of cultural and natural heritage, and such immaterial labour forecloses alternative ways of making a living off of culture and creativity under the continuous capture of local subjectivity (Lazzarato 1996).

This relationship between labour and place is crucial when analyzing the work that policy actually *does*, even when it appears as alienation and exploitation. Creative industries policy tends to see precarious workers and those not represented above-the-line as employed by spillover effects, rather than paying attention to what they actually do or need. This is because, under prevailing logics of global capitalism, those not accounted for are seen as freely available labour pools, resources at the ready for exploitation. As at the global scale of the race-to-the-bottom and transnational competition for FDI, conditions of precarity are most strongly felt by

workers who are often left with no choice but to compete with one another in the absence of strong social infrastructures of care and collectivity. A better political economy accounting for policy's meaningful encounters with labour requires engaging deeply with precarity in the creative industries. If the Dingle peninsula and west Kerry in general demonstrate the eventful interactions between global modes of production and deeply emplaced cultures and landscapes, we can perhaps think about the ways in which culture, labour, investment, and the natural environment are differentially treated as "resources" within the policy logic of nation-states and the operations of capitalism.

Naturalization and Precarious Media Labour

As the previous section exposes, the spatial logics of media policy demonstrates a management of labour pools similar to that which captures value in the creative city. Across policy literature, whether that of media production or the creative industries more broadly, workers are treated differentially depending on their role and its perceived value in a larger economy. For example, creative industries policy privileges the needs of "creative" young professionals within an often unclear range of industries (from the arts to finance); media policy sees ripple effects and spillover industries like tourism as secondary to the initial facilitation of production, leaving its actual governance to tourism bodies; and media production more generally treats "above-the-line" talent (producers, actors, directors, screenwriters) as more important than "below-the-line" workers (gaffers, grips, set decorators, costume designers, lighting technicians, drivers, caterers), reproducing an on- and off-set class hierarchy that informs how workers are treated by corporations and within the policy equations of national and transnational organizations.

This plays out in a number of ways. In co-production treaties, practical script considerations—location, actors, languages—are referenced as exceptions to agreed-upon terms, meaning that extra actors and locations can be added based on these considerations if the script merits it. "Cultural tests" are employed across co-productions and offshored productions to ensure that the proper amount of local talent and benefits are being employed to avail of tax benefits like the S481, in spite of the often progressive loosening of these rules. In a potent example, in 2010 while filming the Italian/French/Irish co-production *This Must Be the Place* (Paolo Sorrentino, 2011) in Ireland, Sorrentino as an EU citizen working in Ireland would justifiably have passed the "cultural test" as "eligible spend" for the S481, whereas US actor

Sean Penn would not have. However, under current stipulations begun in 2015, under what is called the "Tom Cruise clause" (Murphy and O'Brien 2015), as talent working *in* Ireland, Penn's significant wages would have been eligible for a hefty tax break by the company's producers (up to €50 million). In effect, as Murphy and O'Brien argue, a production could under these rules technically employ *no* Irish-based workers or unions whatsoever and "and with few obligations to workers beyond the minimum wage and health, safety and working time standards" (2015). But even before measuring the outcome of these policy equations, it is clear how they tend to value a certain kind of worker differently based on nationality and overall net economic benefit. They demonstrate the embedded bias in how the value is then administered by regulators and industry professionals. This language of "cultural tests" and "eligible spend" signals a deeper cultural imbrication of neoliberal governance, where human labour is accounted for as *spend* in the same terms as building use and technologies, and the metrics of jobs meant to account for a whole series of processes and funds that apparently disappear into the pockets of investors.

The prevalence of "talent" and "skills" as resources to manage within recent media policy represents the clear creep of biopolitical governance into film and media policy via creative industries discourses. Resonant with Chapter 1 and Chapter 2's focus on theories of financialization and immaterial labour across sharing and social networks (see Terranova 2000), there is a *knowledge economy* governed across the spatial and labour networks of the media industries. The policy analyzed through this chapter shows how these economies are envisioned and put in place by the state and capital, representing the pervasiveness of creative industries discourse within how not only the media industries are managed by institutions but in how workers are biopolitically conditioned to perform in certain ways and reproduce given socialities. In the face of nation-states' inability to shore up cultural funding without appealing to transnational structures of power (or the state agencies responsible for keeping multinationals and supranational agencies from retreating or inflicting sanctions), culture must be collapsed into sound economic policy dictated by neoliberal common sense. Thus, arts and media policy today is discussed in terms of potentials for investment and the incentivized growth of indigenous talent and skills, abstracted qualities of labour forces which feed into "ripple" and "spillover" metrics of local benefit to justify media and cultural expenditure (see The Arts Council n.d.). The front page of SI's website is (as of the time of writing) organized around three pillars, featuring stills from successful Irish films: Talent, Creativity, Enterprise (Fís Éireann/Screen Ireland

2020). These are familiar categories across creative industries discourse. Talent: the labour pool is educated, and biopolitically primed to work. Creativity: immaterial labour is ready to be harvested and exported. Enterprise: foregrounding the business of cultural work, or to quote Michael Curtin and Kevin Sanson, "organized according to industrial principles that economize at every step in a sprawling creative process, constantly seeking efficiencies and accelerating workflows" (2017, 1). Some theorists have referred to the "cognitive-cultural capitalism" or "cognitive biocapitalism" that characterize contemporary cities and the interlocking corporate and governing strategies of creative industries and education (Fumagalli 2011; Marazzi 2011; Scott 2008; Vercellone 2007). Space and "knowledge flow" are crucial to how these systems sustain creative economies in whatever media sector (Van Egeraat, O'Riainn, & Kerr 2013), including aforementioned clustering of companies, infrastructure, and resources. Chapter 2 provided a basis for understanding the affective circulations around media industries that normalize financial turbulence and spatial unevenness within the built spaces of the "creative city." And as Chapter 4 will argue, the essentialisms employed by the Irish state in attracting foreign investment—by selling its workforce as unilaterally talented, malleable, hard-working, and friendly, open for business, while also advertising a "wild" rural landscape and scenery— demonstrates the extent to which government bodies will activate "heritage" and use maligned cultural stereotypes to appeal to foreign capital to support its neoliberal economy.

But in the film and media sector specifically, knowledge production and dissemination are articulated in terms of "skills" and "talent" as a way to manage labour bases. Screen Skills Ireland (SSI), a training body now attached to SI, advertises itself as an agency designed to "grow the sector" and provide the conditions for it to "thrive," attaching both the active and un-enfolded workers of the country to a project of economic growth by providing them learning opportunities for a fee. SSI workshops include anything from producing, to writing, to innovation, to "ambition" workshops, demonstrating the affective and cognitive elements of labour skills thought to be required by such training organizations (see Berardi 2009). They pitch these towards global and transferrable skills for the "sector" broadly conceived (Screen Skills Ireland n.d.). While established independently in 1995, they are now administered by SI. By advertising indigenous skillsets to foreign investors, while simultaneously training the workforce to accommodate the industry, SI treats its native workforce like a reserve labour force at the ready for global production, actively building "skills" to be used in the sector. To SSI's credit,

they often offer workshops based on requests from industry professionals. However, the website tars workers, managers, and executives with the same brush as "stakeholders," despite the fact that, in their own words, they must appease market forces with workshops that respond to "skills shortages" determined by global productions (however much these might also be identified by workers needing to round out their technical capabilities). SSI workshops are often held online or at various locations across the country, representing both the flexibility and regional unevenness of the media workforce and the infrastructures available for professionalization (and also showing which places have been deemed strategic by industry advocates and policy agencies). For example, they are frequently held at private film infrastructures like Troy, which are designed, like the Dingle Hub, to build up local infrastructures and labour resources by facilitating the flow of transnational capital and drawing in workers in tandem. Kay Dickinson positions such skills training organizations within wider transformations in media and education to accommodate global supply chains in given environments with cheap, trained, and casualized workers (in her study, the UK) (forthcoming). As more and more skills are required to perform even entry-level roles in these industries, these endless training and professionalization courses are part of wider social and industrial shifts towards ongoing professionalization which de-value the increasingly expensive degrees and certification programs offered by universities while accommodating the continuous flexibility and upgrading of staff required by a globalized media environment (see Bousquet 2008; Harney and Moten 2013; Levidow 2002). SSI provides an essential service for workers. However, its emphasis on "skills" to facilitate global media operations reflects more troubling elements of the biopolitical management of labour by the state, and the subjection of workers to place-agnostic requirements determined by capital.

But no matter what, especially in terms of tax breaks, on-the-ground labour and management are subject to exploitation from afar and become precariously reliant on legislators remaining friendly to international production. For Curtin,

> This geographic mobility and flexibility that has come to characterize big-budget feature production is crucially reliant on location staff that serve as an interface between the global apparatus and local resources. They make the system viable, and quite crucially, profitable. Without them tax incentives would not be as valuable to Hollywood producers or to the state governments that offer them. (Curtin, 2016: 678)

In short, as Curtin states, it isn't hard to imagine what would happen in these locations if "state legislators suddenly turned off the tap" (680). But as he continues, so-called "talent" and "creativity" are increasingly sources of value for extraction by transnational media companies (681). Media policies continue to "dole out tax breaks and strengthen their institutional infrastructures" (681) in order to attract such investment. However, they fundamentally miss the central biopolitical dimensions of labour pools managed within their territorial governance.

Curtin's association of funding and talent with another infrastructural resource—water— echoes the language of tourism operators in Kerry. Rory, when discussing the slow months of the Winter tourism season (when I visited) in contrast to the busy Summer, told me that it was like "turning on the tap" once the seasons changed. A similar image was conjured on a slow day in Portmagee by a boat captain who took visitors to Skellig Michael and painted me a picture of the tiny main strip in the town (a shop and two pubs) laden with tourists in line to sign up for the limited trips out to the island. Even the idea of ripple or spillover effects coming from top-down media policy initiatives, like the central metaphor of the "wild tides" of global capital which informs this thesis, refers to flows of water generating surface effects far from their source of contact or even literally brimming with abundance for the global production while overflowing droplets nourish those around the edges. Natural associations abound within the policy logics required to naturalize the place of FDI within given economic climates (as will be unpacked in Chapter 4). The circular logic and association of resource health and distribution that characterizes the FDI-driven logics of Irish media production, where foreign capital, the landscape, infrastructure, and the labour force are seen to partake within a mutually-beneficial ecosystem, fundamentally cannot account for the problem of global infrastructures which maintain spatially uneven and distributed exploitation. In participating in the naturalizing language and metaphors of this distributed supply chain of global media, Irish media policy positions the people and the landscape within the country as mere resources available for extraction and exploitation by transnational forces. Imagining the flows of capital as somehow akin to water trickling down from above, sustaining an ecosystem, means that at any moment, entire industries and regions can be left arid if the tap stops running for any reason—whether if turned off by policymakers, the flow redirected, or the supply runs out.

The global supply chain of media production *cannot* take care of workers by its very nature as a system of value-squeezing optimization. As Mayer reminds us in a virtuoso

impersonation of a regional tax break (2017, ix-xi), capital is not natural. Capital has intention and methods for producing and extracting value. Owners of capital exploit infrastructural, governmental, and labour systems to redirect this value further and deeper into their own pools of accumulation, while leaving the people and places that generate their wealth depleted, high and dry. While Mayer plays on the spectral quality of a roving tax incentive as a cynical joke, the effects of these economistic treatments of culture, space, and labour are deadly serious. With the equations of policymakers and legislators veering further away from questions of cultural identity as media and film cease to be purveyors of public good, the biopolitical metrics of "talent" within labour pools re-structures how film and media are governed by positioning meritocratic lines around these abstract categories. As post-autonomia Marxists have decried, this biopolitical restructuring of labour via "passion" and cognition betray technocratic mechanisms of intensified labour exploitation in the creative industries across sophisticated technological networks and systems (Berardi 2009; Lazzarato 1996; Terranova 2000). As Curtin continues, "Confronted by the spatially expansive and intrusive operations of global media conglomerates, government officials have, over the past couple of decades, confused cultural concerns with economic and political objectives" (2016, 683). This confusion, as studies of "making-do" under neoliberal (lack of) governance in conditions of economic lack will tell us (see Gago, 2017) and our studies of people making a living in media, tourism, and other spillover industries across Ireland show us, is rather a decision based on a logic of austerity which positions people as capital—contributors to a machine of transnational extraction—within an intensified environment of entrepreneurialism and individual realization, where competition over apparently scant resources often atomizes rather than unifies workers and communities.

However, in spite of the clear creep of biopolitical governance into film and media policy via "creative industries" discourses (which, as we saw in Chapter 2, are deeply spatialized), Curtin's policy recommendation thus moves towards treating local labour pools in terms of "resource management," as a recognition of multiplicity and difference within a given territorial labour pool. What actually happens when valorization begins along these lines? He argues, puzzlingly, that

> policy-making should instead jettison its preoccupation with competing in the global
> creative economy and instead emphasize the disparate purposes of modern media, which
> like parks, libraries, and childcare centers are resources that make places worth living.

The analogy to parklands is especially evocative, since it points to traditions of policy-

making in the field of resource management that may prove instructive. (2016, 681-682)

In doing so, to draw once again on Curtin,

They might on the one hand blend public and private resources, while on the other help to

sustain micro communities or oppositional constituencies that have absolutely no

commercial value. Media should furthermore be characterized—like any healthy

ecosystem—by tension and antagonism, as well as interdependence and symbiosis. (683)

While this is compelling, it seems to me, to borrow a phrase used by Holt and Vonderau, a kind

of "regulatory hangover" (2015), demonstrating a faith in nation-states (and governance in

general) to assert cultural autonomy from the intrusive economic forces of globalization and the

intensified labour exploitation of neoliberal economics, and return to an idea that regulation *can*

happen in a normal, healthy global ecosystem and has not been continuously and permanently

foreclosed by the coalition of capital and the state under transnational organizations of power.

Such a "public resource" logic surrounding labour might actually mesh with the actually-

existing rural film and media sector in Connemara, a Gaeltacht region west of Galway. Bob

Quinn famously located his production company, Cinegael, in Carraroe in 1973, and the region

has maintained semi-continuous film activity since. Liza told me, and activity supported, that this

was the true center of media production in the Galway region. Here, the sector has been well-

established with operational film studios (Telegael), along with a thriving arts community

centered around its active Gaeltacht status and the cultural activity and programs surrounding it.

Since 1996, the area has been home to main offices of TG4, the country's national Irish-language

broadcaster, and the small town of Spiddal hosts film studios Telegael and the permanent set of

long-running Irish-language soap opera *Ros na Rún* (1996-present). While foreign and co-

productions are frequent, the industry in Connemara is largely maintained by services to the

national media industry (from TV, to commercials, to other content). *Ros na Rún*'s production

forms the basis of a quite robust training infrastructure for talent in the region and provides long-

term permanent employment for a variety of workers and technicians, if you are lucky enough to

take over the spot for anyone retiring or moving on to a more lucrative gig elsewhere. An

internship program to apprentice with camera operators, lighting and sound technicians, and

other technical roles has built up skills for local workers, but would not usually result in

continuous employment afterwards. Roger Corman's establishment of a film studio in Spiddal in

the mid-1990s, attracted by tax incentives to make his cheap B-movies, contributed to the training of much of the local labour force. Nonetheless, coupled with the activity and funding of ÚnG and other Irish-language schemes, the Galway region and Connemara offer a fascinating foil to FDI-driven fortunes of other regions in the country. While not a perfect or even all-encompassing media system for the region, and in spite of the pervasiveness of freelancing and contract work present there as elsewhere, there also appears to be potentially more sustainable programs in place to ensure that cultural and media production prevails, even if often more to do with the protected status of the Irish language than an across the board cultivation of the arts and cultural activity.[16]

However, while examples like Connemara and Curtin's argument are compelling and seductive from a regulatory standpoint, such formations do not exist without tension from capital, and demonstrate the ways in which potential complacency might allow a deeper imbrication of culture and capital. Curtin's approach assumes a circulatory capitalism by which the market generates its own "first nature," to use the Hegelian terminology so seminally analyzed by Neil Smith (1984) (see Chapter 1), describing a process by which the social conditions of global capitalism, and the market along with them, come to be treated as naturally-occurring phenomena. While it is undoubtedly true that capital naturalizes its operations through a variety of mechanisms, and circulatory capitalism is the prevailing condition of contemporary life, treating labour markets, labourers, and local contingencies as "resources" in a global ecosystem of production (along lines of circulation) seems a troubling naturalization of forces that are at their very center based on exploitation. Curtin of course does great work in mapping the relations of global production along the logics of the financialized media supply chain. The move to such natural associations is somewhat understandable under the logic of "sustainable" forms of development, especially in terms of the (comparatively) modest goal of damage control, of preventing short-term exploitation and mitigating the exhaustion of supply lines and labour markets. However, in an environment of austerity, during which Ireland undertook *forcible* privatizations across its public sectors and *obligatory* cuts to public programs and cultural budgets, which effectively required privatization and a deeply permissive attitude towards FDI (including natural resources like water and forests), the idea of a return to regulatory strength—

---

[16] Project Spatula was actively improving their personnel's Irish in order to be eligible for the funding offered by Gaeltacht-specific schemes.

especially within resource logics—via a segmental shift in state logic seems far beyond the realm of possibility. Even in Connemara, film facilities are increasingly in use as channels for S481 projects, demonstrating the geographical spread of extractive FDI even to areas with more robust public infrastructures. SI rents fragile cultural and environmental heritage to Disney; environmental resource agencies like Coillte sell forests to Apple (see Chapter 4). The legacy of the biopolitical management of labour pools, which as Aihwa Ong notes is a primary strategy of the "graduated" sovereignties of de-regulated zoning (2006), is enough to give us pause. But any conclusion to treat local labour markets—and the ecosystem of global labour in general—as a "resource" tasks policy-makers with sustainability in a way that the state simply cannot be trusted with.

In Curtin's other work, the concrete risk imposed onto precarious workers *by* financialization and supply chain media production is more explicitly addressed, as he and Sanson argue in the introduction to their collection of interviews with industry professionals: "Grim working conditions at the 'fringe' are the industry's canary in the coal mine, a powerful portent of what might happen if we allow the economic and political logics of the world's most powerful motion picture studios to run amok" (2017, 14). As Mezzadra and Neilson articulate, the intertwined fields of "extraction, logistics, and finance" within the current global structures of power mean that their inseparability should inform the study of any one individually (2019). But while "extraction" has taken on conceptual provenance in recent political economies and theories, Mezzadra and Neilson are careful to warn us not to forget about the centrality of "exploitation" even within de-centralized networks of extraction, and emphasize the gendered and racialized processes of violence at the heart of these assemblages of power and domination that occur at the nexus of the state and capital (2019, 201-208). In doing so, they articulate how forgetting "exploitation" which occurs across extractive processes and frontiers (from logistical networks to financial calculations) risks foreclosing radical alternatives within which social cooperation is *not* enmeshed within systems of capital and collective action *is* possible.[17]

---

[17] While this study focuses on precarity as a shared condition of work across lines of race, gender, sexuality, and dis/ability, exploitation is nonetheless concentrated more severely and more violently on racialized subjects, women, members of the LGBTQ+ community, people with disabilities, and other marginalized groups in Irish society. The work of Aphra Kerr (with Preston, 2001), Anne O'Brien (2014; with Kerrigan, 2020), Zélie Asava (2013), as well as Screen Ireland's recent reports and programs designed to achieve gender equity and overall diversity (see Fís Éireann/Screen Ireland), provide the groundwork for future studies on these key areas which are essential for imagining and creating more just cultural and economic futures for Irish media industries.

What I want to emphasize is that the practical concerns being proposed as damage-control for a global industry are already irreparably organized into what Anna Tsing calls "supply chain capitalism" (2009), whereby increasingly heterogeneous, dispersed, and precarious forms of production are used and fed back into the profits of large transnational corporations. Thus, this isn't merely another crisis that film and media studies scholars are applying to an apparent new threat to critical work and potentially livable work conditions. It is far from imagined—film boards, government agencies, and the subsidiary public/private infrastructural supports are literally advertising for the logistical facilitation and reorganization of film production. These logics are explicit. Policy architecture is essential for these continued functions as much as private built infrastructure and their material networks. So while in Chapter 2 the focus was on how built space manifests these things in terms of gentrification, spatial development, privatized infrastructure, and the like, transnational treaties, foreign tax regimes, and overall geo-political and geo-economic structures are a crucial part of visualizing trade flows and their imbrication in networks of finance and logistics, as much as the actual spaces themselves, and sometimes can even be seen as the direct cause of spatial development as much as the machinations of global capital.

What, then, does this mean for workers and those concerned with the industry more broadly? To avoid over-generalizing the Irish case through these global phenomena, what we should note is that media policy that is designed as damage control for the continuous re-structuring of the global economy must always take this structure for granted as a necessary fact of governance. Policy orientated towards the FDI-driven logics of global productions, tourism, and to a lesser extent co-productions always derives from a place that situates a country competitively within a global race-to-the-bottom that puts worker stability, culture, and public health at the margins of broader economic concerns. In Ireland, this has led to an environment in which workers barely see themselves represented within policy in ways *other than* resources for producing value, or as external beneficiaries of top-down projects. This does not necessarily feed into how they actually see themselves in the industry—far from it, as they tend to view policy concerns as peripheral to how they *actually* make a living and engage in cultural activity and enterprise. However, the approach to these phenomena presented in this chapter reveals something troubling about Irish governance, using Curtin's idea of labour as a "resource" and confronting how these policy logics actually represent workers (and spaces) within them. It

demonstrates an ongoing extractive logic, driven by a long history of FDI and the treatment of land by the Irish state, that cannot but utilize available "resources" for extractive ends.

Conclusion: Incompatibilities of Cultural Funding, Financialization, and Media Diplomacy

Speaking to Aosdána, an elite national assembly of artists, the Sociologist-in-chief Michael D. Higgins' 2015 remarks frame the place of culture within the logics of economic development. He stresses that creativity and culture are about the right for everyone to participate in a society: "They are a social good which, if left to the vagaries of the marketplace, will either fail to survive or become so compromised and distorted that the public good will not be served" (2015). He continues, "As a society we must come to recognise that institutional provision for the arts is as important to our infrastructure as roads, hospitals and schools" (2015), embedding cultural production within national infrastructure. Finally, he notes

> While culture has its instrumental uses, including employment creation, we also have to recognise the limits to which this can be applied without endangering it. The arts are increasingly recognised as useful in the sphere of economic development at home and as burnishing our prestige as a country abroad. But the arts are not merely a tool of tourism or commerce. Yes there is of course an economic case for arts expenditure but that case is not, and cannot be allowed to become, the only reason for such expenditure. (2015)

While these remarks are admirable, they ultimately represent the limits of critique when maintaining ideals of rights, public, representation, and citizenship within a liberal society. Admitting the instrumental uses of culture demonstrates the fact that these logics have already crept so far into public policy that there is no return without radical overhaul, outside of the remit of civil society organizations as they are currently constructed. Just as capital caused the crisis, it profits from the response. Creativity and culture—through the creative industries—represent the logical point at which a crisis of finance and feeling redirects the excess capital of "public" good back to the private sector, with a remarkable sleight of hand.

However, despite the macro-economic and geopolitical influence of transnational and global media economies across Irish space, this landscape is still not *smooth* or *organized*, but lumpy, ad hoc, uncoordinated, a heterogeneous assortment of producers, service providers, unions, public and private agencies, workers, studios, especially at the bottom end of the industry's accounting sheets. Offshoring and supply chains are processes of circulation as much

as production (see Urry 2014) and exist in direct relation to transnational finance and the state's privileging of this fictitious capital. Transnational interdependence operates similarly. We need new words and new approaches to film and media economies that do not abstract processes as somehow transcendent or top down, although we must certainly understand how FDI parachutes in from above; but we need to also understand how transnational capital's coordination on the ground can inform us of a more equitable and just media system, and opens up avenues for resistance against the powers of state and capital as their distinctions become blurry.

Policy is set in place and advertised as a mechanism for increasing jobs. It is not under current conditions, in spite of histories of public provision, necessarily the best place for funding work. But what we see across the different contexts in Ireland are the same rollout of community-based media and arts organizations to support the local scene, often un-funded or minorly funded, while the actual beneficiaries of media and arts policy are wealthy producers and transnational corporations. What we have on the ground is still a widespread environment of freelancing, gig work, small-scale jobs, and emigration. Many of those who stay (and stay put) are those with a particular devotion to the Irish arts and media environment at a political (or at least cultural) level, and a pride in the ability of media workers in Ireland to produce particular kinds of work and particular political consequences. Guinan was particularly inspirational on this front, as someone who worked in the arts sector and yet understood the shortcomings of cultural responses to material crises.

Media policy and its diplomatic and sovereign arrangements do, clearly, have a material politics. However, it is a politics that occurs in a transnational sphere within which precarious workers have little to no democratic input. What became abundantly clear in my travels across Ireland to speak with media workers and attend media events was that the prospects of "scaling up" to even the national scale for local workers (let alone a transnational or global one), which was the entire policy justification and ground-game for the Irish film industry, were extremely unlikely, the paths to even modest "success" treacherous and unclear. Media policy does not in fact generate the kinds of localized effects that are put forth by wider rhetorics of jobs, ripple effects, and externalities. These trickle-down outcomes do not demonstrate widespread prosperity among those working in these industries but rather a wider condition of precarious contract labour, short-term projects, and ebbs and flows of production. It is not a unilaterally successful or robustly sustainable way of bringing production in. It does not even, at minimum,

ensure the employment of a localized labour force, an outcome promoted by cultural funding agencies in terms of justifying policy to sustain the industry (whether Irish bodies or European ones). Of the roughly twenty government agencies, arts and media institutions, production or post-production companies, and media workers that I visited and discuss in this chapter, the vast majority used or worked primarily with and through contract labour. So, if the private sector bodies that arrive to make larger-scale projects are meant to be providing social welfare and a sustainable future via consistent employment, technical infrastructure, and skills training, this falls apart once you start to ask even more basic questions. Why is Disney saying Ireland needs more skills training and better infrastructure if their investment is what is meant to grow these material needs? And on a level of basic survival for workers and artists, what are these project-based employment opportunities going to provide in between big projects? This is true whether you are an individual or a small enterprise contractor within the film and media industry.

All this to say, top-down logics and the sustainability arguments of ripple and spillover effects from foreign and transnational production do not hold water in the world of freelance and below-the-line workers. Needs are determined by market forces, dictated by corporate executives and policy officials (with limited engagement in this low-level work). But beyond on-the-ground labour considerations, especially around issues of "sovereignty," the transnational cultural diplomacy enacted by media policy opens up much bigger questions about sovereignty and transnational media infrastructures more broadly, especially in relation to a wider "ecosystem" of the global media and creative industries.

Digital media and content companies could not survive without the robust distribution apparatuses offered by transnational technology and logistics companies like Amazon, Apple, Facebook, Google, and Netflix. Many of these companies have become content-producers in their own rights, integrating the media supply chain within their expansive operations. These processes are highly transformative, both in terms of production and circulation. As capitalism's center of gravity has shifted *from* production to circulation, it is the speculative futurity of these capital projects that have the most radically altering effects and can be seen in the facilitation of tourism and media infrastructures on the island in support of these new productive centers and processes. Ireland has become crucial for these operations, for many of the same motives articulated in these preceding chapters—low corporate tax rate, business-friendly planning environment, naturalization of an FDI-driven economy—but also for reasons more directly

related to the engineering and spatial planning considerations required to facilitate large-scale computing. Building on insights about the naturalization of certain logics of extraction within media policy in this chapter, in the final chapter I will analyze the instrumentation of this pervasive business and natural "climate" in Ireland by the "data center industry."

Chapter 4 – Storm Clouds: Data Centers and the Cultural Logics of Climate Extraction

> …the activation of discourses and practices of sustainability and corporate social responsibility…ensure that the world's extractive activities continue along an open frontier.
>
> Sandro Mezzadra and Brett Neilson, *The Politics of Operations*

> And yet pulsing through various terrains is a very different temporality—the river becomes a polluted dump; the fog becomes smog; rock formations become computer components.
>
> Elizabeth Povinelli, *Geontologies*

> Maybe Ireland will now embrace its climate. Some have tried already, most notably the 19th-century writer William Bulfin from County Offaly, who described the Irish rain as 'a kind of damp poem. It is a soft, apologetic, modest kind of rain, as a rule; and even in its wildest moods it gives you the impression that it is treating you as well as it can under the circumstances.' But [Google's investment in data centers] is probably the first recorded case of anyone planning a move to Ireland because of the weather.
>
> Charlie Connolly

One morning in the Summer of 2018, I was picked up at the Athenry passenger rail station by Paul Keane, an organizing member of the Athenry for Apple community advocacy group. We had arranged a site visit to Derrydonnell Woods, where Apple, after several years of dealing with environmental objections through the complex Irish planning system, had recently withdrawn a proposal to build an €850 million data center campus, which would have constituted the largest private influx of capital in the region's history (O'Donoghue 2017). The location in East Galway was particularly significant, as an oft-neglected region of the rural west, more associated with the flat, boggy midlands than the mountainous landscapes and Gaeltacht communities of the far western coastal regions along the state-branded Wild Atlantic Way tourism route. Keane and I had only met via Facebook before this point, so we made small talk during the ten-minute drive out to the woodland site on the outskirts of town. His family, he told me, had been in the area for generations. As we drove past the town's Gaelic Athletic Association (GAA) pitch, near the edge of town, he remarked that his grandfather had been among the small contingent of local rebels to gather there during the 1916 Easter Rising. This historical detail, unrelated to our journey that day, was characteristic of the living character of history in Ireland, especially in rural regions,

where the past is a readily accessed and remembered presence in the landscape, always re-surfacing and co-existing with ongoing present circumstances and potential futures.

When we arrived at Derrydonnell Woods, we parked at the end of a small unpaved access road, marked as private property (Fig. 43), advising that the "occupier," the holder of the land, had no "duty of care" towards visitors. However, there was a woodland trail, and we encountered one or two other small groups of walkers as he showed me the site. It was a hot and sunny Summer day, especially by west of Ireland standards, but the woods were cool. This, Keane told me, was one of the primary draws of a woodland site for a data center, where the air temperature would be several degrees cooler than even the surrounding landscape, characterized much of the year by rain and wind. Keane showed me a variety of markers along the path, including one that monitored the shallow water table (Fig. 44). A data center would apparently have had little risk of affecting the groundwater, as opposed to an incinerator which had once been planned for the site, something that could have released toxic particles and circulated through the area underground. Keane lived adjacent to the land with his family, and water integrity had been very important for him when considering his support for Apple's proposal. We came eventually to a clearing in the woods, and I realized that the clearing was artificial—most of the trees appeared to have been cut down, and those still standing were dead or decrepit. Coillte, the semi-state forestry company who had facilitated the land handover to Apple, had once overseen industrial logging of the woods, leading to swathes of the 500-acre forest being cut down for lumber (Fig. 45). Woods are not terribly common in contemporary Ireland outside of conifer plantations, so those that remain are often quite beloved. Keane told me that this logging had already done damage to the ecological and aesthetic integrity of the area, and that Apple, who had planned to build public walking trails around their private site through the woods, would have helped restore the area to its former majesty.

Fig. 43: Notice at the entrance to the site in Summer 2018

Fig. 44: Keane demonstrating the water table monitor, same day

Fig. 45: An apparently logged portion of the site, same day

The suspended future of the site, still tied up in decisions being made in Apple boardrooms in Cork, at the closest, or more likely in Silicon Valley, was felt most palpably when we returned to the town and de-briefed over coffee in a local pub later that morning. Speaking with the barman, Martin, among others that passed through briefly or sat sipping their Guinness across the bar, the hope that had once flooded the town seemed to have manifested in defeat and bitterness. Just a few years after 2,000 residents (for reference, Athenry's population is roughly 4,000) had taken to the streets to demonstrate support for the project, the town felt drained. The community had come to distrust especially the objectors to the site, two of whom, the principle objectors Sinéad Fitzpatrick and Allan Daly, lived locally. Daly, however, was not *a local*—an engineer, he came from the US originally, but was married to a local, involved in the arts community in nearby Galway. After Keane left the pub, I stuck around and chatted with Martin, who, with a meaningful look, suggested I dig deeper into Daly's affiliations: "Who's funding Daly?" No one could discern his motivations, he said. When I contested and said that Daly's concerns seemed genuinely environmental, Martin was doubtful.[1] At other times, however, he was more hopeful. "We'll battle on, hopefully the wheel will turn." He pointed me to various storefronts in the town where he said that local residents involved with Athenry for Apple would be happy to speak with me. But on the contrary, most whom I encountered were sick of talking about it. An "Apple hangover," as they said, had taken over the town. Apple, though, was spared

---

[1] After a later email exchange with Daly, I stand by this assessment.

most of the bitterness, which was directed primarily towards the objectors and the inefficient state.

The failure of Apple's project in Athenry was widely associated in the press with an imaginary of the west of Ireland as a place of tricky cultural politics (see Paul 2016). The town's ambiguous location between the scenic west of Ireland and the Midlands, existing between the "place-branded" (Greenberg 2004) jurisdictions of Fáilte Ireland's Wild Atlantic Way and newer Ireland's Hidden Heartlands campaign in the Midlands, among other gripes with the state's lack of focus on rural Ireland, had left the area largely deprived of the creative-industry and services-led "recovery" happening elsewhere across the country. Calling to mind the histories of uneven (post-)developmentalism during the Celtic Tiger and post-financial crisis aftermath described in Chapter 1, Athenry is one of many towns in the rural west still reeling from recession. The final Supreme Court ruling on Apple's proposal, finalized in Spring 2019, long after the company had withdrawn their proposal, was even, exceptionally, held for public attendance at Aula Maxima on the National University of Ireland, Galway's campus, a kind of spectacle of governance offered by the state to residents in the west who felt largely forgotten and abandoned. As journalist Mark Paul quipped in the *Irish Times*, Apple had been "stuck in mud in the fields of Athenry" (Paul 2016), in dual reference to the boggy imaginaries of Ireland's rural regions and the famous rebel tune "Fields of Athenry" (see Brodie 2020b). This tongue-in-cheek headline encapsulates, intentionally or not, many of the complexities of culture, history, capital, politics, and the environment being entangled at the site. Tying the data center to a complicated tangle of cultural and environmental histories in Athenry, the aspiration of global connectivity was lost in the mud of the Irish bogs, the thickness of life and territory in the west of Ireland too dense to crawl out of once immersed.[2]

However, what is perhaps lost in this narrative of failure is that the general populace of Athenry, with many supporters across the region more broadly, was *actively and enthusiastically in support* of Apple's project. The project was only blocked by a small minority of objectors, who contested the project's environmental toll, which, across the appeals process, included disruptions to the local ecosystem, noise and light pollution, and, most prominently, the

---

[2] UK-based artist Matt Parker created an installation about the thickness of these kinds of feelings and cultural elements, echoing the immanent critique of someone like Elizabeth Povinelli and the "thickness" of social projects and subjectivities in late liberalism (2011, 6). See Parker 2019, n.d..

astronomical energy costs being disregarded within planning approvals and Environmental Impact Assessments (EIAs) carried out by An Bord Pleanála. The case study of Athenry thus offers a reference point for this chapter through which to understand the entangled infrastructural politics of contemporary Ireland through the lens of transnational tech corporations, their logics of value, and their politics and operations on the ground—or, to borrow a phrase from Jennifer Holt and Patrick Vonderau, Athenry provides a fecund example of "where [and how] 'the cloud' touches the ground" (2015, 75). These "peripheral" places across Ireland, the subject of much of Chapter 3, have been imagined as frontiers for economic development in Ireland for decades, as Chapter 1 contends, despite the messy and uneven dynamics that tend to slow, stall, or prevent these projects. The cultural and environmental politics conjured by Apple, the state, the media, and the residents of Athenry, as other examples from each of the prior three chapters have suggested, is not only serendipitous. These politics represent the entangled logics of value that see Irish space and culture as commodities for exploitation and extraction, in ways that have pervaded the public sphere. Financialization and austerity have led to a widespread (if defeated) acceptance of certain economic realities and modes of production, and these are tied to much longer histories. However, far from arguing that the populace is "disempowered," putting these agencies only in the hands of the state and capital, I argue that projects continue to be thwarted or enriched by complex cultural politics on-the-ground and through the organizational and spatial structures of data centers. As this chapter will go on to argue, the array of conditions that characterize Ireland's post-financial crisis media infrastructural environment contribute to a "climate" through which value is extracted by transnational corporations. This climate is not only meteorological, but it also consists of business interests, tax structures, policies and planning, infrastructural arrangements, civil society, and cultural politics which are entangled within local ecologies in profound and often unexpected ways.

While Athenry was left at square one, with no incoming development to speak of and Apple still in control of the approved Derrydonnell Woods site, the discussion that has been circulating across the country has focused on the enormous environmental effects that the "data center boom" is having on the country. The environmental externalities of media technologies have been the focus of considerable debate in recent years, especially in terms of the export of extractive activities—and their risk—to peripheral zones on national and world scales (see Arboleda 2020). Data centers are merely one part of a growing technological assemblage, global

in scale, supporting atmospheric and ubiquitous computing (Gabrys 2016) and "smart" optimization (Sadowski and Pasquale 2015), or, "the Fourth Industrial Revolution," as it has been called in the business and technology press (Schwab 2015). The metaphors and mechanisms by which these occlusive geographies play out have been the subject of a growing number of studies on internet and media infrastructures (Amoore 2018; Hogan 2015a, 2015b; Holt and Vonderau 2015), to which this dissertation contributes. But the "immaterial" frontiers of consumer and business software and "smart" urbanization, where users are sold a wispy, atmospheric "cloud" and corporate planners imagine terra nullius outside of urban spaces, cross through existing and complex rural economies and ecologies. Just like the mines, as Timothy Mitchell argues, which fired the carbon-fuelled urban futures of colonial modernity (2011), the infrastructures powering the digital economy are found outside of cities, in peripheral and colonized zones of extraction, and are navigating through environmental, cultural, and labour politics in their planning, construction, and continuous operation.

In Ireland, many have begun to notice these externalities in terms of how data centers are and will continue to affect energy consumption (see Bresnihan and Brodie 2019; Carroll 2020). Early reports on the data center boom, which occurred in the immediate aftermath of the financial crisis (beginning, roughly, in the early 2010s), were focused on Ireland's "cool climate" as a primary attraction. Cooling is crucial for these infrastructures, which, as halls full of computers constantly humming with the data of our collective business, consumer, and state internet traffic, generate tremendous amounts of heat. Most data centers in Ireland rely on cooling systems that need both cool outside air and water circulation. The cool, wet, windy climate saves energy and increases efficiency by taking advantage of these conditions. These controlled microclimates thus use local climate conditions while affecting them in collateral ways, particularly via waste heat, increased energy use, and resultant emissions (McLaughlin 2015). As the number of data centers has grown, so has energy usage in the country, rising steadily. While energy demand in most sectors, especially the average household, has remained constant, demand from "data centers and other large energy users" has soared since 2017 (Judge 2019). Many have noted Greenpeace's statistic that "if the cloud were a country it would be the fifth largest energy consumer in the world" (Maxwell 2014). In Ireland alone, 2017 reports suggested that by 2026, 15% of the country's energy use will go towards data centers (Bodkin 2017), a number that balloons to 20% on world scale projections (Climate Home News 2017).

But these figures are changing rapidly: by 2020, estimates have doubled, as Eirgrid has projected that by 2028, data centers will make up 29% of Ireland's energy use (Carroll 2020). An Amazon Web Services (AWS) data center campus in Mulhuddart, Dublin alone will use the same power as a small Irish city, up to 4.4% of the country's energy capacity in a 2026 projection (O'Donoghue 2018). The Athenry data center campus in total, according to Supreme Court proceedings in Galway, would have strained the national grid for 5-8% of its capacity *daily*. These statistics and projections are constantly evolving based on current developments and industrial conditions.

Whatever the exact numbers, these externalities, beyond being unsustainable at the level of supply, will continue to have adverse climate impacts as long as the national grid is powered primarily by fossil fuels (53.9% of total input natural gas). While tech companies claim that they will "provide" and use 100% renewable energy within the next several years to accommodate state and supranational energy agreements, an assertion that activists and courts alike often find disputable, the method by which they do so is to simply buy renewable capacity off the grid, sometimes in exclusive contracts with the providers (see Bresnihan and Brodie forthcoming). This means that other energy usage—such as household usage—comes from redirected flows of carbon fuel. Energy shortages are predicted in the Dublin region without significant investment in new infrastructure in the coming years due to data centers' disproportionate demands (see Lima 2019), leading to data center speculation across the country (including Athenry, Cork, Ennis, and Letterkenny). And finally, wherever the energy comes from on a normal day, every data center also needs on-site back-up energy supplies in case of grid failure. From my experience, they have a supply of continually charged batteries that can power the data center for thirty or so minutes until a new power source is operational, usually on-site gas-powered generators. If the lights go out, the data center still runs, on carbon-heavy power.

While the specificities of these energy politics are urgent, they are not the sole focus of this chapter. Rather, what this chapter will articulate are the ways in which these climate impacts are being imaginatively offset by the generation of a different kind of climate: a "business climate," entangled with the natural climate, through which value can be extracted through infrastructural assemblages of data, finance, and energy. Ireland's low tax rate (especially for research and development and intellectual property), corporate-friendly state policy, educated workforce, and history of facilitating foreign direct investment (FDI), along with the "cool

climate," are all mobilized within corporate and state planning to attract or justify the existence of data centers. Industry website Data Center Dynamics tells a similarly familiar story of the attractiveness of Ireland's indigenous technical, transport, and labour infrastructure, in direct association with the natural climate:

> Today, in common with many other northern European countries, Ireland is marketing itself as the ideal location for a data center. To that end, it will push everything from the weather (it is mostly cold and damp, so think low power usage effectiveness and free cooling) to the workforce (think English-speaking and well qualified) to its transport, power and telecoms infrastructure, much of which was built within the last 25 years. (Jones 2014)

This environmental and infrastructural assemblage is branded by the state and civil society partners as a resource for extraction by data centers. As Mike Hulme has theorized, "climate" refers not only to the weather, but to a sedimented array of historical and present social, cultural, and political circumstances (2017). Such "cultures of climate," as he calls them, refer to the socially-constructed material conditions within which a climate is experienced (2017). Drawing on these and other expanded ideas of "climate," including work on the affective "atmospheres" of contemporary capitalism, as well as building on the spatial research unfurled in the first three chapters, this chapter will theorize what I call "climate extraction": a mechanism by which state and corporate power coalesce to build extractive conditions for big tech infrastructures to operate. However, while this branded "business climate" is pervasive, it is necessarily incomplete, only part of a wider cultural politics of value that entangles extractive enterprise with the so-called natural world. Politics and environments on the ground disrupt these projects in unpredictable ways: much like the weather both builds imaginaries of the country's wild landscape for consumption and value extraction, it is also a disruptive and agential force, like in 2011 when a lightning strike caused massive blackouts for AWS and Microsoft in Dublin (Miller 2011), or in 2017 when Hurricane Ophelia delayed a court ruling on Apple's data center in Athenry. Potentially disruptive, like other examples of the productive frictions within supply chain capitalism (Tsing 2005), these conditions of turbulence can also contribute—like the more predictably constant wind and rain—to the overall socio-cultural climate from which tech corporations endeavor to extract value.

In my research on the data center industry in Ireland, I have attended corporate conferences, networking events, and Supreme Court proceedings. I have encountered people who own data centers in their home towns; aspiring and failed data center magnates; industry experts and advocates; realtors of data center space; divided and bitter local communities and individuals; besieged environmental objectors; pro-data center state and semi-state officials; curious and intrepid researchers; apprehensive and confused security guards; and even some of the relatively few workers within these blackboxed infrastructures. Access to these sites is often difficult, both in terms of physical location—usually situated on the suburban peripheries of Dublin along the T50 fiber optic cable route encircling the city and only accessible by car or, in my case, public transit and long walks—and bordering fences with high levels of (sometimes biometric) security. While communities and housing are often visibly left stranded within development zones or pushed out entirely, many data centers coexist in uncanny contrast with surrounding environments and estates. The drive for greater connectivity in fact disconnects the spaces of investment from the communities and ecosystems that once existed there, whether leaving them behind or exposing the stark inequalities of global capitalism's structural turbulence. Visiting these sites across time provides perspective as to the scale of spatial upheaval required for these and other sites of FDI-driven industry, driven by the uneven flows of the world economy. This chapter uses accumulated knowledge and experiences gathered across this fieldwork and planning research to theorize the territorial role of data centers within the Irish state's cooperation with transnational corporate operations in and through the country to naturalize the role of big tech within the country's social, political, and infrastructural futures.

The chapter begins with an outline of the "data center phenomenon" in Ireland (McLaughlin 2015), as it has been called, with a particular focus on the Dublin region, where dozens of tech multinationals, colocation providers, and telecommunications companies have set up shop around the bundled infrastructural networks of the T50 and M50 motorway. I will then articulate the public/private politics of visibility and security at the heart of the data center economy. Building, then, off of the case study of Apple in Athenry, I will articulate how all of these factors contribute to and naturalize a pervasive "climate" in Ireland, utilizing studies of logistical media, affect studies, and the management of climate turbulence to comprehend how associations between data centers and nature purposefully entangle the tech industry with particular contexts in order to naturalize their data-driven territorial futures.

Data Center Country

While we have spent the last odd portion of this dissertation focusing outside of Dublin, it must be emphasized that ground zero of the data center "boom" encircles Dublin along the T50 fiber optic cable route and the transport, energy, and industrial infrastructure with which it is bundled (notably along the M50 ring road). Private data infrastructure clusters around the projects and infrastructural resources provided by the state or other corporate presences, and this is especially true around Dublin's "databelt" (McLaughlin 2015, 198) (see Fig. 46). As Martin Danyluk argues through what he calls the "logistical fix," capitalism's inherent and contradictory turbulence is reflected in the transformative global distribution of logistical infrastructures, which shape the spatial distribution of industry across the world's supply chains (2018). Irish architecture scholar John McLaughlin demonstrates that this formation reflects the attractiveness of the country's tax climate but also the clustering of data centers around other critical and circulatory infrastructures. The infrastructural "bundling" occurring is key to identifying the strategic routes through which these forms of public/private partnership operate. Just as logistics companies require public roads and railways as much as natural and man-made waterways to operate, so do private high-tech companies require and instrumentalize the energy and fiber optic resources of territories as much as its labour resources and, in this case, climate conditions (Fig. 47). Infrastructure, as Shannon Mattern tells us, is "path dependent" (2017b, xxviii), meaning that it follows routes laid down by existing physical networks, reflecting their histories and geographies of power and influence. As the CEO of Cork Internet Xchange (CIX), entrepreneur Jerry Sweeney, told me, the location of his data center in Hollyhill Industrial Estate was in part determined by the site's proximity to Apple's Cork headquarters, as the concentration of fiber optic cables and other internet infrastructure was already piped up the hill on which CIX operates. Mél Hogan notes that this occurs because

> Large corporations also pay for various infrastructures that are intended to help other
> server-based companies 'set up shop' nearby. So while communications technologies
> have long been privatized, these internet infrastructures are increasingly entangled in
> market logics that are making internet flows a utility to manage, like electricity and
> water. (2015b, 4)

One can only infer that the internet access of the surrounding industrial estates, which stretch for miles surrounding CIX, is pay for subscription, while Sweeney's mechanical sheds extract value from internet traffic all over the country and beyond. By these logics, infrastructure, as supposedly ambient and public architecture for circulation (see Larkin 2013), is treated as a naturally-occurring part of the Irish environment. Companies simply need to get permission, and plug in. However, as Holt and Vonderau point out, the design and location of a data center mimics the design of something like a warehouse (2015, 72), or "sheds" as Gary A. Boyd and John McLaughlin describe them (2015), reflecting that these logistical routes make up the actually-existing contemporary geography of industry. These sheds are rapidly built, faceless architectures, futuristic in the very mundaneness of their scale (Fig. 48).
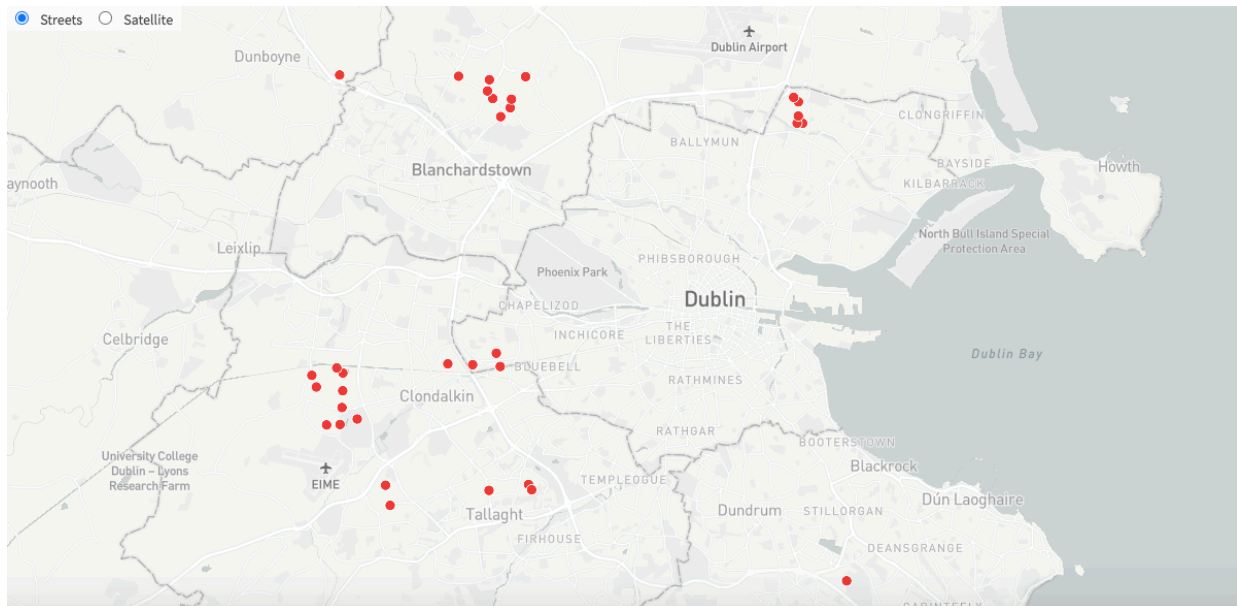
Fig. 46: A partial map of data centers encircling Dublin. Note their clustering and approximate location along the M50 ring road and other motorways (source: Baxtel n.d.)

Fig. 47: Bundling and path-dependence—at Citywest Business Park in Spring 2019, home of several data centers, you can see bundling of electrical and transport routes at the Luas station

Fig. 48: Faceless AWS data center nearby Tallaght in Spring 2019

However, too-intently mapping infrastructures' path-dependence, logistical organization, and "smoothness" simplifies the complex territorial politics that determine these formations in contemporary capitalism. These flexible, elastic rhythms of the global economy are operational to what Anna Tsing has called "supply chain capitalism" (2009), the contemporary transnational arrangement of trade and power by which diverse life and labour enrich the supply chain while ensuring structural subjugation to extractive capital. But central to the thesis of supply chain capitalism, and the studies of logistics and infrastructures which have mapped and analyzed these

global circulations (Cowen 2019; Mezzadra and Neilson 2013, 2019; Ong 2006; Tsing 2005), are the roles that actually-existing territorial and environmental formations have "stitched together" (Rossiter 2016; Starosielski 2016) by the governing and management of logistical technologies. Whether speaking of national borders or the separated and strategically zoned infrastructures and office parks encircling contemporary cities, zoning and bordering are used to separate work forces and administer territory for the greatest exploitation by capital (Mezzadra and Neilson 2013; Ong 2006). As borders multiply across geopolitical contexts as well as across everyday life in the age of finance capital (Mezzadra and Neilson 2013a), tech companies plan infrastructures not necessarily through the smoothest path. Rather, they are often navigating their operations across social, cultural, political, and environmental avenues of friction and resistance, and if successful in doing so, strengthening their functional operation and expanding their extractive power within given places. The data economy is continuously navigating across different spaces via networks, and these spatial differentiations are part of how the supply chain continues to function. As small and modular edge data centers will be built throughout cities and their "smart" environments to accommodate 5G (Enterprise Ireland 2017), larger hyperscale and colocation centers will continue to grow in the outskirts of these same cities. The simultaneously intensive and extensive processes of supply chain capitalism through data centers demonstrates how the rhythms of supply chains are reflected through data center geographies, as well as the monopolization of power through data supply chains. Textured engagements with spaces of data center construction and operation, such as Jenna Burrell's (2019), Alix Johnson's (2019), Julia Velkova's (2020), and Asta Vonderau's (2019) sited ethnographies of data center development and labour, better account for the structural diversity that constitutes the particular modes of circulation, and intensive and extensive supply chains, represented by data centers and their surrounding economies and ecologies.

In this vein, on multiple occasions, I took the 151 bus from the Coombe in Dublin 8, where I lived during my fieldwork, out to Grange Castle Business Park. The park was established in the early-2000s as a partnership between the Industrial Development Authority (IDA) and the South Dublin County Council. The sprawling industrial region within which it sits, just west of Clondalkin and part of a much wider expanse of office estates, logistics parks, manufacturing plants, and infrastructure spaces including the Park West Business Campus, the Citywest Business Campus, and the nearby Profile Park, among many others, hosts dozens of

multinational companies. Getting off the bus near the entrance to the park, you are first greeted by a Pfizer pharmaceutical plant. On the opposite side of the road, hidden behind a landscape mound, ostensibly for privacy, is an unmarked Equinix data center. If you walk out of the estate, you will come across Google's flagship Dublin data center in Grange Castle Business Park South, as well as a neighboring Digital Realty data center in Profile Park, which has positioned itself as a designated hub for data centers, under the slogan: "Where data needs to be" (Fig. 49).

Fig. 49: Profile Park in Spring 2019—"where data needs to be"

Back inside Grange Castle Business Park, if you walk further up the road from the bus stop, there is the entrance to the overwhelmingly massive—also unmarked—Microsoft data center campus, which resembles more a military base than a computing hub, flying Irish, US, and EU flags (in descending order of mast height) (Fig. 50). Farther along this same road, amongst the pharmaceutical manufacturing plants, apparently empty fields, and the ruins of medieval Grange Castle, the namesake of the park, you come across a data center owned by Interxion, a Dutch multinational (Fig. 51). The manicured landscape, with walking trails and a fountain pond, butts right up against the Grand Canal, which used to make up an industrial corridor between Dublin and the River Shannon in the west of Ireland. Now, more ironically, the no-longer-functional canal connects this particular business park with Grand Canal Dock, the heart of the Dublin Docklands, where tech companies such as Facebook, Google, and Airbnb have their expansive European headquarters, as detailed in Chapter 2. The commuter train lines heading out to Dublin's western suburbs and beyond to Galway (through Athenry) and Limerick still roughly follow along this original transport infrastructure, criss-crossing it through the small

towns and out through the midlands, and demonstrating the historical longevity of infrastructural path-dependence and the continuous activation of existing spaces and routes for circulation.

Fig. 50: The securitized gate of Microsoft's Dublin data center campus in Winter 2019

Fig. 51: Grange Castle in the foreground, Interxion in the far background, Winter 2019

During one of my visits to the area, my destination was Interxion. Upon arrival, I was greeted with typical security: after procuring an appointment weeks earlier, I had to announce myself at a separated gate, be buzzed in to the parking lot, then buzzed in again at the door, where I had to provide government ID, sign in, and wait for a representative. When this employee finally arrived in their glossy, co-working waiting room, he took me on a brief tour of

the computing facility, where I once again had to be let in, this time by biometrics. This was a familiar experience for me by this point in my research. Like other such spaces I had visited, after security, the inside was largely unremarkable for someone without engineering expertise: few personnel were seen, hallways and work stations were squeaky clean, rows of humming server stacks made up most of the rooms we entered, backup energy generation and battery power were essential spines of the facility, an electrical substation sat just offsite, and as usual, they were expanding their data halls into a new build next door. Upon concluding our tour, we sat down in one of the conference rooms, with a view of the fountain pond near the entrance. Speaking with him about not only Interxion, who hosted several other facilities across the Dublin region, but about the broader data center economy of Ireland, the representative (who was born and raised in Ireland) told me that the country was uniquely suited for data center development. This went beyond typical justifications, however, like tax incentives and climate factors: he argued that there was something about Irish *culture* which made it a good place to construct and operate a data center. As we spoke, and then later as I wandered these inhuman industrial landscapes on my way back to the bus stop, I was continuously reminded of how he greeted me upon my arrival: "Welcome to data center country" (see Fig. 52). While he spoke of the region encircling Dublin in particular, laden with data centers, this jokey statement echoes the state's vision of the country as a home for these energy-hungry infrastructures.

Fig. 52: Enterprise Ireland's "Year of the Data Centre" graphic (The Irish Advantage 2018)

Ireland's influx of data center development by some of the largest tech companies and data colocation providers in the world has been a subject of considerable interest and debate,

both in Ireland and in the data center industry (Carroll 2020; Jones 2014; McDonald 2012; Silicon Republic 2016). Ireland is the most concentrated data center hub in Europe (Savvas 2018), and most of this development has centered on the Dublin region. It has also ramped up since the 2007-2008 financial crisis (see IDA Ireland 2018, 29). In an environment of widespread job loss and austerity, like the wider "creative economy" described in Chapter 2, data centers' massive investments have been seen as tools for "recovery," especially in places which have been left out of the so-called Celtic Phoenix, "rising on data center wings" (Allen 2019; see also Regan and Brazys 2018). To provide a brief recap of the timeline in Chapter 1, Microsoft and AWS planned or built data centers as early as 2007; Facebook built its first data centre in 2016; Google expanded into its Grange Castle facility in 2016; and, finally, Apple tried but failed to build a data center in Athenry, County Galway between 2015-2019. Microsoft, Google, Facebook, and especially AWS, the so-called hyperscalers, have all extended their facilities, the latter with over a dozen (by my count) data center sheds across multiple areas of Dublin, which makes up its EU West 1 Availability Zone.

These companies co-exist among dozens of other multinational colocation data center providers (like Interxion, Equinix, Keppel, and Digital Realty) hosting expansive operations, established roughly across the same timeline. Still more companies experiment with edge, modular, and, intriguingly, underwater data centers. Smaller operations like CIX (Cork) and data management and services companies like Sleepless (Galway) fill in gaps and service this supply chain. Analyzing public materials, websites, industry documents, planning permissions, and court cases, one finds repeated and all-too-familiar claims as to the benefits of Ireland for hosting data: its open business environment and friendly tax climate; a highly educated workforce; quality digital and electrical infrastructure; cool and damp weather conditions. However, this rosy, top-down view of Irish space and its planning systems gloss over the messy and conflicting interests that each data center project must inevitably negotiate. Objections are becoming more obvious as the number of data centers grows: construction tends to be short term, jobs in the completed data sheds limited and often, in the case of colocation data centers, employees are contracted or shipped in from abroad by companies renting server space. Energy use continues to balloon. Water supply concerns, not associated with wet, rainy Ireland, have been reported in Dublin, drawing attention to data centers' resource use beyond only energy (Woods 2020; also Hogan 2015). Reports of "saturation" and potential energy shortages in Dublin (see IWEA 2019,

2) have led multinational companies like AWS (Drogheda), T5 (Cork), Echelon (Arklow), and Atlantic Hub (Letterkenny/Derry) to look outside of the immediate Dublin fold to gain Irish foothold in places with less strain. Proposed data center projects in Killala, County Mayo and Ennis, County Clare have claimed similar reasons to attract investment, also promoting infrastructural availability. Proposals for data centers across the country are put forward regularly, and with few caveats as to energy costs. Each place wants to be a new "Silicon Valley," in the case of Athenry (Siggins 2017), or a new "goldmine," as the potential for a €400 million data center in Ennis heralds (McMahon 2019). The "gold rush" is on, as the metaphorical resource politics engaged in by data and bitcoin "mining" proclaims the new automated geographies of extraction. Sometimes, the state succeeds in pushing a project through with little resistance; other times, projects hit unexpected blockages and disputes, or founder in the courts. For example, Nautilus Data Technologies, a start-up, has for several years attempted to secure permission to build an experimental underwater data center in the Limerick port, but local residents and business owners objected, arguing that the heated wastewater would damage the ecosystem. After a few years, however, state and capital's support prevailed, and the project is going ahead. Such is the nature of extractive transnational capital and its modes of territorial expansion—while capital is efficient, and the state paves the way for its operations, politics and environments remain unruly.

The state is all in on the data center gamble and has concertedly branded itself as a data center hub. As Chapters 1 and 2 introduce, Ireland's "creative economy" has been centered around the tech and financial services sectors since the rapid growth of the Celtic Tiger, and data centers would appear on the surface to be a continuation of these development strategies, which have arguably only intensified after the financial crisis (Lawton, Redmond, and Murphy 2014) (see Chapter 2). Since this initial "boom," the growth has not stopped, and the state has responded by releasing a variety of policy frameworks and reports emphasizing the importance of data centers as part of the country's enterprise strategies (Government of Ireland 2018a; IDA Ireland 2018). However, even so, a variety of organizations, private, semi-state, and state, have begun to alternately sound the alarm about data centers' energy usage while also arguing that they are an essential part of the state's growth strategy (Enterprise Ireland 2017; Government of Ireland 2018a; IDA Ireland 2018; IWEA 2020; SEAI 2017). These interests appear conflicting, but reading through these documents, they are somehow posed as part and parcel: data centers do

and will continue to use *astronomical* amounts of energy in Ireland (see Bresnihan and Brodie 2019), however, these energy demands will be met with methods of "green" growth and an expansion of renewable energy capacity. For example, while the Sustainable Energy Authority of Ireland (SEAI) (in collaboration with civil society booster Host in Ireland and Bitpower Energy Solutions) says that energy supply will become more difficult, it also buys into the wider need for data centers in the Irish economy in relation to global trends and data-driven enterprise:

> Investment in data centres is significant, and the data industry supports many jobs across the economy. There are also opportunities in the content of the data. We are only at the beginning of the digital age, and Ireland needs to be ready to leverage future trends in data…Collaboration between the data centre operators, the state utilities, renewable developers, researchers, state agencies, and local authorities will be key to unlocking future opportunities. (SEAI 2017, 29)

The investment offered by data centers is too significant to merely scoff at, and the imaginaries of tech-driven economic prosperity are seductive for many people across Ireland. However, jobs are quite scarce, and are increasingly subject to automation in both operation and maintenance. While hyperscalers and large colocation hubs will continue to be required, the growth of "edge" data centers across cities to accommodate more distributed cloud and IoT networks will further automate operations, as government reports on "the future data center" predict (Enterprise Ireland 2017).

Legislative change to facilitate data centers has also been widespread. As the Government's strategy documents indicate, there are several pillars to their incentivization, including changes to planning and energy policy and data centers' inclusion in the Project Ireland 2040 spatial planning framework (Government of Ireland 2018a, 3). In 2017, Taoiseach Leo Varadkar announced a proposed amendment of the Planning and Development Act of 2000, in particular the 2006 amendment on Strategic Infrastructure which paved the way for strategic development zone (SDZ) designations, moving to "allow data centres and other key IT infrastructure to be included in the criteria for access to the Strategic Development planning procedure" (Government of Ireland 2017). This classification as critical infrastructure is leveraged in order to fast track their planning and development and "enable the planning process to work more smoothly" (qtd. Finn 2017). The new amendment, according to Varadkar, "will allow them to skip a whole state [sic] of the planning step into the future and in addition to that

we're going to develop a very clear policy around data centres, where they should be located and how energy should be provided for them" (qtd. Lynch 2017). While companies will still have to receive planning permission at the state level, they no longer are required to follow local planning procedures, thus lodging their plans immediately with the state-wide, quasi-judiciary An Bord Pleanála. As outlined in Chapter 2, these "strategic development" procedures remove local considerations from these large-scale projects (see Byrne 2016), effectively attempting to bulldoze the local opposition (and opportunities for support) reflected by the Athenry saga. The messy and conflicting interests in the west of Ireland constituted a barrier to be overcome by deregulation. The IDA has already laid plans for pre-conditioned sites (B. O'Halloran 2017); industrial parks and sites across the country are promoting data center-ready infrastructure, like Profile Park and the former Asahi chemical plant in Killala, Mayo. But to Keane, the strategic infrastructure amendment was an empty gesture even in itself: objectors, he believed, would still have slowed the process even if the first round of appeals had been circumvented by the streamlined law.

These aggressive moves to pave the way for FDI demonstrate not only the state's aversion to objection, but their absolute reliance on FDI. Varadkar attempted to steady the ship and ward off concerns, saying that such objection is "not the norm. There are lots of data centres all over Ireland and they get through the planning process with relative ease so I don't think this delay in Athenry because of the courts and because of the planning process is typical" (qtd. Lynch 2017). The courts also seem eager to fend off concern. In addition to the strategic infrastructure amendment, the Supreme Court's 2019 ruled in favor of Apple's right to not provide a full Environmental Impact Assessment (EIA) for their plan, where they only assessed the impact of one data center shed as opposed to the proposed eight. This ruling came in spite of Apple's withdrawal, and set a de-regulatory precedent meaning that other companies can follow Apple's route of underplaying the environmental and energy costs of their future plans. Thus, the state participates within a system of value and extraction which posits data centers as inevitable factors within Ireland's economic future. This occurs in spite of the limited public benefits of data infrastructure for the people of Ireland.

It also, more alarmingly, represents a coalescing unity of logistical governance, through the territorial technology of the data center: the state removes barriers to development by pre-emptively subduing and reducing avenues for dissent and alternative political mobilization.

Public objection is outflanked, headed off at the pass. As Ned Rossiter articulates in terms of what he calls "the logistical state" of contemporary capitalist territorial governance, "If logistical operations are central to the emergence of new forms of sovereign power, then a media theory of logistics lends analytical traction to the collective work required to diagnose and critique contemporary regimes of rule" (2016, 4). Central to these emergent forms of politics and rule in contemporary logistical capitalism, administered by tech corporations, their infrastructures, and their state partners, are forms of security and strategic visibility, which interlock with the politics of visuality put forth by the Irish state and its economic strategies.

Visibility, Security, and Private Infrastructure Planning

Data centers are thus sites through which to study Irish governance's concerted and tightly intertwined relationships with transnational corporations. As Chapter 1 argues in detail, the privatization of infrastructure is constantly in action, and often the result of supranational debt mechanisms and dependence. FDI is a strategy to draw capital into strategic geographical areas and sectors of the economy, including culture, public services, and infrastructure. The blurred boundaries of public and private provision within supposedly "public" infrastructure means that state subjects are increasingly treated as consumers, paying customers rather than citizens deserving care, with the politics of "access" often replacing welfare and care. This wider infrastructural formation acts as in support of the dominant flows of data and capital in the tech world. In particular, many multinational tech corporations are concentrated on the streaming space and content production, and Amazon Prime, Apple TV, Disney+, and Netflix (the latter two contract their server space) require expansive data center facilities to accommodate the enormous streaming traffic of their millions of users worldwide.[3] But in the same data sheds, there exists consumer data, business records, government files, and personal cloud storage. These convergences of technology and content, production and distribution, while part of a massive infrastructural apparatus spanning territories, cables, wires, nodes, and a variety of important sites and ecologies, are tangled within the territorial technology of the data center. Within this environment, data centers are given exceptional purchase and promoted as public projects bringing green and data-driven prosperity, as Athenry and community support for other projects

---

[3] Laura Marks, in a short piece, has established that streaming video accounts for 60% of the world's data traffic and 1% of total greenhouse gas emissions (2020).

demonstrate (including in Ennis and Killala). They are seen as essential and integral infrastructures to the state's economic future, in spite of their largely extractive presence within the landscape and their unmanned operations.[4]

　　In spite of the strategic role that data centers play in the plans of the state, and the public services that they are seen to offer, they are notoriously guarded or strategic about when and to whom they make their operations visible. Transparency around these infrastructures remains a major point of contention, as the idea of the cloud fundamentally occludes where our personal data is actually stored and what power governs it (Holt and Vonderau 2015, 75). For example, AWS is deeply secretive about their operations, to the extent that a leak of their "infrastructure regions" by Wikileaks in 2018 was enough to provoke an international scandal. Scholar and artist Paul O'Neill has made it part of his artistic practice to bring "tour groups" out to AWS data centers surrounding Dublin, operations which are constantly expanding (see Humphries and Kapila 2019; O'Neill 2018, 2019a), clustered within suburban enterprise zones and surrounded by logistics centers, manufacturing operations, and warehouse spaces. Referencing and in conversation with Ingrid Burrington's long-time practice of bringing groups on infrastructural tours of New York (2016) and Shannon Mattern's concept of "infrastructural tourism" (2013), O'Neill builds an experience out of such security, even provoking the security guards—from the safety of public property, outside of the data center fence—to engage, usually through loudspeakers installed on the outside of the data centers. Security guards, when asked, do not tell you who owns the buildings, despite the publicly available planning documentation (although even this is sometimes occlusive, using misleading subsidiary acronyms such as ADSIL, Amazon Data Services Ireland Ltd.). In my own experiences visiting AWS (with O'Neill and others) and other data center campuses unannounced, encounters with security are inevitable, especially if you step foot on any manner of private property. Once in Summer 2017, after taking a bus out to the then far-less developed Grange Castle Business Park, walking along a narrow road with no sidewalk from the bus stop to reach an official entrance, I traversed the poorly-available public walking infrastructure of the area and finally approached the gate of the new

---

[4] This is not an attempt to erase the existing labour at these sites, including the continuing maintenance and security labour from blue collar workers. Velkova has done exceptional work on these sorts of labour (2020). However, it remains true that the number of workers represented within these enormous infrastructures is proportionally quite low in comparison to their destructive externalities.

Google data center.[5] Taking photos the whole way, I stepped inside the gate and was immediately apprehended. Private Google security guards took my passport, asked for my information and affiliation, and called their supervisor. In all, I was held there for roughly thirty minutes, a few of which were tense before their tone changed to one of curiosity more than distrust. I had a similar experience with my Trinity supervisor Phil Lawton in 2019. We entered the front door of an unmarked Equinix data center in Citywest Business Park, to confirm our suspicions of the owner. The security guard, in shock, asked us to leave immediately. These highly secure infrastructural (and labour) accounts, however, are not universal. Next door to Equinix in Citywest, Phil and I approached an unmarked data center owned by Keppel, a Singaporean conglomerate, and the security guard—a contractor, based on his uniform—greeted us cheerfully, and asked "Here for Keppel?" Other companies offer public-facing visibility to control the narrative. Google presents itself as a public space, complete with a mural painted on the side of its main shed, but visible only from a safe distance (Fig. 53). Apple, similarly, performed a good deal of community visibility work in Athenry, including donating iPads to a nearby school and promising community walking trails, before the project was cancelled. Facebook gave a publicized tour of their facility in Clonee to RTÉ (Goodbody 2018). Like their operations in Prineville, Oregon (see Burrell 2020) and Luleå, Sweden (see Vonderau 2019), Facebook attempted to build consent with *strategic* visibility for the community. However, as Vonderau notes, the data center in Luleå remains mostly locked away, its visibility controlled by a PR firm in Stockholm, despite ongoing community support (707).

---

[5] I got turned around while wandering this area in 2017, and ended up walking into a Traveler estate, in sight of the ostentatious Google data center. Someone pulling into the estate up the unpaved road pointed me in the right direction. When returning in 2019, the small access road to the estate had been paved away, but there was a small remaining access point, seemingly put in place on purpose by those that re-paved the road.

Fig. 53: Google's Grange Castle mural in Spring 2019, all clouds and wind

As Chapter 2 demonstrates, the visual culture of development represents these financial and logistical modes of seeing and governing the future by erasing existing communities, labour, and political dissent. Likewise, Chapter 3 argues that the state, via media policy, sees workers through a biopolitical lens of resource management and thus extraction, representing another example of the state sacrificing place-considerations for FDI. Parallel to how these are rendered occluded practices and geographies, there is a politics of (in)visibility to such securitizing of resources and their circulation. As Nicole Starosielski argues in terms of undersea telecommunications cables, such infrastructure, always fuzzily public and private and existing across jurisdictions, has tended to be invisible to the public eye (2015). By surfacing particular localized histories and social relations around such infrastructure, Starosielski activates different ways of seeing them and their geographies. However, that is not to say that corporate and state strategies do not tend to manage these visibilities, making any activity of envisioning and mapping alternative politics a difficult endeavor. Only by controlling where and how the public (or investors) become aware of data centers can the cloud truly recede into the ambience of global life.

In relation to these politics of transparency and visuality, Holt and Vonderau propose seeing popular visualizations and corporate propaganda around data centers, along with the physical spaces, policies, and agreements, as part of their infrastructural operation and necessary to understanding the public/private imbrications of the built environment of the cloud (2015, 74).

Resonant with the discussions of corporate visualizations of future urban space in Chapter 2, data center plans project an imagined, digitized future, controlled by logistical governance, which effectively manages the built and natural environment with little contingency. In these images, problems and turbulence are nowhere to be found. Speaking of visualizations of data centers, Holt and Vonderau argue that

> such images tell us about affordances and constraints turned into pipes and cables, about
> in-built political values and the ways the engineering of artifacts come close to
> engineering via law, rhetoric, and commerce. And the images also testify to the constant
> struggles over standards and policies intrinsic to the network economy. (2015, 74)

As suggested early in this thesis, the visual culture of such images project ideal infrastructures through which frictionless imaginaries can become operational, in spite of the often-fraught planning processes and political dissent that characterize their development. These physical infrastructures are not simply those that are built, but also the surrounding visual culture which circulates and contributes to the collective imaginary of a given project. While these are experienced largely in boardrooms and government offices, they are also widely available on the internet, and in the case of a foreclosed project (like Athenry), the visible evidence of an imagined future and an index to a space both existing and stuck in limbo (see Chapter 2; also Carse and Kneas 2019).

Such images also promote the "green" vision of technology, a clean and clear-skied future. Visualizations of data centers, through corporate promotional material and press releases shown to the general public on industry and journalistic websites, often focus on the "expanse of sky and land surrounding the buildings. In effect, the data centers are visible but rendered practically inconsequential by the surrounding spectacle of natural vistas and wide-open spaces" (Holt and Vonderau 2015, 76; see also Carruth 2014). Data centers are energy vacuums, and yet these images do not manifest the surrounding infrastructural or environmental conditions, unless supporting a green image (for example, on-site wind generation). This is a familiar corporate tactic of "greenwashing." Companies vie for position in a market increasingly geared towards "green" alternatives, which governments (state and supranational) incentivize to mitigate damage while encouraging growth. Industry and company websites inveterately preach corporate dogmas of energy efficiency and green energy that motivate the rhetorics of sustainability and climate responsibility. Allison Carruth describes the ways in which industry propaganda around "the

green cloud image often serves to greenwash both network infrastructure and corporate America," because "whether lauded as a silver bullet for corporate sustainability or exposed as much dirtier than we think, the medium works…to simplify the 'large, complicated, [and] inaccessible' infrastructure that moves data around the world" (2014, 349). Rendering the cloud "green" through these strategic visibility tactics serves to paint corporations as "sustainable" elements of unstoppable forward movement, naturalizing their relationship of care towards future planetary ecologies. The rhetoric of sustainable technologies is tainted with the idea that to sustain is to continue, to march down a slightly greener path to a more ethical, but always capitalist, future. But systemic growth is itself unsustainable, as global climate and economic turbulences—and the social, political, and cultural effects of these changes, disproportionately felt in the formerly colonized world—have proven.

Crucially, and reflecting the few jobs actually created by data centers, the buildings within these "green" visualizations are part of a larger, usually pristine, natural landscape (Fig. 54), devoid of people. Returning to the politics of urban and rural development in Ireland discussed in Chapter 1, these images conjure the "greenfields" imagined by state propaganda to bring capital into rural spaces, as Luke Gibbons has identified in early economic development materials promoted by the IDA (1996). Like the aspirational promotional spaces of the city expressed in Chapter 2, the visions of development—or, perhaps, of technological urbanization—promoted by state and corporate planning are unevenly transferred across the country and demonstrate the strategic (em)placement of data infrastructures and their demographic imaginations through regional variations. Chapter 2 introduces the idea that many studies of "place atmospheres" within a lineage from Nigel Thrift's non-representational theories of geography and affect (2008) tend to universalize experience from the perspective of a western subject (Degen, Melhuish, and Rose 2017). The atmospheres generated within images of data centers, for example, assume a particular view of territory: terra nullius, formed against green landscapes, clean, devoid of people. Kathryn Yusoff argues that these visions of wild frontiers for development exist within a direct lineage of colonization, and its actual and imagined optics of bodies and territories (2018), and A.R.E. Taylor has articulated how data centers' human-free imaginaries promote a "technological wilderness" in their construction and operation (2019). Such atmospheres enact logistical violence by imagining an empty landscape for capital to colonize. However, rather than necessarily external imaginations, their visions in and of Ireland

are endorsed by the state, profoundly seductive in their visuality, imagining these "empty" spaces as potentially green, technologized, future spaces for sustainable and automated prosperity in places often outside of the fold of these corporate visions of urbanization.

Fig. 54: Digital rendering of Apple's proposed data center in Athenry (source: Wuerthele 2018)

This atmosphere projects a kind of futurity (see Neves 2013), a potential feeling and vision of prosperity, but it also enacts particular ideological work across existing social, cultural, and political places and spaces. Facebook's rendering of their data center in Clonee, for example, shows a vast green landscape surrounding it (Fig. 55). The surrounding area, as I found out trying to access the then-under construction site in 2017, was made up of small towns, farmland, but also, further to the east and closer to Dublin proper, vast R&D parks inhabited by companies like IBM. While definitively more rural than many of the suburban and industrial environments surrounding AWS data centers in Tallaght, for example, Facebook's future vision sees the data center—and Facebook with it—existing within an untouched landscape, free from social, cultural, and political frictions, part of a much wider ideological project to de-politicize the profoundly political business and consumer uses of media. Data centers, as largely unmanned infrastructures after initial construction (the largest often employing a mere few dozen workers), and even whose maintenance and optimization is increasingly mechanized and automated (Enterprise Ireland 2017, 24), may be seen as a dream conduit for labour-averse capital seeking to establish territorial grounding in a tax-friendly locale. Their development is enacted across urban and rural divides that are politicized across Irish cultural histories.

Fig. 55: Digital rendering of Facebook's data center in Clonee, County Meath (source: Sullivan 2016)

But as Sandro Mezzadra and Brett Neilson argue, these often rural spaces are frontiers of *urbanization* (2019, 196), representing the ways in which contemporary technological industry exports extractive activities to peripheral zones of its own focus, where they support the consumer and enterprise operations of urban centers (from cell phone platforms to smart technologies). However, to push against these visions, we have to pay attention to their on-the-ground politics, and re-center rural areas within our analysis of such systems. Influentially, Harvey Molotch has called such procedures of urbanization the "urban growth machine" (1976), driven by the interacting, competing, and cooperating local interests in any given place which feed ongoing and expanding development. This takes on a particular weight in (sub)urban Ireland, where space is at a premium (Gavin, 2018)[6] and the patchwork maps of communities and interests are constantly changing even among the mundane landscapes of industrial parks, logistics centers, and big box stores encircling Dublin's M50 (McLaughlin 2015). But at these "frontiers," zoned for business and strategically sited alongside existing infrastructure for growth, emplaced politics, cultures, and environments are continuously interacting with state planning and policy. As Chapters 1 and 2 expose, the colonial history of imagining the "empty" space of the "green" frontier in Ireland is linked to ongoing strategies and imagery promoting the business opportunities offered by Ireland. However, these processes are often far more intensive

---

[6] This article also points to "logistics" as a market to watch in 2019.

than such extractive frontier imaginaries leave space for. This is especially true of Athenry, where familiar infrastructural and planning arguments as a strategic frontier for development of crowded Galway city were fed by profound local support and active political mobilizing by the community and the state, all attempting to facilitate large-scale FDI by an enormously wealthy transnational corporation. At the other end of the scale, CIX, while the location was ultimately chosen due to proximity to Apple's offices and their infrastructural availability, also has a far more local story: Sweeney is a Cork native, and, in a partial way, as he told me, CIX's location is a result of his familiarity with his hometown. This is a common refrain from developers, but there is some truth in such admissions, however calculated they are. While strategically situated nearby another massive tech organization as well as cable landings from North America and Europe, CIX is in some ways the product of an entrepreneur's desire to bring such a development to his hometown, with other factors lining up. As Molotch contends,

> we need to see each geographical map—whether of a small group of land parcels, a whole city, a region, or a nation—not merely as a demarcation of legal, political, or topographical features, but as a mosaic of competing land interests capable of strategic coalition and action. (1976, 311)

By paying close attention to these politics, we can short-circuit and complicate top-down visions of corporate urbanization, and focusing intently on rural "frontiers"—the "systemic edge" of technological urbanization—can de-center centrifugal analyses of such development in order to locate much more complex entanglements and centripetal intensities across global systems.

These so-called frontiers, while facing certain kinds of urbanization, are *not* urban. These areas are often at the cusp of massive upheaval, *becoming* (sub-)urban only via the state's FDI strategies and their geography. Google's data center in Grange Castle Business Park South, as recently as 2017, used to be surrounded by fields and small estates, just on the edge of Dublin's suburban sprawl. In a very visible way, this sprawl has caught up: roads have been developed, infrastructure expanded, and in the process, what was once farmland has been claimed for development. Compulsory purchase orders from the state, issued long before I had even visited, and the continuing expansion of industrial and data center operations in the area had left many occupied and abandoned houses and properties stranded by the time of my last visit in 2019 (see Figs. 56, 57, 58, 59). Mezzadra and Neilson refer to what they call the "systemic edge" (2019, 138) where capital, concretely, "hits the ground" in new spaces of development. As argued in the

introduction to this thesis, it is at the edges of governance that such technologies find their places of experimentation, of navigating productive frictions, in terms of determining their future operations. Places in rural Ireland wiggle away from top-down molds of corporate urbanization, both in politics and environments, demonstrating the importance of foregrounding emplaced cultural and environmental politics in the crosshairs of development. It is also where politics on the ground—in the form of local support or resistance for projects—participate in or resist such processes. Within narratives of development, the histories of these spaces are "submerged" (see Gomez-Barris 2017), even though material ruin may still be visible on landscapes.

Fig. 56: Microsoft's data center campus in Grange Castle Business Park from a new local road and bike path, Spring 2019

Fig. 57: In-progress suburbanization, with abandoned farmhouse and the roof of Google's data center in Grange Castle Business Park South barely visible in center right, same day

Fig. 58: Abandoned farmhouse property with the same Google data center in the background, same day

Fig. 59: Full view of an abandoned farmhouse and surrounding landscape, with Google data center in the background, same day

The materiality of data centers and the ways in which these logistical infrastructures operate in specific places, in relation to local environments and industries, testify to the very spatio-political diversity, and what Mezzadra and Neilson refer to as the "fog and dirt, violence and magic" of borders (2013, vii) that supply chain capitalism both courses through and runs aground on. Non-places—like the data centers and industrial estates potted across the world, and the channels and pipelines between them criss-crossing the globe—are never empty, but productions of a given kind of strategic space for an apparently boring purpose in negotiation with the "fog and dirt" of planning, zoning, and the communities they circulate and intersect on the ground.

Fog and Dirt, Clouds and Mud

In 2015, Apple first announced plans to build a data center at Derrydonnell Woods. Referred to as a "greenfield" site in the outskirts of Athenry, "neither Coillte nor the IDA would divulge details of the land transfer to Apple" (The Irish Times 2016).[7] Twenty-five sites in Galway were inspected with the IDA, but some "were immediately dismissed because of poor roads and broadband, or else the sites were too small to cope with a 15-year plan to build eight data centres in one location" (Newenham 2016). Apple officials stated that the Derrydonnell plot was

---

[7] Coillte's project page still exists (Coillte n.d.).

"uniquely attractive" (Newenham 2016) and, as Keane told me, the natural cooling offered by surrounding woodlands would apparently supplement Ireland's already cool climate. Athenry is also located nearby the junction of the M17/M18 motorway, a fiber optic cable route, an IDA site, and a commuter railway connection, which would make the forest cooling appear secondary (like the cooling arguments in Ireland more broadly). On the surface, Athenry seems to merely be a particularly strategic "dot on the map," amongst a bundle of developments and infrastructure (Fig. 60).

Fig. 60: Derrydonnell Woods outside of Athenry, a strategic "dot on the map," Summer 2018

However, from the beginning, local politics were complicated. Apple consulted with the community, who formed the Athenry for Apple group in support; state officials representing the region advocated strongly for the project; and, amongst the overwhelming excitement, several environmental objections were lodged at the initial planning stages. These objections held up the process until October 2017, when, after a series of juridical delays—including the arrival of probably climate change-related Hurricane Ophelia on Ireland's shores (Carolan 2017b)—a Court of Appeals dismissed the objections. However, the court agreed that Apple "had noted no direct renewable energy connections or renewable energy projects" in the plans for the data center, nor had the company "clearly shown power to the data centre would be from 100 per cent renewable resources" (Carolan 2017a). In spite of this, it was determined by the courts that "the potential employment and regional development benefits of the centre outweighed potential adverse climate impacts" (Carolan 2017a). This admission that the climate impacts were

secondary to the whims of capital investment, a more widespread sentiment in Irish state planning, is predicted to put Ireland on a crash course with EU sustainability goals over the next several years. Varadkar and Apple CEO Tim Cook's close relationship in shirking collection on Apple's €13.1 billion owed back taxes in the country has been widely acknowledged. In November 2017, the Taoiseach's diplomatic meeting at Apple's headquarters in California—a geopolitics of state/corporate partnership—cast doubt on the project's future despite its court approval. Varadkar announced the new uncertainty, regretting that the appeals process was outside of Apple's control.

In December 2017, the objectors lodged a final appeal to the Supreme Court. The Athenry for Apple group expressed regret for continued dissent, at a local and national level (RTÉ News 2017). On May 10, 2018, after three years of negotiations and delays, Apple announced that it would no longer be proceeding with the project. This came two weeks after the Supreme Court allowed the principle objectors to continue their environmental appeals, which may have eventually landed Apple on another time-intensive crash course with the European Union (Wuerthele 2018). Despite this and other ongoing controversies about unpaid taxes, Apple and the Irish state seek to maintain a good relationship, and local members of the Athenry for Apple group press on, continuing to share stories and thoughts in their dedicated Facebook group. While the state adapts to ensure data centers continue to locate in the country, the people of Athenry and east County Galway are apparently left at square one, with no incoming capital to speak of, the woodland site tied up in planning debates happening across the country and boardrooms in California. From the community to state level, there has been deep embarrassment and anxiety about scaring off future investors. Cases of planning objection around the country refer to Athenry as a cautionary tale. Thus, in the town especially, unease around this loss of potential investment have crystallized into a hardened resentment toward the state and the objectors. Aspiration has turned to bitterness.

Social histories and climates of dissent and protest are encapsulated within what I mean by "climate" in the expanded sense throughout this chapter. In Athenry, and in the west of Ireland more generally, the governmental calculations of state and capital fail to account for what those in the town, and various friends and acquaintances elsewhere, referred to as a "culture of objection," "serial objectors," and "professional agitators." East Galway TD Sean Canney compared the case of Athenry to that of the Galway ring-road. Traffic in Galway is notoriously

congested, with ongoing issues of space and expansion for an otherwise quite small urban center. However, a ring-road proposal to ease congestion was delayed for years in the Irish courts. The project was eventually brought to the EU, who upheld objectors' environmental conservation concerns about the proposed route and put the project on hiatus. As a local Fine Gael councilor complained after the ruling, "The land is just growing briars, it's scrubland and good for nothing…We seem to have this attitude of object to everything and get nothing done" (qtd. in Melia 2013). The project was eventually approved, but was forced to navigate a complex and fickle planning process for final approval. Canney, among others, maintained that in the case of Apple in Athenry the objectors' use of the appeals process was more about the duration of deliberation than the substance of objections. However, in spite of local and state dismissal, Daly and Fitzpatrick's concerns reflect wider environmental discussions and movements within and outside of Ireland. As Robert Allen traces, there is a long history of contending the state's facilitating of polluting or extractive FDI (2004), and disputes against Apple's energy vacuum in Athenry fit this lineage. Even if Daly and Fitzpatrick's oppositional strategies appear detached from the community and its desires, such dissent is essential within any negotiation of potential futures. The state tried to govern these objections *out of existence*. There are great stakes here, especially in terms of environmental objections to the planning process. More research should be devoted to these movements in particular, as environmental activists turn up dead across the world at the hands of corporations and their repressive government (and non-government) cronies. In Ireland alone, take the case of Michael McCoy, a career environmentalist and planning objector who was found beaten to death in the woods in South Dublin, and there has been direct reference by certain agitators to Daly facing a similar fate (Gilbert 2017).

But as we can see in objection as much as in support like that of Athenry for Apple, culture, as much as climate and weather, reacts unpredictably to finance and technology. These socio-cultural-environmental elements on the ground are pointed to within the headline about Athenry alluded to earlier, that Apple was "stuck in mud in the fields of Athenry" (Paul 2016). "Fields of Athenry" is an Irish rebel folk song from the 1970s. The song is sung by a prisoner, being sent to a prison colony, for rebelling "against the famine and the crown"—putting this history of rebellion in spatial as well as well as temporal conversation with Athenry's appeals for the data center. Like such headlines, local residents demonstrate willingness to put current development in historical exchange with Athenry's cultural heritage. Keane contrasted his

family's longevity and heritage in the area with the objector Fitzpatrick's, who also lived adjacent to the site but was referred to as, with bemused sympathy, a NIMBY by other people with whom I spoke. While her claims were related to environmental conditions and a sense of intrusion, Keane felt as though a data center would be friendlier to the ecosystem than other proposed plans for the site, and Apple's promise to provide publicly accessible walking trails would help restore the woods after their logging. Resident concerns for local ecological conditions were thus factored into supporters' advocacy for the Apple plan, inverse to Daly and Fitzpatrick's objections. Such ecologically focused support recalls early discussions of Google's investment in data center infrastructure in Ireland, proposed by Irish weather writer Charlie Connelly:

> Maybe Ireland will now embrace its climate. Some have tried already, most notably the 19th-century writer William Bulfin from County Offaly, who described the Irish rain as 'a kind of damp poem. It is a soft, apologetic, modest kind of rain, as a rule; and even in its wildest moods it gives you the impression that it is treating you as well as it can under the circumstances.' But [Google's investment in data centers] is probably the first recorded case of anyone planning a move to Ireland because of the weather. (qtd. McDonald, 2012)

This embrace of the environment as a sphere of instrumentalization to attract transnational capital, and the thickness of capital and affect at these sites, demonstrates the material and ideological relations captured by the state and capital within projects like Athenry. Keane's family history in the area and his concern for the local environment, to him, seemed to strengthen his claim on the space and the desire to have Apple there. Keane's rooted attachment to Athenry, its environment, and surrounding region actually led to greater feeling about the necessity for transnational investment on the site.

The unrealized Apple data center is an example of where these entangled sovereignties, on-the-ground conditions, and cultural histories have represented the encoding of a populations' desires—as much as those of global capital—within an imagination around an aspirational project. In the form of a data center, the public medium of communicative and cultural labour (see Terranova 2000) is meant to be locked away in a mechanical shed, projecting its various forms of private information in coded messages sent throughout the world, and from which capital can only be extracted by those who understand its language. But these circulations are far

more elemental. In conversation with Paul's suggestion that Apple was "stuck in mud" in Athenry (2016), we cannot forget the force of *mud* itself as a conduit for communicative media, a profound cultural and agential force in Ireland, and the externalities of data centers as water-hungry machines requiring drainage basins, runoff considerations, and other implications for the local water table/supply. Hogan discusses the extensive water usage and resource politics of data centers in her study of a government data center in Utah (2015a). To the surprise of many, recent water shortages in Dublin attest to the urgency of data centers' drain on the water supply (Woods 2020). These emerging environmental politics pose major challenges to governance. As Elizabeth Povinelli asserts, "There is little doubt about the part geological and meteorological existents play in late liberalism" (2016, 126). The cultural history of "mud" suggested by the association of the west of Ireland with wet, rainy, boggy landscapes reflects this urgency at real and metaphorical levels.

Bogs make up around 5% of the Irish landscape, representing a significant ecosystem. However, they have also been treated as a resource for extraction. Bogs contain a resource reserve of peat, or "turf." The bogs have long been drained to be made useful for peat extraction and agriculture, which releases carbon into the atmosphere as the bogs dry and are industrially cut for turf. Large turf-cutting operations dot the Midlands, amongst the miles of agri-business operations producing dairy and other goods for domestic, European, and international markets, administered by the semi-state body Bord na Móna, who industrialized the Midlands with large-scale turf-cutting in the 1940s. These operations employ thousands of workers, and many towns are essentially Bord na Móna company towns, a less-familiar industrial formation in Ireland. As of 2020, 10% of Ireland's fuel inputs and over 3% of its total usage are still powered by these turf reserves. This resource, however, is dirty. It burns hot, and spews heavy residue into the atmosphere. This has direct implications within data centers' enormous energy use, as McLaughlin argues, because "electricity production in Ireland is still predominately from fossil fuels and the production of electricity results directly in the consumption of bog-lands as well as imported oil and gas" (2015, 192). In an effort to reduce carbon emissions, the state has already begun re-assigning state workers in these extractive industries to bog reclamation, and the state has committed to phasing out turf cutting and burning entirely, while advocating for a "just transition" for these industrial workers and their families.

However, such large-scale views of the bogs, while emphasizing the urgent political ecology of energy and particularly carbon extraction and burning, flatten the cultural and environmental histories of bogs and peoples' relations with them across Ireland. Turf, especially in the west of Ireland, is a traditional touchstone of rural life. Farmers and small landholders cut turf to dry and use as fuel for personal and community heating and small energy needs, and mid-level operations would sell this turf for commercial use in local shops and businesses. The smell of turf burning is a warming marker of seasonal chill, and a reminder of this unique "culture of energy," as Jaume Franquesa (2018) and others (Sheller 2014; Wilson, Carlson, and Szeman 2017) have discussed in terms of the cultural entanglements of energy politics.

Thus, while turf is in many ways a technology of urbanization in both its use in powering the country's energy grid and in terms of its role in industrializing the Midlands, it has a more complicated history and cultural politics. Mattern centers "mud" within the history of communicative media and urbanization in particular, arguing that its traditional uses to build walls, write messages, and generally mold urban landscapes demonstrate the infrastructural politics of this mucky resource (2017, 88). But this is not only particular to mud as a medium, but to the entanglement of geologic forces with cultural life, social ordering, and politics throughout history, which emerge in the discourses of the "smart city," "ubiquitous computing," and other attempts to optimize territory, life, and labour:

> Particularly in light of recent attempts to understand what kinds of intelligence are embodied in the world's emerging 'smart cities,' the comparatively 'dumb' histories of mud and mark-making demonstrate that calculation, coding, and 'embedded' technologies have long been integral to urban infrastructures. But there's more at stake than historiography. The public squares, city walls, building facades, urban archives, and sandy stores where earthen materials and writing intersect: these are the humble city sites where politics play out at myriad scales—where the entanglement of global and local political-economic forces enter people's lives through the material, the geological, and the aesthetic. Building and writing materials, extracted locally or sourced and distributed from afar, converge in our settlements and cities, where designers and laborers, often informed by internationally codified and inscribed protocols and standards, give them urban and architectural form. These same construction materials then become public media. (89-90)

The public imaginary pushed by the idea of "mud," the bogs of Ireland, harkens back to issues of pre-colonial slowness, of an archaic medium of cultural as much as geological processes that prevent development and innovation. The "smart" mandates represented by data centers are held up by the "mud" of existing histories and ways of life, even as congealed mud continues to power these infrastructures, and even though the modes of shared life stored within and circulated through such infrastructures make up the background of contemporary digital economies and forms of governance.

The industrial changes to boglands in Ireland come along with incentives to move to renewable energy sources for the Irish grid, already largely powered by wind farms that dot the rural landscape (about 16% at both input and consumption). This form of energy is often literally sat on boglands where turf would formerly have been harvested. For example, the Galway Wind Park operation on Moycullen Bog in Galway saw enormous environmental opposition and planning problems since 2012, due to An Bord Pleanála's initial refusal of the project on environmental grounds and ongoing local opposition because of its effects on inland fisheries and protected bog habitats. Despite these very material consequences, wind farms and other renewables are seen as more atmospheric, drawing the climatic movements of weather—notably, Ireland's notorious wind—into the country's energy assemblage, and thus the political economy of the business climate. Through wind's logics of green value, rather than spewing particle-heavy smoke into the atmosphere, shifting climatic patterns and affecting local and global environments, wind generates energy from atmospheric movements and technological assemblages (see Bresnihan and Brodie forthcoming).

These modes of modernizing the bogs reflect the historical toil required to make the bogs "productive." The bogs of Ireland have a fascinating colonial history, as the British had trouble colonizing these often-inaccessible areas, and it takes enormous work to make them productive in a modern sense. As the manager of a bog heritage park tells William Atkins, "The bogs have always been wild," associating the long history of pre-colonial un-inhabitability with Bord na Móna's initial establishment of turf-cutting operations in the Midlands as the "wild west" (Atkins 2020). But bogs also have remarkable storage capabilities for carbon, their ecologies offsetting climate impacts by their nature, as well as for organic material more generally. Famously, Irish poet Seamus Heaney's "bog bodies" cycle reflects on the cultural and historical resonances of the highly preserved bodies uncovered from bogs (1975). Derek Gladwin's

research has situated the bogs within the cultural and (post-)colonial histories of Ireland through literature since the late-1800s (2016). As Christine Cusick argues through what she calls poet Moya Cannon's "poetics of place," such cultural expressions blur "distinctions between language and land, and hence between natural and political change. Natural history is tied to colonial history; shores are formed and changed by the same erosive influences that silence and erase a language to form a colony" (2005, 71). Resonant with the erosive and turbulent waves of financialization that threaten Ireland in tandem with oncoming climate impacts, the future-facing "smartness" of green technologies through Irish boglands, also represented by data centers, can be contrasted with the much more complex, embedded, and "wild" histories contained within social and cultural relations to these landscapes.

Bord na Móna's concerted effort to "green" the bogs with renewable energies masks the transnational and neo-colonial forces of "climate finance" that are dictating these futures. The European Investment Bank (EIB), a self-styled "climate finance pioneer," has in Ireland earmarked investment in a diverse range of built environments and climate initiatives, representing Ireland's status as a strategic case and proving ground for various transnational green energy initiatives. Wind resources in particular are a central element of these, including an EIB and Bord na Móna collaboration on the Oweninny Wind Farm in Mayo in 2018 (European Investment Bank 2018). AWS has also invested in two wind farms, one in County Donegal and another in County Cork, after facing pressure from the public around the massive expansion of their operations in Ireland (Bresnihan and Brodie forthcoming). While excess will be sold back to the grid, Amazon will undoubtedly have privileged access to these new energy reserves. The future of human life depends on a transition to renewables, and rather than encoding them as public by taking common and un-enclosable climate circulations like wind (see Howe 2011), they are preemptively privatized and sold to tech corporations before new alternatives can be imagined.

Thus, while the state has spent time and energy on public awareness campaigns and invested in future infrastructure to prepare for the dissolution of industrial—as well as traditional—practices of fuel extraction and generation from the bogs, more efficient replacements are colonized by the interests and practices of US tech capital. While this is not to advocate for industrial turf extraction, or even for smaller-scale practices of turf-cutting (however much the traditional way of life it represents, not to mention the pleasure to the senses

it provides, may be forced by the wayside), I nonetheless want to point out the ways in which public awareness and state initiatives fundamentally privilege certain kinds of extraction over others in the current global climate, particularly those that can be articulated as more atmospheric and immaterial as opposed to "muddy," "smoggy," or "dirty." As Mezzadra and Neilson point out in a sustained analysis of exploitation (in addition to extraction) and nature, many have attempted to articulate this assemblage, and even Marx pointed to the primacy of "the soil and the worker" as "the original sources of all wealth" (qtd. 2019, 198), a statement that rings particularly true in traditionally agricultural (and colonially exploited) Ireland. However, as the frontiers of accumulation continually shift towards newer and more innovative fields of extraction—from the soil to the air, from mud to the cloud—we need to pay close attention to the discursive, as much as the material, shifts that go along with the roving crosshairs of the state and capital's radar (see Bresnihan and Brodie forthcoming).

What this cultural history of mud, energy, and the bogs can do for us is to emphasize the inseparability and entanglements of human society and the "natural" environment, as suggested by Neil Smith (1984) and described in Chapter 1. Hulme argues that even urgent constructs like anthropogenic climate change, which ultimately represents the human ordering of planetary history into observable and measurable circumstances, emphasize the division between human activity and more natural atmospheric patterns (2017). However, keeping in mind these discursive categorizations, we need to account for the entanglement of socio-cultural and environmental politics, both in sites on the ground, and in how these are instrumentalized for capital's extractive and exploitative operations. Renewable energy industries and "green" and "smart" tech, far from ensuring a cleaner and more efficient environment, are disproportionately funneled into the data centers popping up around Dublin and soon elsewhere in the country.

Recognizing that "climates" are co-constituted by structural forces as much as the everyday, as power and capital courses through the lived space of the contemporary built and natural environment, is crucial to understanding how the existent conditions and those created (and data generated) become sources of value extraction for capital. Climates arise from the same diverse array of on-the-ground factors—environments, culture, politics, bordering, and the like—as those which facilitate the extractive operations of FDI in Ireland.

Climate Extraction

The archaeological indulgences of the previous section, where I associate cultural histories of "mud" with the future of boglands in Ireland through an initial *newspaper headline*, may appear roughshod. However, I ultimately arrive at a crucial series of entanglements that demonstrate the intertwined pasts, presents, and futures of media and energy infrastructure in Ireland. These sorts of entanglements, while representing perhaps a "poetics of infrastructure" as suggested by Larkin in his analyses of such intertwining spatial and cultural politics (2013), are not only happening within culture and public discourses. They are also prevalent *tools* of association that the state and capital use to naturalize the flow of data and the presence of multinational extractive corporations in the country of Ireland. The "cloud" and its discourses tend towards the metaphorical and make wispy and "atmospheric" data circulations that are resolutely grounded in the cables, sheds, and server stacks of fiber optic networks. In addition, associations of data as the new gold or oil demonstrate the willingness of industry to associate old-school resource extraction with the new, de-materialized politics of the cloud. The SEAI's data centers report makes similar associations: "As the 'Connected Planet' becomes a reality, the need has arisen to securely store and forward the 'oxygen' on which this growth is based" (2017, 29). Atmospheric gases are continuously affected by ongoing emissions and the release of carbon from natural formations like bogs, and data and capital colonize the air. The naturalization by state forces of data as a source of value for extraction is then materialized in the territorial form of the data center through a variety of social, cultural, political, and environmental conditions.

Revealingly, the fact that SEAI continues the atmospheric association of "oxygen" with the "cloud" and its material infrastructures demonstrates a wider metaphorical and circulatory politics of data and capital. Newspapers, magazines, and corporate literature all echo the same dogma: Ireland's climate reduces the immense cost of cooling data centers. In a revealing article from the early days of the boom, *The Guardian* formulates the appeal in popular terms:

> 'It's not often that Irish weather is a cause for praise, but the temperate climate was very significant in choosing Ireland as a location for this data centre,' says Dan Costello, Google's global data centre operations officer. The group has managed to reduce the amount of energy it uses worldwide to cool down its data systems to just 12% of its energy bill. 'It's not quite as simple as just opening the windows, but it's pretty close.' (McDonald 2012)

The tying of climate to culture—in the form of national pride and praise—here echoes the return of certain essentialisms of Irish space (and weather) in the service of transnational capital. As the prior chapters have emphasized, the imaginary of the wild green frontier of Ireland has facilitated the operations of mostly US FDI for decades. Thus, this familiar tool of economic development is freely read through public, corporate, and state discourses:

> Ireland has been able to attract these world-famous corporations despite the depth of its financial and economic crisis, due to the lobbying work of the country's Industrial Development Authority; a highly educated, young, English-speaking workforce; and, crucially, the Republic's rock-bottom 12.5% corporation tax. And now the weather can be added to those factors. (McDonald 2012)

The climate here is positioned as a positive feature of Irish space to be extracted for profit, especially post-financial crisis, which takes shape in primarily public discourses. However, the determining factor seems to be the generous business and tax climates of the country, and the accompanying infrastructure from which to draw, and not the "natural" environment—however much these discourses pose the landscape of financialization (and austerity) as natural. This is a process that occurs elsewhere, particular in northern Europe. Johnson traces the variety of factors that align to pose Iceland as a "natural" home for data infrastructures (2019). Vonderau points out this convenient terminological convergence in Sweden's north, where Facebook built a data center in the small town of Luleå, allowing state authorities to extol northern Sweden's "climate for innovation" (2019, 698). However, this sort of innovation and "clouding," as Vonderau calls it, requires a particular business and regulatory environment as much as resources and weather. As previous chapters articulate in detail, Ireland's 12.5% corporation tax and a state happy to facilitate private infrastructure investment has profoundly transformative spatial consequences. These mechanisms have intensified in Ireland post-financial crisis in service of cash flows and global visibility through the country, as the state has been eager to dispel concerns around economic instability and rebuild an image of robust growth potential. But their implementation also means that companies often have free rein of the spatial and regulatory environment. This naturalizes the liberties taken with the climate, and the failure to provide believable environmental credentials to back up the greenwashing. As an *Irish Times* writer found out,

> 'To be honest, the line on the weather is a bit of spin,' says Jason O'Conaill, international partner with Infinity Data Centres in London and formerly data centre lead with Eircom.

‘The weather here is the same as most of northern Europe when it comes to computer

cooling, and from an engineering point of view, well Norway, Denmark or Amsterdam

would be the same really, so it's not really a strategic advantage.' (O'Dwyer 2015)

This was echoed to me at CIX by Sweeney, whom I visited during a heatwave (sunny Cork was a balmy 25 degrees Celsius). Sweeney testified that the cost savings of Ireland's cooler climate were so negligible as to not be a factor in how his company operated their data center.

Meteorological climate in the normative sense is, of course, a pressing concern for data centers. Microclimates are generated within data center sheds, as the heat from the continuous operation of server racks must be managed by efficient cooling, using enormous amounts of electricity and generating waste heat. This comes to the fore with recent proposals to re-purpose the excess heat from data centers for commercial purposes. Data center entrepreneur Brian McDonagh's involvement in a variety of high-profile cases in Ireland surrounding data centers has been the subject of much scrutiny,[8] particularly around his proposed €1 billion data center project on land originally zoned for data center usage in northern County Wicklow in 2008. McDonagh wants to sell his site and plans to a corporation like Apple, Microsoft, or his most recent target, Chinese telecoms giant Huawei. His plan is to filter excess heat from the data center through a heat pump to warm other local commercial endeavors, from greenhouses, to desalination, to a leisure center (including a biodome and indoor ski facility). This practice, to heat local homes and businesses with data center waste heat, is already in practice across the Nordic countries (see Velkova 2016). AWS has proposed heating homes in Tallaght, Dublin through what they are calling the Tallaght District Heating Scheme (Moore 2020). While none of the endeavors described by McDonagh have yet been built, he says that they will follow the development of his data center plan, setting in place a local growth infrastructure. What is remarkable about McDonagh's proposal, as pitched to me, is that he insists he has no interest in what data centers do. He merely saw them as self-generating community heaters. Speaking over a coffee at a hotel in Newtownmountkennedy, County Wicklow, he talked to me about tomato-growing greenhouses, and mimicked holding a tomato, asking me to imagine: "These tomatoes were grown with energy *reaped from the cloud*." His solutions provider, Ecologic Data Centres, would harvest energy from data centers' excess heat to warm other commercial enterprises, using

---

[8] He was a tertiary objector on one round of appeals against Apple in Athenry, but his involvement was dismissed due to conflict of interest—he had apparently tried to sell his site to Apple before they chose Athenry.

data centers—and the continual operation of data-based commercial systems—as a *resource* for energy extraction. This literal climate extraction follows a greenwashing logic that the private sector will provide climate solutions when the state refuses—McDonagh insisted he was fighting with both the state and the oil companies over his ideas—naturalizing data-driven value-production as well as putting forth the private sector as the primary agent of environmental care, seeing innovation as the only way forward.

These more literal discussions of climate in relation to cooling—in tandem with the "business climate" of Ireland more broadly—form the basis of the coalescing logics that I refer to as "climate extraction," or the coordination of extractive modes of production across financial networks, supply chains, cultural conditions, and environments. In discussing the divergences between "extraction" and "extractivism," Mezzadra and Neilson distinguish that

> [extractivism] provides a means of identifying the wider characteristics of economic, political, and social formations that are predicated upon an expansion and dominance of extractive activities. [Extraction] describes historical and contemporary processes of forced removal of raw materials and life forms from the earth's surface, depths, and biosphere. (2017, 185)

Their argument, however, is that far from representing a new paradigm, the current financial and logistical dimensions of the global economy make it possible to "locate extractive dimensions in operations of capital that are seemingly remote from these domains [mines, plantations, etc.]" (186). The raw data of consumer activity circulating through data infrastructures, through smart technologies, bitcoins, and other atmospheric modes of consumer and enterprise computing, becomes a crucial site of extraction, as many (Gago and Mezzadra 2017; Mezzadra and Neilson 2017; Rossiter 2016; Srnicek 2016) have begun to understand, where financial and logistical flows of value circulate through a mechanized array of consumer and business devices, which data centers necessarily support. As Mezzadra and Neilson argue,

> The mapping of this frontier cannot be restricted to sites of literal extraction. Over recent years there has been a marked dissemination of the language of mining into other spheres of human activity…In these instances [bitcoin mining and Chinese gold farming], we can discern the expanded sense of extraction…involving not only the appropriation and expropriation of natural resources but also, and in ever more pronounced ways, cutting through patterns of human cooperation and even trespassing on the very sinews of the

human body. The expanding panoply of practices in data mining is another register of this pervasive penetration of extraction across different spheres of human and economic activity. (2019, 144)

Resonant with discussions of cultural and creative labour in Chapters 2 and 3, Mezzadra and Neilson argue that data-driven commerce and financialization—via biocapital—are driven by the extraction of "skills and labor" from users and workers within these data assemblages and their modes of extraction, collection, storage, and accumulation (145). Data centers thus operate on several different levels of extraction, representing territorial bases of extractivism, as the extractive economies of energy (fossil fuels), data (user info, "Bitcoin mining"), and finance overlap in one particular place.

Many besides Mezzadra and Neilson have recognized the conceptual overlap between "data mining" and the resource metaphors that characterize the data economy (Gago and Mezzadra 2017; Srnicek 2016), whether it is seen as new gold, currency, oil, or oxygen. However, such discussions can often de-materialize by making metaphorical literal extractive activities. What Rossiter talks about as "logistical media" describes extractive activities articulated through and across the infrastructures as well as the users of contemporary digital technology (2016). Jennifer Gabrys, in her study of atmospheric computation, argues that the planetary imaginations of big tech companies, such as the IBM campaign for a "Smarter Planet," posits an "increasing instrumentation of the planet" (2016, 7). This logic is extractive in a way that has not been as widely theorized. That is, it is extractive in the sense that the "environment" and its "natural resources" are increasingly used in tandem with technological infrastructure in the production of more efficient circulation, following the idea that contemporary value extraction is primarily focused on this "noisy sphere" of circulation (Marx 1992, 279), as suggested in earlier chapters as the motor of contemporary capitalism. To reiterate, as Mezzadra and Neilson argue, circulation and the interlocking logics and operations of "extraction, logistics, and finance" form the basis of how the state and capital partner to ensure the ongoing expansion of capitalist activities (2019). The "signal and noise" of communication in informational capitalism (Larkin 2008), movement and turbulence, is as much a place for extraction as is the smooth transmission of people, goods, and data. As Rossiter notes, "the capture of value through the coordination of movement" (2016, 173) central to technologized supply chains must necessarily render global turbulence at economic and environmental scales legible for extractive

activity. Data centers, as the territorial bases of digital economies, operate as transnational conduits for *flows of extractive capital*—whether tax evading finance, the mining of user data, the shipment and burning of fossil fuels,[9] the packaging and shipping of culture, the opportunistic use of climate conditions—which takes the place of state investment in local politics and prosperity, in addition to contributing significantly to pollution and other environmental disruptions.

But to expand on what I mean by "climate extraction," these operations require vast networks of cooperation, from state and private infrastructural systems, to tax and planning policy, to political, social, and cultural circumstances, to environmental resources and conditions. Studies of the atmospheric circulation of data and capital demonstrate that climates are not only hot and cold, wind and rain. As Hulme argues, climates represent entangled social, cultural, and political as much as "naturally occurring" meteorological phenomena (2017). This is especially true in conceptualizations of the "Anthropocene" and "climate change" which center European civilizational agency within planetary and geological processes (see Moore 2017; Yusoff 2018). Similar to the universalizing images promoted by the state and capital in imagining the future, the Anthropocene glosses over historical and existing processes of colonialism, capitalism, and imperialism as an agential climatic force, as well as the resistant and unruly "worlds" that act within such planetary circulations. Jason W. Moore amends the concept of the Anthropocene to what he calls the "capitaloscene," centering the role of capital and industrialization within the geological and meteorological changes reflected within climate change and environmental collapse (2017). Sharae Deckard, building on Moore, argues that capital organizes nature across Ireland (2016). Data centers, then, as continuations and more automated processes of offshoring, have become technologies of *managing* nature, both in the ways that they instrumentalize and generate meteorological climates as well as in how they are positioned as providers of a "green" future of more efficient and automated forms of value production outside of carbon-intensive production. What would have once been thought of as the "natural environment" is not only seen as a site of extraction but rather a site of instrumentation, of circulation, at the same time that dominant discourses produce this same environment as something under threat, to be cared for by green market initiatives and NGOs, and as "precious" as ever before. Thus, the mechanics of

---

[9] Public agitation towards imperial routes of natural resource extraction has risen in Ireland. US-based academic Aviva Chomsky recently criticized ESB for using coal from open pit mines in Colombia (O'Sullivan, 2019).

extraction colonize the entanglements of technological systems, public infrastructures, and natural environments, all loosely grouped together within "business climates" through which they operate and instrumentalize existing socio-cultural environments.

Business Climates, Crisis, and Logistical Governance

There is an array of conditions that creates a particular "climate," the seemingly natural assemblage of elements that makes somewhere a good place to do business, or not. Climates are both affective and representable, relational and fixed in places. On an Ireland-specific page, Zayo, a digital infrastructure company, extol the virtues, familiar from earlier examples, of hosting data-driven enterprises in Ireland, calling Dublin "the world's data center," claiming geopolitical proximity, partnerships, and stability; a robust and decentralized start-up and entrepreneurial culture; a pro-business environment; a "burgeoning cloud ecosystem"; a "fibre motorway" around the city; and finally "a natural climate that helps with the cooling of data centres and little threat of natural disasters, Dublin's natural economy supports this pro-business system that has been put in place"; all within the same description (Zayo 2017). The frequency and pairing of organic, ecological, and atmospheric metaphors with economic and infrastructural conditions is revealing, as though they all flow through Dublin like the River Liffey. As we can see, these types of materials and advertisements, which circulate only amongst a privileged class of investors, entrepreneurs, and policymakers, smooth over the spatial contingencies that already strengthen the case for spatial and economic development. As evidenced by the title "the world's data center" itself, Ireland—and Dublin in particular—are seen as mere generators of profit for the world-making enterprises of finance, tech, and other corporate interests.

To emphasize the widespread association of climate, culture, and capital in discussions of Ireland's "business climate," let us refer to a picture painted by a writer describing the startup scene in the Dublin Docklands, where "fintech" companies (think digital platforms for financial activity, both consumer and business) "vie for some of that Irish luck":

It's happy hour, and young financiers from Citi and Deutsche Bank and State Street are loosening their ties and mingling with techies from Google and LinkedIn and Facebook. Some in the crowd talk passionately about startup ideas they've always wanted to pursue; others cheerfully gripe in myriad accents about the blustery weather in their dynamic, cosmopolitan city.

> But this isn't San Francisco; this is Dublin, one of the world's most surprising hubs for
> financial technology (or fintech, to use the insiders' lingo). Here, in the handsome,
> historic capital facing the Irish Sea, established multinational companies and scrappy
> startups alike are raking in investment dollars, bringing a whole new kind of green to the
> Emerald Isle. (Watkins, 2017)

The writer integrates weather with lingo; the Irish Sea with scrappy startups; blustery winds with passionate entrepreneurialism. As Chapter 2 argues, tech and finance culture have since the early stages of the Celtic Tiger coexisted in the Docklands and around the IFSC. Today, data centers are crucial to how these industries operate, a channel between Dublin and the rest of the world.

We cannot separate these discourses from the cultural and "creative" economies developed in Ireland, which offer a self-orientalized version of an idyllic rural, colonial, homogeneous, "wild" past within (and often starkly in contrast to) the heterogeneous and relatively wealthy space of contemporary Ireland. Like the industry write-up above, the IDA and Enterprise Ireland's Irish Advantage Campaign advertises the "luck of the Irish," which builds on this stereotype to brand the Irish workforce as "innovative, flexible, and trusted," hard-working and enthusiastically ready for business (EnterpriseIrelandTV 2017). Global capital mobilizes these essentialisms in similar ways. For example, the environmental finance arm of the EIB activates cultural heritage for its activities in Ireland. During austerity, Coillte was pressured to privatize forestry assets. On an Ireland-specific page, EIB describes the cultural heritage of "romantic" (and modernist) Ireland, arguing that high finance solutions to creating more forested territory will inspire the next generation of writers, poets, and musicians (Tanklar 2017). Similar to "wild Irish" stereotypes the Wild Atlantic Way tourist campaign, an array of state and private actors capitalize on the Irish landscape, culture, weather, and climate conditions, extracting value from existing infrastructure, fixed capital, technical resources, and labour as well as the feelings, affects, and needs of those in a given place. As Isabelle Stengers argues, we should follow Guattari in being "hypersensitive to the danger of reterritorialization in an imaginary past" (2017, 383). This is true whether we are talking about how capital colonizes culture and heritage, or within outright nativism.

As studies of place-branding have demonstrated, "business climates" are promotional atmospheres generated by and about a particular place and are often branded as such in response

to economic and political crises to draw in capital (see Greenberg 2004). Post-financial crisis, as this and prior chapters have argued, the state has promoted Ireland as a place to visit, make media, consume, and do business, intensifying longer histories of drawing in visitors and FDI. While "soft power" (Nye 1990), which suggests that nation-states' power can be exerted through cultural diplomacy and long-term building of relationships across civil society and the private sector, is effective in describing how agencies such as Enterprise Ireland and the IDA promote the country, the concept takes on a certain immateriality if used without qualification. Certainly, such state "branding" is effective, but also difficult to measure. Thrift has discussed the affective "atmospheres" of contemporary life, discussed above through Monica Degen, Clare Melhuish, and Gillian Rose's studies of digital architectural renderings of future spaces (2017), as central to understanding how capital cultivates space for consumption (Thrift 2008). But as Miriam Greenberg's study of New York's re-branding through "I Love New York" following a series of crises leading into the 1990s (2004), this "event-making" out of crisis is a primary tool of liberal governance, which uses the eventful relations within the public sphere to undercut and normalize the "crisis ordinary" of (particularly precarious) life under late capitalism (Berlant 2011; Povinelli 2011). Lauren Berlant has theorized what she calls "crisis ordinariness" arising out of conditions of austerity and lack, and the ideas of these felt atmospheres of capital and affect that solidify into an "environment," in terms of the temporality and spatiality of the "event" and its governance (2011). The 2007-2008 financial crisis in Ireland, rather than changing the country's capitalist landscape, solidified its strategies and intensified the hold of financialization across various and differential environments. Here, the pro-business climate of the "crisis ordinary" masks the continued eventfulness of global capital and its circulation through Irish space.

As Chapters 1 and 2 argue, the particularly turbulent fall in the supposedly natural global market in 2007-2008 shifted blame away from the real causes and onto individuals, populations, and already-struggling places, and their exploitation and suffering is designed to appear as natural, with politics necessarily articulated through these relations and conditions of governance, whether imposed by the state, supranational regulators, or transnational capital. Within this environment, in Athenry, an atmosphere of hope transformed into one of bitterness. However, such atmospheres also engender political responses at larger scales. For example, part of the crisis response, as imposed by the troika and its debt conditions, was the enforced privatization of public resources. The state privatized water and established a semi-state

commercial utility called Irish Water in 2015 (see Bresnihan 2016), which was fought off ardently by the populace through a series of lively protests and old-school civil disobedience against proposed water charges, during which many households in the country simply refused the installation of water meters. Coillte, the semi-state forestry company which transferred their land to Apple in Athenry, was nearly compelled to privatize its forestry assets. While not fully enforced, Coillte continues to serve doubly as a resource organization and an asset manager: on a phone call with a Coillte representative, I was told that the company wants to sell more of its sites for data centers, even though it recently sold its telecommunications wing to multinational InfraVia Capital Partners. While this might appear like two unrelated areas—forestry and communications—these shelter under the same umbrella as the Department of Communications, Climate Action, and the Environment. The management and protection of natural resources becomes asset management. They both come into strategic cooperation as much conflicting kinds of interests in the basic governance of how infrastructural systems operate and are developed, from the regulation of antennae to the management of natural resources.[10]

But climate finance initiatives represent even more insidious privatizations of not only traditionally public, but also *common* resources. This extends beyond metaphors, the privatization of resources, the production of more effective business environments, and the facilitation of extractive capital: it extends into the very financialization of *air* itself. Melinda Cooper has theorized the financialization of climate through turbulence by mechanisms like climate finance and the solutions of the financial sector fixing climate change (2010). The ungovernable spaces of the "commons," long a site of valorization, become sites of future resource and energy conflict (170). As Cooper continues,

> what the market in derivatives extracts from the noise and colour of the world are its
> event-making relations. The turbulence engendered by connectedness. Turbulence is the
> event emerging from an irresolvable relation between two or more 'flows' that are
> themselves relations. (180)

The "weather" that constitutes such unmanageable turbulence, in the sights of climate finance, resonates with my overall approach to the unpredictable and wild movements which disrupt the projects of state and capital. The "noise and colour" of financial (and logistical) circulation—and

---

[10] Lisa Parks has written on the environmental and visibility politics of "antenna trees," the fake trees made out of telecommunications towers in forested areas (2009).

perhaps the "wilder" movements surfacing through submerged histories forgotten by the state—become sites of extraction, demonstrating the ways in which it is *circulation itself* which produces value for extraction under contemporary capitalist regimes. While Cooper articulates the political economy of such relations, Derek McCormack, in his studies of what he calls "atmospheric envelopment," stresses the importance of atmospheres as ways to "link the affective with the meteorological" at a "range of scales and over various time horizons," as

> The significance of meteorological variations, processes, and events in this atmosphere is being ever more scrutinized as their origin is denatured, and their disruptive effects become part of the turbulent, emergent urgency of the affective life of contemporary political ecologies. (2018, 20-21)

He draws on Tim Ingold's notion of "weather-worlds" to tease out this climate/affect relation, which is especially crucial due to the fact that "the infrastructures upon which forms of life depend are arguably becoming more atmospheric" (McCormack 2018, 22), referring especially to the apparently immaterial infrastructures of computing.

The spatialization and temporalization of "atmosphere" as generalized but felt—perhaps in an "enveloped" or even "enclaved" sense—within a given territorial formation thus points out the sometimes troubling ahistoricism and universalism of phenomenological approaches to capital and affect, as suggested by Degen, Melhuish, and Rose (2017). Branding and business interests certainly shape atmospheres; however, these are experienced and enacted differentially, and should never be taken for granted. The financial crisis in Ireland was certainly one of affect as much as finance (see Linehan and Crowley 2013), and ongoing crises of housing, climate, and other environmental (both built and natural) concerns are experienced similarly. However, speculative new materialist approaches to objects, matter, and atmospheres often flatten the uneven and non-eventful violences of the "crisis ordinary" lived by both those subject to force and oppression as much as by those who, however unknowingly, contribute to these ongoing structures. By remaining focused on the cultural lines-of-flight from global capital, atmospheric approaches like McCormack's may perform analysis through the same speculative logics that finance and its futurities capitalize upon by maneuvering within the limited space of the "atmospheric." The meteorological as much as geological elements of life under late capitalism, the elemental aspects of climate and territory, are all necessary to understand how finance and data become tied up in elemental movements beyond how they are experienced.

Thus, the affective dimensions of "atmospheres" tend to de-materialize the production of certain conditions, especially in terms of what I call a "business climate," which is materialized through various networks of interdependence (and dependence) as well as through local political, social, and cultural conditions. As Vonderau describes in the context of Facebook's data center in Luleå, Sweden, through David Harvey's articulation of the importance of particular nation-state "business climates" within the transnational and regional competition of so-called uneven development and its networks of interdependence, "What materialises in these 'national' geographies of the cloud…is the problematic role of the state" (Vonderau 2019, 709). While civil society in Luleå played an important part in the development of Facebook's data center, the role of the state in the cultivation of particular environmental conditions for extraction emphasizes the material role that governance continues to play, especially through place-branding, which visualize and imagine certain territories for extraction and in doing so erase or flatten the complexities of on-the-ground politics, labour, and environments.

This is true of climate finance as well as the "cloud" and the atmospheric computing environments which shape spatial and energy futures across the world. Povinelli points out the real and metaphorical play between fog and smog through contemporary and historical extractive practices (2016, 126), referring to the externalities of traditional extractive industries, like mining, which are forced, in the context from which she is writing, upon indigenous communities in Australia due to lack of investment from the state (2016, 166). Fog from local atmospheric conditions shifts seamlessly to toxic smog both in these locations and elsewhere, as pollutants and emissions drift across land and sea. These stormy and toxic environmental externalities then enter into policy and governing discourses as "part of the emergent state and international security order" (Povinelli 2016, 126). Once mixed with the runoffs of extractive capital, these atmospheric conditions come to react unpredictably—or perhaps, predictably in friction—with new contexts, bodies, and governing regimes, as Solveig Suess argues in terms of the sandstorms which disrupt logistical circulation along the PRC's "New Silk Road" (2018). But, as Povinelli argues, these sorts of atmospheric and elemental circulations are themselves a physical and cultural runoff of colonialism and neo-imperialism:

> Fog was becoming smog, a term Hadej Voeux coined in 1905 for the sulfur dioxide
> clouds covering European manufacturing cities, clouds responsible for the great smog of

London in 1952 that caused about twelve thousand deaths. The skies over Europe are

now often clear; the smog has moved elsewhere. (2016, 136)

Similar to the export of risk to peripheries that Cooper argues was safely operationalized through neoliberal globalization (2010), real environmental costs—and turbulence—are experienced unevenly across varied geographies of the earth's atmosphere. Climate change is seen as a monolithic planetary force, rather than as a differentially experienced (and valued) set of global circumstances, felt and existing differently across the world. As Martín Arboleda argues,

The very idea of the 'global' as a proverbial blue marble demarcated and measured

through grids and coordinates is being gradually superseded by that of the 'planetary,' in

which the earth reemerges as an unfamiliar space riddled with eerie, destructive, and

menacing forces. (2020, 15)

If the planetary suggests that environmental turbulence is non-human and unmanageable, we must necessarily adjust conceptual tools to account for the obvious co-existence of global capital and planetary circulation, especially in the sense that we can often trace the source of the "externalities" associated with environmental degradation. Representations of fog and smog, culturally or politically, visually or metaphorically, contribute to these de-materialized capitalist myths of atmosphere and natural relations of ecologies and capital. As Povinelli points out when discussing digital projects acting in response to government abandonment (2016, 164-165), even though the idea of the cloud as green and immaterial is fundamentally occlusive, this homogeneous metaphor brushes over the more sinister meanings of clouds as physical and cultural harbingers of bad weather and nuclear explosions. The actual cloud is foggy; its externalities smoggy. The state cannot expect capital to offset these externalities, as they try to control public narratives and visibilities while their operations exist within the clear and ongoing lineage of extractive transnational operations.

But how, then, can we reconcile the affective and experiential dimensions of our analysis in Chapter 2 with that of digital design logics and politics of data centers? One cannot discount the political feeling evinced by data centers, big tech, and the creative industries, especially in a place like Athenry, where affective politics were directly entangled with capital in a context of (real or imagined) state abandonment. The atmospheres of the "crisis ordinary" and its place-branding are affective, but, as this chapter argues, in Ireland, discourses around "climates" are perhaps better suited to reflect the intersection of aspirational and material spaces that are

expressed, and the apparently immaterial externalities which represent what Berlant calls the ongoing "costs of liberal freedom" (2016, 400) exported elsewhere. Atmospheres are felt, but may remain immaterial and universalized in how they articulate experience; climates, on the other hand, are observable, measurable, differential, and able to be instrumentalized across a sedimented array of processes (see Hulme 2017). Such processes also, thus, account for the dissenting or "wild" circulations within a given climate, weather conditions that move against the predictable and harnessed patterns of known and accepted systems. The controversial 1970s leftist group the Weather Underground have usefully used a similar meteorological association, via Bob Dylan: "You don't need a weatherman to know which way the wind blows," suggesting that certain actions and reactions simply *cannot* be encapsulated and captured by corporate and state forms of vision and control, and must be made actionable and reacted to, based on constantly fluctuating conditions and movements.[11]

However, as the case of Apple in Athenry can show us, these unexpected movements are not always resistant. A vast array of interests, conditions, policies, cultural histories, and ecologies present in post-crisis have generated a climate from which companies are able to extract value. Whether the discursive/literal heralding of the natural climate as a source of cooling; the cultural branding of the business environment; fiber optic cables to use information; or the activation of policy mechanisms to optimize value generation; the country has not only become increasingly dependent on extractive FDI but largely defined by it on a geopolitical level. This entangled political ecology has consequences far beyond branding and spatial development. As political theorist William Connolly argues,

> Today, the question becomes how to renegotiate persistent tensions between freedom and belonging during an era when fateful intersections between the social organization of life and planetary processes of climate, ocean currents, tectonic plates, glacier flows, and species evolution with powers of their own have once again become so palpable. (2017, 19)

Our ways of doing and understanding politics must fundamentally account for the differential modes of "freedom and belonging" as experienced by those places which face turbulence in ways that are not just eventful, but which *endure* (Povinelli 2011), even if such politics resist

---

[11] Hito Steyerl, in *Liquidity Inc.* (2014), similarly associates the liquidity of contemporary circulatory capitalism and unpredictable movements, giving ironic weather forecasts as "the weather underground."

expectations. The choppy waves of global finance and oceanic circuits of trade, information, and energy re-organize and re-distribute violence and instability across all forms of life and work, at the same time that a "tsunami of data" threatens to flood the world with the unmitigated growth of media infrastructures and their energy requirements (Climate Home News 2017). These are emergent sites of politics, where the state and capital are already gathering forces. Turbulence can never be *fully* managed, and this management, both by governance and corporations, is designed to protect the interests of capital in the face of existing and oncoming structural instability.

We are of course talking about different things when we discuss data centers using a given climate—tax, atmospheric, or otherwise—to discursive and practical advantage and the increasingly abstracted worlds of financial markets. Nonetheless, data centers are part of wider industrial and geo-economic shifts and sovereign disputes. All of these factors make them strategic nodes for both capital and its discontents, and sites of securitization and conflict. Clemens Apprich and Ned Rossiter's identifying of state anxiety around terror and disruption at data infrastructures is generative here, especially in terms of the nexus of military and environmental security as it converges in these "critical infrastructures" (2016, 277). Green development is a firmly entrenched strategy of capitalist valorization, especially through how it utilizes particular spaces for development *because of* given climates or weather patterns. This is a direct financialization and logistical management of climate, as projects like data centers capitalize on "cool climates" while industry execs admit that this is mere corporate spin to take advantage of friendly tax climates, an environmental twist on a geopolitical issue. Data sovereignty and the increasing instrumentation of the planet have global consequences, but we can find within particular localities of friction and struggle the conditions through which these projects are either strengthened or disrupted. But just as "Infrastructure makes worlds," so "Logistics governs them" (Rossiter 2016, 5), as the private administration of goods, data, and people comes to operate this peculiar strand of non-democratic politics, presenting the new local and transnational frontiers of struggle in the age of circulatory capital.

But, it remains true that the climate, the planetary circulation of air, gases, weather, and water, is fundamentally ungovernable, necessarily tied up within transnational geo-political and economic negotiations and regulations, fought for bitterly on the ground by environmental activists against agents of state and corporate violence, but also turbulent in ways that evade

harnessing and enclosure. As much as the natural climate becomes a source for speculation and control, as it always has been, its current status as a site of *future* conflict remains an abstraction. Just as local residents in Athenry feared current dissent would dissuade future investment, as though its flows are as fickle as water, the future is not already here, even if in construction, as the state and their corporate partners try to project. In her essay "Infrastructures for Troubling Times," Berlant argues that "institutional failure leading to infrastructural collapse, from bridges to systems to fantasy…leads to a dynamic way to disturb the old logics, or analogics, that have institutionalized images of shared life" (2016, 403). Thus, political and cultural imaginaries and the common sense logics of public and private in the case of the peculiar and intensive infrastructures of data centers (and similar data infrastructures) perhaps need a new set of conceptual tools, or they risk succumbing to "regulatory hangover" (Holt & Vonderau, 2015) and a return to institutions that are geared irreversibly towards perpetuating the system they would be tasked with regulating. One can see these responses take shape in widespread support for data centers, or consent for their role in shaping our futures, as somehow "green" versions of existing extractive activities. Global development discourses, especially surrounding Ireland, seem to more and more place real and cultural capital on the "climate" and its extremes (as well as its everydayness).[12] Actual physical infrastructure is both highly geopolitical and physically cooled by redirected air and water circulation (whether through the space itself or by its methods of electrical generation). The logistical operation of data infrastructure within a wispy, vaporous cloud pushes a kind of sovereignty that keeps data (and its capital architecture) un-touchable by alternative political futures, by its strategic mobilization of the commons.

Conclusion: Weather Patterns

As this chapter illustrates, in tandem with Chapters 2 and 3, financialized industrial modes of flexibility, optimization, efficiency, and automation dovetail with property development logics of media urbanism, the productive rationalities of media production, and the logistical technologies of data centers. In each case, the state plays a crucial role in promoting and facilitating the various ways in which these are implemented and allowed to function across the space of

---

[12] Whether in public discussions around Irish workers in Dubai and Abu Dhabi relating to the heat (Kenny 2017), or to the arguments that the wars in the Middle East are resource wars generated by climate change (Bigger and Neimark 2017).

contemporary, post-crisis Ireland. In data centers, we see the ideal location within which the people—the political subjects populating the country, who are diversely in support of, opposition to, or unaware of these areas of the economy—can be nearly dispensed with entirely, and a self-perpetuating technology of accumulation appears to be operable. However, as is true with each of the other cases, the actual conditions within which people, communities, and subjects relate to the state, capital, and the environment are far messier, far more unruly, than the world-eating mechanisms big tech would want. They respond to turbulence in their own way, in unpredictable ways. Whether local communities living and expressing themselves in tension with global corporate strategies, lone objectors standing up to the state and global capital, data center developers accidentally providing too much information, or cheeky security guards briefly lapsing in their role as protector of these sheds of information, data centers, their social and managerial realities, their physical footprints always collide and produce unpredictable encounters, outcomes, and relations.

The global data center landscape is messy, and this chapter presents more of a scattershot argument about its diverse implications and operations through one country than a silver bullet. Such is the nature of supply chain capitalism, and also collecting research on a constantly expanding and innovating set of industrial conditions. However, I hope that we can at least see some of the methods by which transnational capital is naturalized as an atmospheric form of circulation, as well as an agent of environmental care, which make data centers crucial sites at which this imbrication of data and finance occurs. This is achieved by extracting *for* and *from* data circulation through a built and "natural" environment already coded with colonial residues and economic development logics of hyperbolically green wildness and rurality ripe for cultural, touristic, industrial, and financial exploitation, all at the same time. The infrastructural and industrial ruins of former periods transition into new modes of productivity, with as-yet-unseen consequences once these private infrastructures come to decay, and society's speculative gambles with transnational capital as purveyors of care lead to new asset bubbles, and new bursts. New crises, turbulences, and regulatory changes leave places like Ireland, intricately tied into interdependence by an FDI-driven economy, largely precarious. For instance, the writing may be on the wall as the EU and other supranational regulators begin to crack down on tech companies' tax avoidance and what are seen as unfair tax advantages in countries like Ireland.[13]

---

[13] As footnoted above, Apple and Ireland might actually win this battle and remain tax evading partners.

What, then, will happen to these buildings once they become redundant or obsolete? An AWS data center in Dublin, the size of three football fields and employing a mere thirty permanent workers (Judge 2017), points to the vast physical emptiness of these corporate infrastructures, even as they are loaded with significance, making workers redundant, data distribution cleaner and faster, and the extraction of value from data (and the "natural" environment) more efficient. While the servers and computing stacks within a data center are under near-constant renewal, with technologies only expected to last for a few years at a time (Ward and Carcone 2015), the buildings themselves are subject to their own turnover, repair, decay, and disappearance. Observing the rate of obsolescence of digital media infrastructure, and a changing regulatory landscape, when will these data centers need to be updated, razed, or, perhaps more crucially, totally replaced by newer forms of data distribution and value extraction?[14] Most importantly for Ireland, and those gambling on the future social and environmental care offered by tech companies and their private infrastructure, what will happen when this bubble, like the property market before it, also bursts?

As this study of Ireland's climate and advanced extractive processes can tell us, in conversation with local frictions, political climate can change, and is always changing, based on currents and patterns happening above, on, and below the ground. The conditions that transnational capital encounters in Ireland are actually not nearly as fixed as the state promotes. There are always potentially different weather patterns to follow, and rain and wind can always clear at a moment's notice. But it is a matter of changing political behaviors and beliefs that will ensure that these climatic conditions are or become stable and represent a healthy environment for people to live and build collective power in. But such changes must also come with a recognition that a particular climate is only one amongst many, which must co-exist with others to ensure a healthy and balanced system. Interconnectedness at a variety of scales needs to be constantly in our minds, especially in sight of increasing global and planetary turbulence. If one climate remains geared towards extraction, then others are not safe from the externalities of these activities. As I argue through Povinelli above, fog becomes smog in the externalities of the cloud, and industrial runoff and toxicity is still felt most violently among the marginalized and in the Global South. Politics in Ireland must perform with an understanding of the country's place

---

[14] Hogan, for example, has researched how DNA storage may be the new frontier of data storage for tech, demonstrating further entanglements with nature (2018).

as a perpetrator within global systems of inequality. The country's overall climate is one climate among many, however affected by the extractive industries and FDI companies that have become infrastructural to how the state and its economy function. Nonetheless, activities on and above Irish soil contribute to an interconnected global (and planetary) system that implicates everyone. Understanding how climate is both anthropogenic and not at the same time, human and non-human, controlled and uncontrollable, tamed and wild, in the sense of the constant entanglements of these domains of activity, allows us to see the simultaneous and multiple scales at which we must focus our conceptual and political energies. The fact is that the very sphere of the climate that organizations—whether the state or capital—are attempting to condition, manage, and control tells us much of what we need to know about the stakes of the naturalization of global circulatory systems. There is nothing natural about the machinations of transnational capital, but these operations occur within planetary systems nonetheless, as much as across borders and global contexts. Thus, there is always turbulence and disruptive movements when capital hits the ground and tries to operate; planetary systems continue to thwart attempts and control and management. This should encourage us to deploy our politics towards disrupting global systems—and their imagined futures—and protecting planetary ones at all costs, even if the planetary seems increasingly turbulent and frightening. Stability should be no excuse for complacency, as we know how quickly the tides can turn, and the planet thwarts such inaction. An alternative politics of climate is urgent, and the state and capital are already ahead of the curve, focused intently as they are on controlling this sphere of action. The Conclusion will offer a final reflection on how these "wild" experiences which could not make the pages of this thesis present places for political mobilization beyond the seemingly inescapable logics of finance, logistics, and their governance.

Conclusion: Trespassing towards Calmer Seas

> This is why the future has lost its zest and people have lost all trust in it: the future no longer appears as a choice or a collective conscious action, but it is a kind of unavoidable catastrophe that we cannot oppose in any way.
>
> Franco "Bifo" Berardi, *After the Future*

> The bogs have always been wild.

> What we've done is let the water back in…You just let nature take it back.
>
> Ray Stapleton, manager of Lullymore Heritage and Discovery Park[1]

Let us conclude by returning to the central metaphor of *tides* from the opening page of the introduction. As the high waters of finance capital receded, years of austerity left the salt to harden across the landscape, revealing the ruined structures that had been immersed in the tide, the social formations laid bare by recession, and the bitterness and affective politics of austerity. Young populations fled; cultural and public funding was cut; the commodification of culture and landscape intensified; labour became more precarious; inequality grew; and all the while, global capital continued to function in this landscape, even as many suffered within earshot of its machinic hums operating behind enclosures, nourished by subterranean currents that others could not access, channeled in through proprietary pipes. However, before most had even figured out new ways to live in this barren landscape and its novel arrangements, the formations that emerged in the mud or crystallized in the salt flats left behind by the recession had scarcely dried before new waves of foreign capital began to tentatively creep through the country, fully immersing certain areas once again, and dissolving the logics that had coagulated into the mucky waters. The operations of foreign capital pulsing through Ireland's economy reveal a more muddled and toxic version of what had caused the destruction in the first place, and the tentacles of finance capital lurked in the new and murky pools. What this thesis has done, perhaps, throughout nearly real-time research, has been to keep track of how these formations have dissolved into these turbulent waters, and how they are affecting the emergent ecosystems—not only in continuity with older forms of rule, extraction, and exploitation, but also in new and poisonous ways, and before they begin to disappear once again under the auspices of prosperity, or worse, emerging crises.

---

[1] Quoted in Atkins 2020.

As I have suggested throughout, paraphrasing Aihwa Ong (2006), the interfaces between the state and capital affect daily life *directly* in an era of transnational capital, *especially* in conditions of precarity and crisis, far more than might appear on the surface. As I noted from Anna Tsing earlier in the thesis, perhaps the "precarity and indeterminacy" that appear marginal to systems of capital and rule are in fact central to how global economies function in the first place (2015, 20), across dispersed territories of operation. The structural role of such instability is particularly urgent when it comes to climate change and the environment. As opened up by the final chapter, the literal dimensions of the tides and toxicities conjured by this thesis' central metaphors are becoming more and more pressing. In 2017, near the time when I began my field visits to Ireland, the ruling Fine Gael Government unveiled their ambitious Ireland 2040 planning and policy framework, fully combining the "national" character suggested by the "Celtic Phoenix" image of the recovery with a total territorial vision governed by FDI. Central within it are several factors, most prominently for this thesis the so-called "audiovisual industries" within the Creative Ireland program, the high-tech industries, and planning for climate change. As Ireland faces current and oncoming climate catastrophes like the rest of the (particularly coastal) world, dynamic speculation on what Melinda Cooper talks about as "weather futures" in financial markets situates the circulation of data and finance through climate fluctuations as a site of future accumulation in turbulent natural and geopolitical ecologies (2010). The planning framework has an entire section devoted to the "Coastal Environment and Planning for Climate Change," as "Forty per cent of Ireland's population lives within 5km of the coast" (Government of Ireland 2018, 103). Much has been written about waterfront development and resiliency in New York post-Hurricane Sandy (Dupuis and Greenberg 2019; Wakefield 2020), as well as green and sustainable urban design more generally (Bigger and Millington 2019; Knuth 2019) as neoliberal responses and securitizations to the uncontrollable climate catastrophes to come (Cooper 2010). While each of the four chapters of this dissertation emphasize the role of the "creative industries" broadly defined and the central role of culture within these logics, the final chapter has purposefully strayed quite far from the more traditional analyses of media economies in Chapters 2 and 3. Data centers as territorial formations implicate such a wide variety of processes—from spatial planning to the media industries to internet access to government surveillance to the environment—that it is hard to know where to focus our analysis. I have used data centers as an opportunity to bring together various strands of

investigation and point them in directions for future study, theorizing and laying the groundwork for how we can perhaps better view the sites at which emergent forms of rule are coalescing, as well as places where unruly politics might represent frontiers for future struggle.

However, what is important to emphasize for Ireland's future is that the *natural environment* is by necessity in the crosshairs of the presiding state and cultural rationalities of finance and logistics through sustainability initiatives and climate finance. The series of naturalizations processed through this thesis are only the beginning, as we have yet to fully grasp the implications of climate change for future spatial governance in Ireland. But the gears are turning. In Ireland 2040, there is an extensive focus on sustainability and branding Ireland as "green" framed through the concept of "natural capital," which acclimatizes the optics of capital towards the various ecologies represented within Ireland, framed through pride of place and commodified versions of national landscape and culture: "Ireland's environment and its diverse landscapes form part of our 'green' persona and we have much to be proud of" (Government of Ireland 2018, 116). Like labour and the climate, the country's environments are treated as resources. This extends beyond climate finance and renewable energy infrastructures, and into more traditional media industrial considerations, as the Project Ireland 2040 frames it in terms of preparing for and managing climate change:

> Our coastal areas are also a key driver for Ireland's tourism sector, which the successful branding of the 'Wild Atlantic Way' and internationally recognised location shoots for the film industry have highlighted in recent years. Ireland's coastline is a remarkable but fragile *resource* that needs to be managed carefully. (103, my emphasis)

And while this, like Curtin argues (2016), might in a more just world lead to forms of stewardship, of repair and of care (Mattern 2017), the over-representation of FDI across the rest of the plan suggests that the reality will be more intensified forms of extraction. The climate and the culture are predictably naturalized for capital.

As data centers and the spatial governance of the tech industry demonstrate, these extractive mechanisms are placed at the center of policy, and the private management of their turbulences means that the public is left behind. The wealthy and powerful will ride out the coming storms in controlled environments, protected and secure, while those making do on the outside are left to drown in the churning waters. It is already happening, and arguably has happened for all of modern history. What the latter portion of this thesis presents is an analysis of

the interconnected series of conditions which generate the world climate and reproduce its existing mechanisms.

However, as I hope I have also demonstrated, there are always "wild" resistances that evade the representational and controlled systems of contemporary capital and governance, usually in highly localized formations or in unexpected resonance across territories. Throughout, I have gestured towards alternative formations, in spite of perhaps foregrounding the role of global capital in bringing turbulence. As the cases studied throughout can prove, capital, labour, communities, and the environment always exist in a variety of *fields of relations* to systems of power. Llerena Guiu Searle tells us that the stories that capital relates are important to understand how it creates the conditions for its own systematic continuation (2016). Dipesh Chakrabarty famously recounted the "two histories of capital," which splits our historical view of the development of capitalism in order to understand the structural role of colonization and the subaltern within its ongoing operations (2000). We understand now how these histories are living, how capital continues to conjure new formations out of turbulent tides, offering ethereal stability for the subjugated while sewing discord and violence. Industrial modernity, promised by liberalization and its globalizing infrastructures, was merely one of many formations across the world replaced and supplemented by neoliberalism, financialization, and supply chain capitalism. As Chapter 1 contends, there is no such thing as a logical progression from pre-modernity to post-modernity, underdeveloped to post-developmental, pre-colony to post-colony, pre-capitalist to post-capitalist. However, as Tsing argues,

> This is a story we need to know. Industrial transformation turned out to be a bubble of promise followed by lost livelihoods and damaged landscapes. And yet: such documents are not enough. If we end the story with decay, we abandon all hope—or turn our attention to other sites of promise and ruin, promise and ruin. (2015, 18)

As Karl Marx identified even in his early theories of circulation, capitalism is structured by continuously evolving phases of production and accumulation. Cycles of promise and ruin exist in a corresponding field of pasts and futures, and infrastructure is uniquely a site through which to understand the simultaneous existence of promise and forthcoming or existing ruin, especially in relation to how the institutions of global capital continue to spin chimeric yarns about prosperity and stability. What looking around us and surveying the ruins already here can tell us is how we can begin to imagine autonomously from these institutional frameworks, which bind

current and ongoing ways of living to colonized pasts and capitalized futures, both of which enact structural violence on those promised and aspiring for a different world.

While this thesis begins with a description of post-financial crisis politics, after Chapter 1 and the discussions of "ghost estates" in Chapter 2, it focuses on what we might retrospectively call the "recovery era." The "Celtic Phoenix" (Regan and Brazys 2018), rising on its wings of foreign capital from the ashes of the Tiger's spectacular flame-out, begins its lifecycle anew. I reject this imagery because of its ascription of a symbol associated with an ascending and unified nationalism to what is ultimately a zombie-like imperial system of value and rule. However, what even those who buy in to the Phoenix must tacitly admit is that the Tiger must have itself been a Phoenix that had combusted prior, rising from the embers of the postcolonial state and its toxic insularity, which may have had a slower and less spectacular conflagration. They must then realize that this Phoenix will suffer the same fate, burning up as it reaches its apex, leaving ash and ruin in its wake. These narratives are hard to short-circuit, and I have tried throughout this thesis to analyze and in doing so disrupt the teleological stories they tell. However, we may once again find Tsing's methodologies inspiring here, in terms of looking at the more unexpected things arising out of such formations:

> To live with precarity requires more than railing at those who put us here (although that seems useful too, and I'm not against it). We might look around to notice this strange new world, and we might stretch our imaginations to grasp its contours…to explore the ruin that has become our collective home. (2015, 3)

Ireland's ruined landscapes post-financial crisis were revealed to be exceptionally vital, at the cusp of new uses both by capital and the communities piecing together a living in the wake of finance's toxic tides. While the logistical imaginary of the state seems to be winning out, I hope that I have pointed to places where people are negotiating ways of living, "letting the water back in" (Atkins 2020) themselves and figuring out ways to live and work in these ruins of capital. For Tsing, matsutake mushrooms offer an exceptional place to view how nature and culture exist in the ruins of capital. But this thesis' focus on *systems* themselves means that the interrelations between capital and nature are much harder to separate, with the very climate of the country part of an emerging politics of rule. Financial and logistical capitalism's grasp of Ireland mean that the wider built assemblages—the infrastructures of capital's circulation—are where we need to direct our attention. This is true for unraveling how they govern, for identifying how they deal

with friction, as well as for attending to the potentialities opened up at these points of tension and conflict. What if we can come together to redirect, to levee against, the unnatural tides of global capital, while building new systems of care amongst one another? Examples throughout this thesis already point to sites of emergent politics: the Irish Glass Bottle Housing Action Group, in alignment with other groups in Dublin, has materially worked against the development of exclusionary private built environments; media workers and practitioners continue to find resourceful ways to subvert the property markets in Dublin with alternative forms of spatial practice; artists work together to form social infrastructures and community networks of support; residents adjacent to development projects leverage their needs across existing relationships to culture and the landscape. In the midst of ongoing and intensifying exploitation and extractive activities, workers collectivize and communities come together. People continue to relate politically to the projects of transnational capital, making claims and working within and outside of available systems. Living together in these ruins will require forms of cooperation which are already being performed, and will have to be activated based on local cultural and material conditions, leaving space open for collaborating and performing solidarity with aligned struggles.

The presentness of the cases throughout this thesis has created methodological, practical, and conceptual difficulties. How does one study an evolving and unstable set of circumstances? How do you even know where to look? Ireland has offered an exceptionally vital place through which to understand these phenomena and pick out points of struggle, find things that look and feel important, even as their conditions of emergence mean they may disappear or be foreclosed at any moment. Nonetheless, many of the cases and aspirational projects traced in this thesis are still ongoing. Such is the nature of much media research: in an attempt to trace threads as they happened, these threads continued weaving different stories in directions and timelines far beyond the scope of this thesis. As such, I have pinpointed key moments and sites of encounter at which these projects were at certain thresholds of emergence and tried to find the politics around the edges that could tell us more about what exactly they mean. The state and its corporate partners try to manage the turbulence from centers of operations, but it is at these extremes, at the edges, where the biggest swings are felt, even if in a delayed fashion. Related to such delays, caused as much by financial turbulence as by the Irish state's messy planning procedures, many of my cases have more stories to tell: NAMA plans to repay all debts by the

end of 2020 (National Asset Management Agency n.d.), begging the question as to the fate of the organization once their exceptional remit has been "completed"; investors in Dublin Bay Studios, described in Chapter 2, who advocated strongly for a site in the Docklands, announced that they have secured space next to Google in Grange Castle Business Park South to build the "Grange Castle Media Park" (Hamilton 2020); the *Star Wars* screen tourism operators in West Kerry, from Chapter 3, will now likely face an even more precarious set of circumstances, with a lack of state funding as a "creative industry" will become even more pronounced in the wake of Covid-19 travel stoppages; and in events following after those described in the final chapter, as of October 2019, Apple was shopping their abandoned site in Athenry to foreign investors on a "ready-to-go data centre development site" for an undisclosed price (Daly 2019), while the Athenry community continues to strive for economic inclusion.

Let this then serve as an acknowledgement that *Wild Tides* presents an approach to entangled phenomena more than a holistic analysis, a series of coalescing phenomena rather than a total system. I have tried to avoid reproducing the planetary "mastery" of space implicit within the projects of global capital, or even the smaller totalities built within something like Ireland 2040. I have not presented myself as an expert, but rather as a mindful interloper. The spaces I conjure here in these pages are incomplete and evade representation. Memory is incomplete, as is any record of events. But as I argue in the introduction, perhaps it is this "wildness" which evades representation, which only reveals itself in the leaky thresholds between life and the systems within which we try to get by, in the histories that emerge suddenly from the landscape, breaking representations of dominant systems, that should inform our research practice. After all, we are often drawn to these moments, to the unexpected, what fundamentally short-circuits how we see the world and politics. In moving between such moments across this thesis, I have, of course, missed some monoliths, as well as infinite other histories, currents, and ecologies submerged in the murky waters. So much methodology reads like a justification for bad methodology, and I am very conscious of reproducing this trope here. However, a thesis only has room for so much, and each of these absences, far from any form of intentional erasure, can hopefully open up capacious avenues for study, both for myself and for future readers of this research.

Nonetheless, two major events in early-2020 have offered an undeniable endpoint for this thesis, without which the post-financial crisis economic "recovery" would still be forging ahead

under Fine Gael's ruling Government. The first is the left-electoral surge in the February 2020 general election, which saw left-leaning party Sinn Féin evenly split votes with center-right Fine Gael and Fianna Fáil for the first time in modern history. Far from a purely Sinn Féin electoral victory, what this election represented was a broad coalition on the left across parties ("vote left, transfer left" was a popular slogan on social media and in community organizing) and an encouraging closure of the disconnect between the increasingly and vocally progressive Irish populace and the social and fiscal conservatism of their elected officials. With any luck, this will signal the end of these two center-right parties' strangle-hold on mainstream Irish politics, although the Frankenstein's monster Fine Gael-Fianna Fáil-Green coalition Government has already proven how unwilling those in power are to hand the reins over to the country's populace. The second event is the ongoing economic recession triggered by the worldwide lockdown as a result of the Covid-19 pandemic. This economic crisis is very unlike that of 2007-2008. The new crisis has laid bare, once again, the cruelty of economic and political systems both in Ireland and across the world, especially in the absence of social safety nets, housing guarantees, and healthcare for all people. The Industrial Development Authority has already had to steady fears that FDI will shrink catastrophically in the coming years, as they can no longer host potential investors and show them sites for development with travel restrictions and liabilities (Goodbody 2020). Once again, the precarity of total reliance on FDI—which here also coalesces with the revenue of international tourism—is particularly striking. However, although many are quick to recognize this difference as one that transcends economics, the fact is that it is a crisis whose conditions were made possible by the environmental destruction of the "Capitaloscene" (Haraway 2015; Moore 2017), whether in terms of the encroachment of human activity on animal habitats or the carbon-heavy mobility of wealthy people across the world. Whatever happens, 2020 has been and will continue to be a pivotal year in world history and for the island of Ireland, offering an ellipsis, rather than a period, by which to fade out this thesis. I hope that the cases traced throughout this project offer apertures to cultural and political futures from which we can learn for current and oncoming crises, in how academics, policy-makers, and activists can unmask and unravel the actual forces of privatized production and circulation, and the power behind them, which hold far too much sway over our cultural and political lives. The logics unearthed across this thesis demonstrate the extent to which the state and its corporate partners are willing to condition infrastructure, labour, and the environment for extraction at the

expense of more just ways of living, working, and relating to our environment. Working conceptually and practically across these fields, then, is an essential exercise for not only trying to navigate increasingly choppy waters, but for looking beyond managing ongoing turbulence and steering ships towards calmer seas.

No Trespassing

We can end by returning to the woods in Athenry, and the west more generally. When entering Derrydonnell, a sign references the Occupiers Liability Act of 1995, reading, in all caps:

> If you pass beyond this point you are on a premises. Please take note that the occupier of these premises given the nature, character and activities of these premises hereby, in accordance with section 5(2) of the Occupiers Liability Act 1995 excludes the duty of care towards visitors under section 3 of the act. Warning: unauthorised entry is prohibited. Private property. No trespassing. (see Fig. 33 in Chapter 4)

The Occupier (Apple) grants no permission to set foot on the land and takes no responsibility for your care upon trespassing—on *their* land. As if there was any doubt about the "duty of care" that Apple would have felt towards the people of Athenry, the law states outright, upon entry into *their* territory, that there is no trespassing, this land is no longer public, and citizens not only lose the responsibility of care upon entering, but are outright forbidden from using the space.

Paul Keane, and the Athenry for Apple group, had consented to this occupation. The state had paved the road for it. But Keane had a far more unexpected relationship to this land than one of pure instrumentalism. We walked straight past the "no trespassing" sign as though it was not there. Keane felt *some* manner of ownership, of right, of *belonging*, which evaded the property laws and logics of the state. Unlike state-centric notions of citizenship and belonging which tend to characterize political theory, Keane's sense of belonging was tied to the land itself, his proximity to it, his family history within it. We were not trespassing that day. Even if Apple had built a data center there, Keane still would have belonged. Different political relations to the land, and thus alternative futures for how it will be used, hide in plain sight.

This sense of strong political ties to the land, especially in rural and agrarian contexts, has a long history in Ireland, where land politics have motivated revolutionary struggles for centuries, most prominently probably being the Land Wars of the late-1870s-early-1880s. How else would a populace mobilize when a colonial power constantly uproots and expropriates from

the territory on which you work, engage in culture, make a life? These politics have continuities in the contemporary Irish state, but also concrete ruptures and emergent politics. The Government, and the nation-state over which it presides, does not determine belonging within the various spaces across the country mapped throughout this thesis. Multinational tech companies, while given the keys to the kingdom by the state, likewise should not be determining the future spatial politics of the country. Those with material stakes in the land, whether those with a long history or who have just arrived, deserve to self-determine such spaces, in horizontal and community-orientated modes of spatial practice.

After all, more historical sites of contention continue to see active political mobilization. We can look, for example, at the Shannon Airport, run by the remnants of Shannon Development Corporation which governed the Shannon Free Zone and Shannon town, where Ireland's purportedly "neutral" state allows US military planes to refuel on trips to undeclared wars in the Middle East. In 2012, Margaretta D'Arcy, an octogenarian actor and activist, broke through the airport's perimeter fence and shut down international flights in protest of these operations. Margaretta did jail time for this action. Affiliated groups have performed similar acts of trespassing and civil disobedience, including partially dismantling an airplane on the tarmac. Such a non-recognition of sovereignty motivates most political actions in the age of circulatory capitalism, as I have previously identified in terms of "circulation struggles" (Clover 2016), including pipeline protests by indigenous groups in North America and logistical struggles at ports and on highways by transport workers. These circulations do not rule us, even if they increasingly permeate the forms of rule that subject us to state violence. Like the residents of Athenry ignoring the sign marking the Derrydonnell land as "occupied," activists in Dublin break into vacant (and occupied) buildings, farmers park their tractors in the middle of Dublin traffic, and D'Arcy and her collaborators cut the fence to the runway. All entail acts of radical non-recognition, of refusal, of blockage, even if differential in their goals. And this should open apertures to a different sort of politics of "trespassing" which may move to abolish the idea of property and ownership altogether, even if true emancipation remains only a flicker on the horizon.

What these anecdotes should tell us is something that we already know: the extractive enclosures created by transnational corporations are not natural, nor are the logistical and financial flows of global capital (and imperialism). But those made by states are also not natural,

and their systems of rule not as powerful and all-encompassing as our theories of politics often suggest. Spaces are always full of alternative relationships and more "wild" possibilities. The sense of belonging policed and administered by the state would not have necessarily compelled Athenry residents to follow the laws set down on this piece of property. Residents would have kept using that land until Apple put up a fence. But as D'Arcy's trips across the runway in Shannon can show us, fences are fallible. They can always be cut, climbed, and removed, opening up new ways into such enclosures.

While Apple is long gone, its tide receded, public discourses and residents of Athenry still cast the space as somehow foreclosed, its use tied up elsewhere, its structures crystallized by the rescinded promise of a coming wave of capital. However, there is a different way to see this space. Derrydonnell Woods are growing back, wild and out of sight, except for those who continue to walk and live by them. Just like workers can reclaim the bogs they once cut, these ongoing and future growths sustain in different ways, in ways difficult to render profitable. We can only hope that such growth outside of capital can be nurtured as we figure out how to live better within its ruins, before the tides carry them away, and us with them.

Bibliography

Acland, Charles R. 2018. "An Empire of Pixels: Canadian Cultural Enterprise in the Visual
Effects Industry," in *Reading between the Borderlines: Cultural Production and
Consumption across the Canada-US Border*, 143-170, edited by Gillian Roberts.
Montreal: McGill-Queen's University Press.

Adkins, Lisa and Maryanne Dever. 2016. "The Financialisation of Social Reproduction:
Domestic Labour and Promissory Value," in *The Post-Fordist Sexual Contract*, 129-145,
edited by Lisa Adkins and Maryanne Dever. London: Palgrave Macmillan.

Agreement between the Government of Ireland and the Government of the Grand Duchy of
Luxembourg on Audio-Visual Relations. 2020. Fís Éireann/Screen Ireland.
https://www.screenireland.ie/filming/international-co-production/luxembourg.

Alimahomed-Wilson, Jake and Immanuel Ness. 2018. "Introduction: Forging Workers'
Resistance across the Global Supply Chain," in *Chokepoints: Logistics Workers
Disrupting the Global Supply Chain*, 1-15. London: Pluto Press.

Allen, Kieran. 2015. "Interpretations of the Irish economic crash." In *Ireland under Austerity:
Neoliberal Crisis, Neoliberal Solutions*, 66-87, edited by Colin Coulter and Angela
Nagle. Manchester: Manchester University Press.

Allen, Mary. 2019. "Celtic phoenix rising on data centre wings." *InsightaaS*, October 12, 2019.
https://insightaas.com/celtic-phoenix-rising-on-data-centre-wings/.

Allen, Robert. 2004. *No Global: The People of Ireland Versus the Multinationals*. London: Pluto
Press.

Amoore, Louise. 2018. "Cloud geographies: Computing, data, sovereignty." *Progress in Human
Geography* 42, no. 1: 4-24.

Anand, Nikhil. 2019. "Leaking Lines." In *Infrastructure, Environment, and Life in the
Anthropocene*, 149-168, edited by Kregg Hetherington, Durham, NC: Duke University
Press.

Anand, Nikhil, Akhil Gupta, and Hannah Appel, editors. 2018. *The Promise of Infrastructure*.
Durham, NC: Duke University Press.

Anderson, Benedict. 2006 (1983). *Imagined Communities: Reflections on the Origin and Spread
of Nationalism*. Revised edition. Brooklyn: Verso.

Anex, Valérie. 2011. "Ghost Estates." Accessed July 29, 2020.

    http://www.valerieanex.com/index.php/ghost-estates/.

Apprich, Clemens and Ned Rossiter. 2016. "Sovereign Media, Critical Infrastructures, and

    Political Subjectivity," in *Across & Beyond: A transmediale Reader on Post-Digital*

    Practices, Concepts, and Institutions, 270-283, edited by Ryan Bishop, Kristoffer

    Gansing, Jussi Parikka, and Elvia Wilk. Berlin: Sternberg Press.

Arboleda, Martín. 2020. *Planetary Mine: Territories of Extraction under Late Capitalism*.

    Brooklyn: Verso.

Armstrong, Frank. 2018. "Leo-Liberal." *Cassandra Voices*, October 5, 2018.

    https://cassandravoices.com/politics/leo-

    liberal/?fbclid=IwAR3uLK7B2LWQFo9YhGtTOnl3ryO7aARsc-hL_vbqD6BBp-

    3nT8ifr8reoVQ.

The Arts Council. N.d. "The Spillover Effect." Accessed July 29, 2020.

    http://www.artscouncil.ie/Arts-in-Ireland/Strategic-development/The-spillover-effect/.

Asava, Zélie. 2013. *The Black Irish Onscreen: Representing Black and Mixed-Race Identities on*

    Irish Film and Television. New York: Peter Lang.

Arrighi, Giovanni. 2010 (1994). *The Long Twentieth Century: Money, Power, and the Origins of*

    Our Times. Brooklyn: Verso.

Atkins, William. 2020. "Bogland: Climate change and the peat industry's dying days." *Harper's*

    Magazine, July, 2020. https://harpers.org/archive/2020/07/bogland-bog-of-allen-ireland-

    peat-bog-bord-na-mona/.

Augé, Marc. 2009. *Non-Places: An Introduction to an Anthropology of Supermodernity*.

    Translated by John Howe. Brooklyn: Verso.

Bailey, Sean. 2019. "Conversation with Paddy Breathnach." Public talk, Lighthouse Cinema,

    Dublin, Ireland, March 20, 2019.

Ballestero, Andrea. 2019. "The Underground as Infrastructure? Water, Figure/Ground Reversals,

    and Dissolutions in Sardinal," in *Infrastructure, Environment, and Life in the*

    Anthropocene, 17-44, edited by Kregg Hetherington. Durham, NC: Duke University

    Press.

Balsom, Erika. 2009. "A cinema in the gallery, a cinema in ruins." *Screen* 50, no. 4: 411-247.

Barlet, Olivier. 1994. "'When You've Got Meat to Cook, You Go and Find Someone with Fire':

The Logics of Western Aid," in *African Cinemas: Decolonizing the Gaze*, 260-278. London: Zed Books.

Barton, Ruth. 2004. *Irish National Cinema*. New York: Routledge.

---. 2018. "Behind Closed Doors: Middle Class Suburbia and Contemporary Irish Cinema," in *Imagining Suburbia in Literature and Culture*, 191-208, edited by Eoghan Smith and Simon Workman. London: Palgrave-Macmillan.

---. 2019. "The Force Meets Kittiwake: Shooting *Star Wars* on Skellig Michael," in *The Routledge Handbook of Popular Culture and Tourism*, 300-310, edited by Christine Lundberg and Vassilios Ziakas. New York: Routledge.

Barton, Ruth and Denis Murphy. 2020. *Ecologies of Cultural Production: Career construction in Irish film, TV drama and theatre*. Dublin: Creative Ireland. https://www.creativeireland.gov.ie/app/uploads/2020/03/ECP.pdf.

Baxtel. N.d. "Dublin Data Center Market." Accessed July 29, 2020. https://baxtel.com/data-center/dublin.

Beggs, Mike, Dick Bryan, and Michael Rafferty. 2014. "Shoplifters of the World Unite! Law and Culture in Financialized Times." *Cultural Studies* 28, no. 5-6: 976-996.

Benjamin, Walter. 2008. "The Work of Art in the Age of Its Technological Reproducibility (Second Version)," in *The Work of Art in the Age of Its Technological Reproducibility and Other Writings on Media*, 19-55, edited by Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin, translated by Edmund Jephcott, Rodney Livingstone, Howard Eiland, and Others. Cambridge, MA: Harvard University Press.

Bennett, Jane. 2009. *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press.

Berardi, Franco. 2009. *The Soul at Work: From Alienation to Autonomy*. Los Angeles: Semiotext(e).

---. 2011. *After the Future*. Edited by Gary Genosko and Nicholas Thoburn, translated by Arianna Bove, Melinda Cooper, Erik Empson, Enrico, Giuseppina Mecchia, and Tiziana Terranova. Oakland: AK Press.

Berlant, Lauren. 2011. *Cruel Optimism*. Durham, NC: Duke University Press.

---. 2016. "The Commons: Infrastructures for Troubling Times." *Environment and Planning D: Society and Space* 34, no. 3: 393-419.

Bernes, Jasper. 2013. "Logistics, Counterlogistics and the Communist Prospect." *Endnotes* 3.
    http://endnotes.org.uk/en/jasper-bernes-logistics-counterlogistics-and-the-communist-
    prospect.

Betz, Mark. 2001. "The Name Above the (Sub)Title: Internationalism, Coproduction, and the
    Polyglot European Art Cinema." *Camera Obscura*, 16, no. 1: 14-44.

Bigger, Patrick and Benjamin Neimark. 2017. "Weaponizing nature: the geopolitical ecology of
    the US Navy's biofuel program." *Political Geography* 60: 13-22.

Bigger, Patrick and Nate Millington. 2019. "Getting soaked? Climate crisis, adaptation finance,
    and racialized austerity." *Environment and Planning E: Nature and Space*, online first.
    https://doi.org/10.1177%2F2514848619876539.

Bodkin, Peter. 2017. "Data centres are making energy demands shoot up in Ireland."
    TheJournal.ie, May 6, 2017. http://www.thejournal.ie/data-centres-ireland-3-3374827-
    May2017/.

---. 2018. "Ireland's Biggest Film Studio Has Been Sold to a Private Equity Investor." *Fora.ie*,
    March 23, 2018. https://fora.ie/ardmore-studios-sold-3920291-Mar2018/.

Boland's Quay. N.d. *Reaching New Heights in a Prime Location*. Accessed July 29, 2020.
    http://bolandsquay.com/brochure.php.

Bousquet, Marc. 2008. "Students Are Already Workers." In *How the University Works:
    Higher Education and the Low Wage Nation*, 126-156. New York: NYU Press.

Bowker, Geoffrey C. and Susan Leigh Star. 1999. *Sorting Things Out: Classification and Its
    Consequences*. Cambridge, MA: MIT Press.

Boyd, Gary A. and John McLaughlin. 2015. Introduction. *Infrastructure and the Architectures of
    Modernity in Ireland 1916-2016*, 1-8, edited by Gary A. Boyd and John McLaughlin.
    Burlington, VT: Ashgate.

Breaknews.ie. 2018. "Take Back The City occupation of AirBnb offices ends as activists blame
    firm for 'exacerbating the housing crisis.'" October 13, 2018.
    https://www.breakingnews.ie/ireland/take-back-the-city-occupation-of-airbnb-offices-
    ends-as-activists-blame-firm-for-exacerbating-the-housing-crisis-875583.html.

Bresnihan, Patrick. 2016. "The bio-financialization of Irish Water: New advances in the
    neoliberalization of vital services." *Utilities Policy* 40: 115-124.

Bresnihan, Patrick and Michael Byrne. 2015. "Escape into the city: Everyday practices of

commoning and the production of urban space in Dublin." *Antipode* 47, no. 1: 36-54.

Bresnihan, Patrick and Patrick Brodie. 2019. "High-energy data centres not quite as clean and
green as they seem." *The Irish Times*, September 11, 2019.
https://www.irishtimes.com/opinion/high-energy-data-centres-not-quite-as-clean-and-
green-as-they-seem-1.4013992.

---. Forthcoming. "New Extractive Frontiers in Ireland and the Moebius Strip of Wind/Data."
Environment and Planning E: Nature and Space.

Brodie, Patrick. 2020a. "*Star Wars* and the Production and Circulation of Culture along Ireland's
Wild Atlantic Way." *The Journal of Popular Culture* 53, no. 3: 667-695.

---. 2020b. "'Stuck in Mud in the Fields of Athenry': Apple, Territory, and Popular Politics."
Culture Machine 19.

---. Forthcoming. "Hosting Cultures: Placing the Global Data Center 'Industry.'" *Canadian
Journal of Communication*, special issue *Materials and Media of Infrastructure*, edited
by Rafico Ruiz and Aleksandra Kaminska.

Browne, Simone. 2015. *Dark Matters: On the Surveillance of Blackness*. Durham, NC: Duke
University Press.

Brustein, Joshua. 2019. "Warehouses Are Tracking Workers' Every Muscle Movement."
Bloomberg, November 5, 2019. https://www.bloomberg.com/news/articles/2019-11-
05/am-i-being-tracked-at-work-plenty-of-warehouse-workers-are.

Burke, Ceimin. 2019. "Government signs off on contract for controversial €3 billion National
Broadband Plan." *Thejournal.ie*, November 19, 2019.
https://www.thejournal.ie/government-sign-national-broadband-plan-4896090-Nov2019/.

Burrell, Jenna. 2019. "Are Rural Data Center Jobs 'Good' Jobs?" *Global Media Technologies
and Cultures Lab Blog*, September 3, 2019. http://globalmedia.mit.edu/2019/09/03/are-
rural-data-center-jobs-good-jobs/.

---. 2020. "On Half-Built Assemblages: Waiting for a Data Center in Prineville, Oregon."
Engaging Science, Technology, and Society 6: 283-305.

Burrington, Ingrid. 2016. *Networks of New York: An Illustrated Field Guide to Urban Internet
Infrastructure.* Brooklyn: Melville House.

Byrne, Michael. 2016. "'Asset Price Urbanism' and Financialization after the Crisis: Ireland's

National Asset Management Agency." *International Journal of Urban and Regional Research* 40, no. 1: 31-45.

Cahill, Ann. 2014. "Almost 10% of Irish young people emigrated during recession." *Irish Examiner*, March 29, 2014. https://www.irishexaminer.com/ireland/almost-10-of-irish-young-people-emigrated-during-recession-263566.html.

Caldwell, John Thornton. 2008. *Production Culture: Industrial Reflexivity and Critical Practice in Film and Television*. Durham, NC: Duke University Press.

---. 2013. "Stress Aesthetics and Deprivation Payroll Systems." In *Behind the Screen: Inside European Production Cultures*, 91-111, edited by Petr Szczepanik and Patrick Vonderau. New York: Palgrave Macmillan.

Callanan, Brian. 2000. *Ireland's Shannon Story: Leaders, Visions, and Networks: A Case Study of Local and Regional Development*. Dublin: Irish Academic Press.

Carolan, Mary. 2017a. "Apple Given Go-Ahead to Start €850m Data Centre in Athenry." *The Irish Times*, October 12, 2017. https://www.irishtimes.com/business/technology/apple-given-go-ahead-to-start- 850m-data-centre-in-athenry-1.3253502.

---. 2017b. "Storm Delays Apple Data Centre Appeal Hearing." *The Irish Times*, October 16, 2017. https://www.irishtimes.com/business/technology/storm-delays-apple-data-centre-appeal-hearing- 1.3257635.

Carroll, Rory. 2020. "Why Ireland's data centre boom is complicating climate efforts." *The Irish Times*, January 6, 2020. https://www.irishtimes.com/business/technology/why-ireland-s-data-centre-boom-is-complicating-climate-efforts-1.4131768.

Carruth, Allison. 2014. "The digital cloud and the micropolitics of energy." *Public Culture* 26, no. 2: 339–364.

Carse, Ashley and David Kneas. 2019. "Unbuilt and Unfinished: The Temporalities of Infrastructure." *Environment and Society: Advances in Research* 10: pp. 9-28.

Carswell, Simon. 2017. "Weekend Read: The ghost estates that still haunt Ireland." *The Irish Times*, August 12, 2017. https://www.irishtimes.com/life-and-style/people/weekend-read-the-ghost-estates-that-still-haunt-ireland-1.3181498.

Carville, Justin. 2013. "Terra Infirma: The Territory of the Visible and the Writing of Ireland's Visual Culture," in *Viewpoints: Theoretical Perspectives on Irish Visual Texts*, 13-28, edited by Claire Bracken and Emma Radley, Cork: Cork University Press.

Chakrabarty, Dipesh. 2000. *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton, NJ: Princeton University Press.

---. 2009. "The climate of history: four theses." *Critical Inquiry* 35, no. 2: 197-222.

Charlemagne. 2020. "How Ireland Gets Its Way." *The Economist*, July 18, 2020. https://www.economist.com/europe/2020/07/18/how-ireland-gets-its-way.

Chatterjee, Partha. 2004. *The Politics of the Governed: Reflections of Popular Politics in Most of the World*. New York: Columbia University Press.

Chua, Charmaine, Martin Danyluk, Deborah Cowen, Laleh Khalili. 2018. "Introduction: Turbulent Circulation: Building a Critical Engagement with Logistics." *Environment and Planning D: Society and Space* 36, no. 4: 617-629.

Chung, Hye Jean. 2012. "Media Heterotopia and Transnational Filmmaking: Mapping Real and Virtual Worlds." *Cinema Journal* 51, no. 4: 87-109.

Clare, Nick. 2019. "Composing the social factory: An autonomist urban geography of Buenos Aires." *Environment and Planning D: Society and Space* 37, no. 2: 255-275.

Clarke, Vivienne and Pat Leahy. 2018. "Ireland 2040 advertising is 'Goebbels territory,' Kelly says." *The Irish Times*, February 27, 2018. https://www.irishtimes.com/news/politics/ireland-2040-advertising-is-goebbels-territory-kelly-says-1.3407239.

Cleary, Joe. 2002. "Misplaced Ideas? Locating and Dislocating Ireland in Colonial and Postcolonial Studies," in *Marxism, Modernity and Postcolonial Studies*, 101-124, edited by Crystal Bartolovich and Neil Lazarus. Cambridge, UK: Cambridge University Press.

Climate Home News. 2017. "'Tsunami of data' could consume one fifth of global electricity by 2025." *The Guardian*, December 11, 2017. https://www.theguardian.com/environment/2017/dec/11/tsunami-of-data-could-consume-fifth-global-electricity-by-2025.

Clover, Joshua. 2016. *Riot. Strike. Riot: The New Era of Uprisings*. Brooklyn: Verso.

Coillte. N.d. "Apple Derrydonnell." Accessed July 29, 2020. https://www.coillte.ie/our-business/our-projects/apple-derrydonnell/.

Coleman, Philip. 2012. "Ghost Estate: Philip Coleman reviews William Wall's newest poetry collection." *Southword*. Accessed July 29, 2020. http://www.munsterlit.ie/Southword/Issues/21/ghost_estate.html?mid=57.

Collins, Patrick and Seamus Grimes. 2011. "Cost-competitive places: shifting fortunes and the closure of Dell's manufacturing facility in Ireland." *European Urban and Regional Studies* 18, no. 4: 406-426.

Connolly, Maeve. 2003. "An Archaeology of Irish Cinema: Ireland's Subaltern, Migrant, and Feminist Film Cultures." Dissertation. Dublin City University.

---. 2004. "Sighting an Irish Avant-Garde in the Intersection of Local and International Film Cultures." *Boundary 2* 31, no. 1: 243-265.

Connolly, William. 2017. *Facing the Planetary: Entangled Humanism and the Politics of Swarming*. Durham, NC: Duke University Press.

Cooper, Melinda. 2010. "Turbulent Worlds: Financial Markets and Environmental Crisis." *Theory, Culture and Society* 27, no. 2-3: 167-190.

Coulter, Colin. 2015. "Ireland under Austerity: An Introduction to the Book," in *Ireland under Austerity: Neoliberal Crisis, Neoliberal Solutions*, 1-43, edited by Colin Coulter and Angela Nagle. Manchester: Manchester University Press.

Cowen, Deborah. 2014. *The Deadly Life of Logistics: Mapping Violence in Global Trade*. Minneapolis: University of Minnesota Press.

Crosson, Seán. 2003. "Vanishing Point: An Examination of Some Consequences of Globalisation for Contemporary Irish Film." *E-Keltoi: Journal of Interdisciplinary Celtic Studies* 2: 1-23.

Crowe Horwath. 2017. *Final Report in respect of a Strategy for the Development of Skills for the Audiovisual Industry in Ireland*.
https://www.screenireland.ie/images/uploads/general/AV_Skills_Strategy_Report.pdf.

Curtin, Michael. 2003. "Media Capital: Towards the Study of Spatial Flows." *International Journal of Cultural Studies* 6, no. 2: 202-228.

---. 2016. "Regulating the global infrastructure of film labor exploitation." *International Journal of Cultural Policy* 22, no. 5: 673-685.

Curtin, Michael, Jennifer Holt, and Kevin Sanson, editors. 2014. *Distribution Revolution: Conversations about the Digital Future of Film and Television*. Berkeley, CA: University of California Press.

Curtin, Michael and Kevin Sanson, editors. 2016. *Precarious Creativity: Global Media and Local Labor*. Berkeley, CA: University of California Press.

---, editors. 2017. *Voices of Labor: Creativity, Craft, and Conflict in Global Hollywood*. Berkeley, CA: University of California Press.

Cusick, Christine. 2005. "'Our Language was Tidal': Moya Cannon's Poetics of Place." *New Hibernia Review* 9, no. 1: 59-76.

Daly, Gavin. 2019. "Apple seeking a buyer for Athenry data centre site." *The Times*, October 13, 2019. https://www.thetimes.co.uk/article/apple-seeking-a-buyer-for-athenry-data-centre-site-d7vs0md8m?fbclid=IwAR2iS8593jCxLpKhNeRvsOJ5ikVQe4Yh8AIpv3OqNB9fSwjBRL6OciKaD60.

Danyluk, Martin. 2018. "Capital's Logistical Fix: Accumulation, Globalization, and the Survival of Capitalism." *Environment and Planning D: Society and Space* 36, no. 4: 630-647.

D'Avella, Nicholas. 2019. *Concrete Dreams: Practice, Value, and Built Environments in Post-Crisis Buenos Aires*. Durham, NC: Duke University Press.

Davis, Mike and Daniel Bertrand Monk. 2007. Introduction. In *Evil Paradises: Dreamworlds of Neoliberalism*, edited by Mike Davis and Daniel Bertrand Monk. New York: The New Press.

De Certeau, Michel. 1984. *The Practice of Everyday Life*. Berkeley, CA: University of California Press.

Deckard, Sharae. 2016. "World-Ecology and Ireland: The Neoliberal Ecological Regime." *Journal of World-Systems Research* 22, no. 1: 145-176.

Degen, Monica, Clare Melhuish, and Gillian Rose. 2017. "Producing place atmospheres digitally: Architecture, digital visualisation practices and the experience economy." *Journal of Consumer Culture* 17, no. 1: 3-24.

Department for Arts, Culture, and the Gaeltacht. 2011. *Creative Capital: Building Ireland's Audiovisual Creative Economy*. https://www.screenireland.ie/images/uploads/general/Creative_Capital_Web.pdf.

Department of Culture, Heritage and the Gaeltacht. 2015. "Projects and Programmes." July 7, 2015. https://www.chg.gov.ie/arts/creative-arts/projects-and-programmes/.

---. 2017. *Audiovisual Action Plan: Creative Ireland Pillar 4*. https://www.chg.gov.ie/app/uploads/2018/06/audiovisual-action-plan.pdf.

Department of the Environment and Local Government. 2002. *National Spatial Strategy 2002-*

2020: People, Places and Potentail. Dublin: The Stationary Office.

deWaard, Andrew. 2020. "Financialized Hollywood: Institutional Investment, Venture Capital, and Private Equity in the Film and Television Industry." *JCMS: Journal of Cinema and Media Studies* 59, no. 4.

---. Forthcoming. "Wall Street's Content Wars: Financing Media Consolidation." In *Content Wars: Tech Empires vs. Media Empires*, edited by Denise Mann. Berkeley, CA: University of California Press.

Dickinson, Kay. 2012. "The State of Labor and Labor for the State: Syrian and Egyptian Cinema beyond the 2011 Uprisings." *Framework: The Journal of Cinema and Media* 53, no. 1: 99-116.

---. 2020. "'Make It What You Want It to Be': Logistics, Labour and the Financialization of Land via the Globalized Free Zone Studio." *The Studio: Space, Form, Materiality*, edited by Brian Jacobson. Berkeley, CA: University of California Press.

---. Forthcoming. "Supply Chain Cinema, Supply Chain Education: Training Creative Wizardry for Offshored Exploitation," in *Assembly Codes: The Logistics of Media*, edited by Matthew Hockenberry, Nicole Starosielski and Susan Zeiger. Durham: Duke University Press.

Dingle Slea Head Tours. N.d. "Dingle Peninsula Star Wars Tour." Accessed July 29, 2020. https://www.dinglesleaheadtours.com/dingle-peninsula-star-wars-tour/.

Donovan, Katie. 1996. "Haunted by the Poorhouse." *The Irish Times*, March 30, 1996. https://www.irishtimes.com/news/haunted-by-the-poorhouse-1.37293.

Dowling, Tom. 2011a. "Could We Transform a Ghost Estate into a Global Film Streetscape?" *Tom Dowling*, May 31, 2011. https://tomtdowling.wordpress.com/2011/05/31/could- we-transform-a-ghost-estate-into-a-global-film-streetscape/.

---. 2011b. "Ek Tha Tiger – Actors frightened by protesters in Dublin." *Tom Dowling*, September 29, 2011. https://tomtdowling.wordpress.com/2011/09/29/ek-tha-tiger-actors-frightened-by-protesters-in-dublin/.

Drake, Philip. 2008. "Distribution and Marketing in Contemporary Hollywood," in *The Contemporary Hollywood Film Industry*, 63-82, edited by Paul McDonald and Janet Wasko. Hoboken, NJ: Wiley-Blackwell.

---. 2013. "Policy or Practice? Deconstructing the Creative Industries," in *Behind the Screen:*

Inside European Production Cultures, 221-236, edited by Petr Szczepanik and Patrick
Vonderau. New York: Palgrave Macmillan.

Dublin City Council. 2017a. "Chief Executive's Report on Submissions received on the
proposed Material Alterations to the draft Poolbeg West Planning Scheme." September
20, 2017. https://councilmeetings.dublincity.ie/mgConvert2PDF.aspx?ID=12724.

---. 2017b. *Poolbeg West Planning Scheme: Interim Publication*.
https://www.dublincity.ie/sites/default/files/content/Planning/OtherDevelopmentPlans/Do
cuments/Poolbeg%20West%20Planning%20Scheme%20(Interim%20%20Document).PD
F.

---. 2019. *Poolbeg West Planning Scheme*. April, 2019.
https://www.dublincity.ie/sites/default/files/content/Planning/OtherDevelopmentPlans/Sp
ecialPlanningControlSchemes/Documents/Poolbeg_West_SDZ_Planning_Document.pdf.

DueDil. N.d. "O'Carroll Mulhern Services Limited." Accessed July 29, 2020.
https://app.duedil.com/company/ie/510939/o-carroll-mulhern-services-limited.

DuPuis, E. Melanie and Miriam Greenberg. 2019. "The right to the resilient city: progressive
politics and the green growth machine in New York City." *Journal of Environmental
Studies and Sciences* 9: 352–363.

E-Flux. 2018. "Project Arts Centre." May 15, 2018. https://www.e-
flux.com/announcements/198070/jesse-jonestremble-tremble/.

Eagleton, Terry, Fredric Jameson, and Edward W. Said. 1997. *Nationalism, Colonialism, and
Literature*. Minneapolis: University of Minnesota Press.

Easterling, Keller. 2014. *Extrastatecraft: The Power of Infrastructure Space*. Brooklyn: Verso.

Elsaesser, Thomas. 2005. "European Cinema as World Cinema: A New Beginning?" in
European Cinema: Face to Face with Hollywood, 485-513, Amsterdam: Amsterdam
University Press.

Enterprise Ireland. 2017. *The Future Data Centre: Trends in Smart Data Centre Design and
Construction*. Enterprise Ireland.

EnterpriseIrelandTV. 2017. "The Irish Advantage." *YouTube*. Video, September 5, 2017. 1:10.
https://www.youtube.com/watch?v=jcjGNAvaCLQ.

Esposito, Roberto. 2008 (2004). *Bíos: Biopolitics and Philosophy*. Translated by Timothy
Campbell. Minneapolis: University of Minnesota Press.

European Investment Bank. 2018. "Ireland: ESB and Bord na Móna reach Financial Close on Oweninny Wind Farm Project." *European Investment Bank*, May 23, 2018. https://www.eib.org/en/press/all/2018-124-esb-and-bord-na-mona-reach-financial-close-on-oweninny-wind-farm-project.

Ezra, Elizabeth and Terry Rowden. 2006. "General Introduction: What Is Transnational Cinema?" in *Transnational Cinema: The Film Reader*, 1-12, edited by Elizabeth Ezra and Terry Rowden. New York: Routledge.

Federici, Silvia. 1975. *Wages against Housework*. Bristol, UK: Power of Women Collective/The Falling Wall Press.

---. 2010. "Feminism and the Politics of the Commons," in *Uses of a WorldWind, Movement, Movements, and Contemporary Radical Currents in the United States*, edited by Craig Hughes, Stevie Peace and Kevin Van Meter. Oakland: AK Press.

---. 2013. "Permanent Reproductive Crisis: An Interview with Silvia Federici." Interview by Marina Vishmidt. *Mute*, March 7, 2013. https://www.metamute.org/editorial/articles/permanent-reproductive-crisis-interview-silvia-federici.

Finn, Christina. 2017. "How Ireland Wants to Become the Data Centre Capital of the World." *TheJournal.ie*, October 22, 2017. http://www.thejournal.ie/ireland-data-centres-3656728-Oct2017/.

Fís Éireann/Screen Ireland. 2020. Fís Éireann/Screen Ireland. Accessed July 29, 2020. https://www.screenireland.ie.

Florida, Richard. 2005. *Cities and the Creative Class*. New York: Routledge.

---. 2013. "More Losers than Winners in America's New Economic Geography." *Citylab*, January 30, 2013. https://www.citylab.com/life/2013/01/more-losers-winners-americas-new-economic-geography/4465/.

Foreman, Donal. 2014. "New Voices in Irish Experimental Cinema: Rouzbeh Rashidi, Maximilian Le Cain, Dean Kavanagh and Michael Higgins." *Estudios Irlandeses* 9: 230-237.

Franqusa, Jaume. 2018. *Power struggles: dignity, value, and the renewable energy frontier in Spain*. Bloomington, IN: Indiana University Press.

Fumagalli, Andrea. 2011. "Twenty Theses on Contemporary Capitalism (Cognitive

Biocapitalism).” *Angelaki: Journal of the Theoretical Humanities* 16, no. 3: 7-17.

Furuhata, Yuriko. 2018. “Architecture as atmospheric media: Tange lab and cybernetics.” *Media Theory in Japan*, 52-79, edited by Marc Steinberg and Alexander Zahlten. Durham, NC: Duke University Press.

Gabrys, Jennifer. 2016. *Program Earth: Environmental Sensing Technology and the Making of a Computational Planet*. Minneapolis: University of Minnesota Press.

Gago, Verónica. 2017. *Neoliberalism from Below: Popular Pragmatics and Baroque Economics*. Durham, NC: Duke University Press.

Gago, Verónica and Sandro Mezzadra. 2017. “A Critique of the Extractive Operations of Capital: Toward an Expanded Concept of Extractivism.” *Rethinking Marxism* 29, no. 4: 574-591.

Gaiety School of Acting. 2009. “Changes to Section 481 boost Irish Film Industry.” Accessed July 29, 2020. https://gaietyschoolofacting.wordpress.com/2009/05/05/changes-to-section-4/.

Gallagher, Alanna. 2017. “Smart Irishtown renovations could have Google appeal.” *The Irish Times*, June 13, 2017. https://www.irishtimes.com/life-and-style/homes-and-property/new-to-market/smart-irishtown-renovations-could-have-google-appeal-1.3117995.

Gavin, Aidan. 2018. “Property outlook 2019: interest to turn to secondary urban areas.” *The Irish Times*, December 5, 2018. https://www.irishtimes.com/business/commercial-property/property-outlook-2019-interest-to-turn-to-secondary-urban-areas-1.3707010.

Ghosh, Bishnupriya. 2004. “On Grafting the Vernacular: The Consequences of Postcolonial Spectrology.” *Boundary 2* 31, no. 2: 197-218.

Gibbons, Luke. 1996. *Transformations in Irish Culture*. South Bend, IN: University of Notre Dame Press.

Gill, Rosalind and Andy C. Pratt. 2008. “In the Social Factory?: Immaterial Labour, Precariousness and Cultural Work.” *Theory, Culture and Society* 25, no. 7-8: 1-30.

Gill, Rosalind, Andy C. Pratt, and Tarek E. Virani, editors. 2019. *Creative Hubs in Question: Place, Space, and Work in the Creative Economy*. New York: Palgrave Macmillan.

Gilmore, Ruth Wilson. 2020. “Ruth Wilson Gilmore Makes the Case for Abolition.” Interview

by Chenjerai Kumanyika. *The Intercept*, June 10, 2020.
https://theintercept.com/2020/06/10/ruth-wilson-gilmore-makes-the-case-for-abolition/.

Ging, Debbie. 2008. "Goldfish Memories? On Seeing and Hearing Marginalised Identities in Contemporary Irish Cinema," in *Facing the Other: Interdisciplinary Studies on Race, Gender and Social Justice in Ireland*, 182-203, edited by Borbála Faragó and Moynagh Sullivan. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Gladwin, Derek. 2016. *Contentious Terrains: Boglands, Ireland, Postcolonial Gothic*. Cork: Cork University Press.

Gleeson, Colin. 2018. "Google buys Bolands Quay site in Dublin's docklands." *The Irish Times*, May 18, 2018. https://www.irishtimes.com/business/technology/google-buys-bolands-quay-site-in-dublin-s-docklands-1.3500256.

Goodbody, Will. 2018. "Inside Facebook's Clonee data centre." *RTÉ*, September 15, 2018. https://www.rte.ie/news/ireland/2018/0914/993768-facebook-data-centre/.

---. 2020. "IDA Ireland warns of 'challenging' FDI outlook amid Covid-19." *RTÉ*, July 8, 2020. https://www.rte.ie/news/business/2020/0708/1152035-ida-ireland-on-fdi/.

Gómez-Barris, Macarena. 2017. *The Extractive Zone: Social Ecologies and Decolonial Perspectives*. Durham, NC: Duke University Press.

Government of Ireland. 2017. *An Bille um Pleanáil agus Forbairt (Bonneagar Straitéiseach) (Leasú)/ 2017 Planning and Development (Strategic Infrastructure) (Amendment) Bill 2017*. Dublin: The Stationary Office. https://data.oireachtas.ie/ie/oireachtas/bill/2017/120/eng/initiated/b12017d.pdf.

---. 2018a. *Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy*. June, 2018. https://dbei.gov.ie/en/Publications/Publication-files/Government-Statement-Data-Centres-Enterprise-Strategy.pdf.

---. 2018b. *Project Ireland 2040 National Planning Framework*. https://assets.gov.ie/7338/31f2c0e4ba744fd290206ac0da35f747.pdf.

Graham, Stephen and Nigel Thrift. 2007. "Out of Order: Understanding Repair and Maintenance." *Theory, Culture and Society* 24, no. 3: 1-25.

Graham, Stephen and Simon Marvin. 2001. *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition*. New York: Routledge.

Greenberg, Miriam. 2004. *Branding New York: How a City in Crisis Was Sold to the World*.

New York: Routledge.

Gregg, Melissa. 2018. *Counterproductive: Time Management in the Knowledge Economy*. Durham, NC: Duke University Press.

Guinan, Kerry. 2016. *The Impact and Instrumentalisation of Art in the Dublin Property Market: Evidence from Smithfield Dublin 1996-2016*. Self-published. https://www.academia.edu/30498471/The_Impact_and_Instrumentalisation_of_Art_in_the_Dublin_Property_Market.

Guinan, Kerry (@KerGuinan). 2020. "I'll start – once got told by dcc arts office that a court case is not an artwork and doesn't qualify for arts funding. Wanted to take dcc to court over the claim but not show up, leaving them to deliberate if the court case was an artwork." *Twitter*, April 24, 2020, 4:14pm. https://twitter.com/kerguinan/status/1253779330725011462?s=21.

Haiven, Max. 2014. *Cultures of Financialization: Fictitious Capital in Popular Culture and Everyday Life*. New York: Palgrave Macmillan.

Halberstam, Jack and Tavia Nyong'o. 2018. "Introduction: Theory in the Wild." *South Atlantic Quarterly* 117, no. 3: 453-464.

Hall, Stuart. 1982. "Cultural Studies: Two Paradigms." *Media, Culture and Society* 2: 57-72.

---. 2007. "Living with Difference: Stuart Hall in conversation with Bill Schwarz." Interview by Bill Schwarz. *Soundings: A Journal of Politics and Culture* 37: 148-158.

Halpern, Orit, Jesse LeCavalier, Nerea Calvillo, and Wolfgang Pietsch. 2013. "Test-bed Urbanism." *Public Culture* 25, no. 2: 272-306.

Hamilton, Peter. 2017. "JP Morgan move cements Capital Dock as flagship development." *The Irish Times*, May 15, 2017. https://www.irishtimes.com/business/construction/jp-morgan-move-cements-capital-dock-as-flagship-development-1.3083448.

---. 2019. "Troy Studios now largest production facility in Ireland after stage expansion." *The Irish Times*, December 17, 2019. https://www.irishtimes.com/business/media-and-marketing/troy-studios-now-largest-production-facility-in-ireland-after-stage-expansion-1.4118293.

---. 2020. "South Dublin Council sells land for film studios for €26.4m." *The Irish Times*, May 12, 2020. https://www.irishtimes.com/business/media-and-marketing/south-dublin-council-sells-land-for-film-studios-for-26-4m-1.4251388.

Hancock, Ciarán. 2017. "Nama to 'resolve' Remaining Ghost Estates by End of 2017." *The Irish Times*, January 5, 2017. https://www.irishtimes.com/business/financial-services/nama-to-resolve-remaining-ghost-estates-by-end-of-2017-1.2926635.

Haraway, Donna. 2015. "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin." *Environmental Humanities* 6: 159-165.

Hardt, Michael and Antonio Negri. 2000. *Empire*. Cambridge, MA: Harvard University Press.

Harney, Stefano and Fred Moten. 2013. *The Undercommons: Fugitive Planning and Black Study*. New York: Minor Compositions.

Harvey, David. 1990. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Malden, MA: Blackwell.

---. 2001. "Globalization and the Spatial Fix." *geographische revue* 2: 23-30.

---. 2005. *A Brief History of Neoliberalism*. Oxford, UK: Oxford University Press.

---. 2006. "Neo-liberalism as Creative Destruction." *Geografiska Annaler. Series B, Human Geography* 88, no. 2: 145-158.

Haughey, Anthony. 2018. "A Landscape of Crisis: Photographing Post-Celtic Tiger Ghost Estates," in *Imagining Suburbia in Literature and Culture*, 301-322, edited by Eoghan Smith and Simon Workman. New York: Palgrave-Macmillan.

Heaney, Seamus. 2001 (1975). *North*. London: Faber and Faber.

Hearne, Rory. 2013. "Politics and Protest in Ireland: A Brief History and a Call to Action." *Ireland after NAMA*, October 14, 2013. https://irelandafternama.wordpress.com/2013/10/14/politics-and-protest-in- ireland-a-brief-history-and-a-call-to-action/.

---. 2014. "Actually Existing Neoliberalism: Public-Private Partnerships in Public Service and Infrastructure Provision in Ireland," in *Neoliberal Urban Policy and the Transformation of the City: Reshaping Dublin*, 157-173, edited by Andrew MacLaran and Sinéad Kelly, New York: Palgrave Macmillan.

Heller-Roazen, Daniel. 2009. *The Enemy of All: Piracy and the Law of Nations*. Brooklyn: Zone Books.

Hesmondhalgh, David. 2007. *The Cultural Industries*. 2nd edition. New York: SAGE.

---. 2010. "Media Industry Studies, Media Production Studies," in *Media and Society*, 145-163, edited by James Curran. New York: Bloomsbury Academic Press.

Hesmondhalgh, David and Andy C. Pratt. 2005. "Cultural industries and cultural policy." *International Journal of Cultural Policy* 11, no. 1: 1-14.

Hetherington, Kregg. 2019. "Introduction: Keywords of the Anthropocene," in *Infrastructure, Environment, and Life in the Anthropocene*, 1-13, edited by Kregg Hetherington. Durham, NC: Duke University Press.

Higbee, Will and Song Hwee Lim. 2010. "Concepts of Transnational Cinema: Towards a Critical Transnationalism in Film Studies." *Transnational Cinemas* 1, no. 1: 7-21.

Higgins, Michael. 2012. "The Poorhouse Revisited." *Vimeo*. Video, 1:29. http://www.experimentalfilmsociety.com/film/the-poorhouse-revisited/.

Higgins, Michael D. 2015. Speech at the 2015 Aosdána General Assembly, March 5, 2015. Keynote Address. Royal Hospital, Kilmainham, Dublin, Ireland. http://www.president.ie/en/media-library/speeches/speech-at-the-2015-aosdana-general-assembly

Higson, Andrew. 2000. "The Limiting Imagination of National Cinema," in *Cinema and Nation*, edited by Mette Hjort, and Scott McKenzie. New York: Routledge.

Himpele, Jeffrey. 1996. "Film Distribution as Media: Mapping Difference in the Bolivian Cinemascape." *Visual Anthropology Review* 12, no. 1: 47-66.

Hjort, Mette. 2010. "On the Plurality of Cinematic Transnationalism," in *World Cinemas, Transnational Perspectives*, 12-33, edited by Nataša Durovicová and Kathleen E. Newman. New York: Routledge.

Ho, Karen. 2009. "Disciplining Investment Bankers, Disciplining the Economy: Wall Street's Institutional Culture of Crisis and the Downsizing of 'Corporate America.'" *American Anthropologist* 111, no. 2: 177-189.

Hogan, Mél. 2015a. "Data Flows and Water Woes: The Utah Data Center." *Big Data and Society* 2, no. 2: 1-12.

---. 2015b. "Facebook Data Storage Centers as the Archive's Underbelly." *Television and New Media* 16, no. 1: 3-18.

---. 2018. "Templating Life: DNA as Nature's Hard Drive." *Public*, special issue *Archive/Counter-Archive*, edited by May Chew, Susan Lord, and Janine Marchessault, 57: 145-153.

Holohan, Conn. 2010. *Cinema on the Periphery: Contemporary Irish and Spanish Film*. Dublin:

Irish Academic Press.

Holt, Jennifer and Alisa Perren. 2009. "Introduction: Does the World Really Need One More Field of Study?" in *Media Industries: History, Theory, Method*, 1-16, edited by Jennifer Holt and Alisa Perren. Malden, MA: Wiley-Blackwell.

Holt, Jennifer and Patrick Vonderau. 2015. "Where the Internet Lives: Data Centers as Cloud Infrastructures," in *Signal Traffic: Critical Studies of Media Infrastructures*, 71-93, edited by Lisa Parks and Nicole Starosielski. Champaign, IL: University of Illinois Press.

Horgan, John, Barbara O'Connor, and Helena Sheehan. 2007. Introduction, in *Mapping Irish Media: Critical Explorations*, 1-13. Dublin: University College Dublin Press.

Horkheimer, Max and Theodor Adorno. 2002. *Dialectic of Enlightenment: Philosophical Fragments*, edited by Gunzelin Schmid Noerr, translated by Edmund Jephcott. Stanford, CA: Stanford University Press.

Howe, Cymene. 2011. "Logics of the Wind: Development Desires over Oaxaca." *Anthropology News* 52, no. 5: 8.

Huber, Werner. 2009. "Celtic Tiger Cinema: Irish Dramatists and/as Filmmakers," in *Cinemas of Ireland*, 192-204, edited by Isabelle le Corff and Estelle Epinoux. Newcastle upon Tyne: Cambridge Scholars Publishing.

Hulme, Mike. 2017. *Weathered: Cultures of Climate*. New York: Sage.

Humphries, Conor and Lois Kapila. 2019. "A City Tour Reveals the Infrastructure of the Internet All around Us." *Dublin Inquirer*, May 22, 2019. https://dublininquirer.com/2019/05/22/a-city-tour-reveals-the-infrastructure-of-the-internet-all-around-us.

IDA Ireland. 2018. *A Study of the Economic Benefits of Data Centre Investment in Ireland*. May, 2018. https://www.idaireland.com/newsroom/publications/ida-ireland-economic-benefits-of-data-centre-inves.

IFTN. 2017. "Dublin Bay Studios Promoters Alan Moloney & James Morris Endorsed by Dublin City Council for 'Visionary' Project." May 19, 2017. http://www.iftn.ie/news/?act1=record&only=1&aid=73&rid=4290665&tpl=archnews&force=1.

Ignatiev, Noel. 1995. *How the Irish Became White*. New York: Routledge.

Image Now. N.d. "Bolands Quay Designing Dublin's Docklands." Video. http://www.imagenow.ie/projects/bolands-quay.

The Invisible Committee. 2017. *Now*. Translated by Robert Hurley. Los Angeles: Semiotext(e).

The Irish Advantage. 2018. "2018: The Year of the Data Center." Enterprise Ireland.
https://irishadvantage.us/2018-year-of-data-center/.

Irish Environment. 2012. "Ghost Estates." May 30, 2012.
http://www.irishenvironment.com/iepedia/ghost-estates/.

Irish Film Board. 2016. *Strategic Plan 2016-2020: Building on Success*.
https://www.screenireland.ie/images/uploads/general/IFB_Five_Year_Strategy_2016-
1.pdf.

Irish Glass Bottle Housing Action Group. 2016. "DATE FOR YOUR DIARY!!!" *Facebook*,
May 16, 2016.
https://www.facebook.com/IGBhousing/photos/a.1607147112909870/215912519771205
6/.

Irish History Podcast (@irishhistory). 2019. "If Notre Dame was in Dublin, there would be
surveyors in the ruins right now figuring how they could convert it into a hotel or a hub
for tax exempt tech startups." *Twitter*, April 16, 2019, 4:39am.
https://twitter.com/irishhistory/status/1118071399170617344.

The Irish Times. 2016. "Over 2,000 March in Athenry in Support of Apple Data Centre." *The
Irish Times*, November 6, 2016. https://www.irishtimes.com/business/technology/over-2-
000-march-in- athenry-in-support-of-apple-data-centre-1.2856916.

IWEA. 2020. *Data-Centre Implications for Energy Use in Ireland*.
https://www.iwea.com/images/files/9660bdc9488d1ce95c4f2ba74ce340bfb4831f.pdf.

Jackson, Steve J. 2014. "Rethinking Repair." In *Media Technologies: Essays on Communication,
Materiality and Society*, edited by Tarleton Gillespie, Pablo Boczkowski, and Kirsten
Foot. Cambridge, MA: MIT Press.

Jacobson, Brian. 2015. *Studios Before the System: Architecture, Technology, and the Emergence
of Cinematic Space*. New York: Columbia University Press.

James, Kevin J. 2014. *Tourism, Land and Landscape in Ireland: The Commodification of
Culture*. New York: Routledge.

Jenkins, Henry. 2006. *Convergence Culture: Where Old and New Media Collide*. New York:
NYU Press.

Johnson, Alix. 2019. "Emplacing data within imperial histories: imagining Iceland as data

centers' 'natural' home." *Culture Machine* 18. https://culturemachine.net/vol-18-the-nature-of-data-centers/emplacing-data/.

Jones, Campbell. 2020. "Introduction: The Return of Economic Planning." *South Atlantic Quarterly* 119, no. 1: 1-10.

Jones, Huw David. 2016. "The cultural and economic implications of UK/European co-production." *Transnational Cinemas* 7, no. 1: 1-20.

Jones, Penny. 2014. "Discovering Ireland." *Data Center Dynamics*, January 6, 2014. http://www.datacenterdynamics.com/content-tracks/power-cooling/discovering-ireland/84470.fullarticle.

Judge, Peter. 2017. "The data center life story." *Data Center Dynamics*, July 21, 2017. https://www.datacenterdynamics.com/analysis/the-data-center-life-story/.

---. 2019. "Floating data center approved for launch in Ireland." *Data Center Dynamics*, September 6, 2019. https://www.datacenterdynamics.com/en/news/floating-data-center-approved-launch-ireland/.

Kelly, Olivia. 2018. "Pigeon House power station and hotel set for redevelopment." *The Irish Times*, May 11, 2018. https://www.irishtimes.com/culture/heritage/pigeon-house-power-station-and-hotel-set-for-redevelopment-1.3492202.

---. 2019. "Five companies competing to redevelop Dublin's Pigeon House site." *The Irish Times*, January 7, 2019. https://www.irishtimes.com/culture/heritage/five-companies-competing-to-redevelop-dublin-s-pigeon-house-site-1.3749361.

Kelly, Sinéad. 2014. "Light-Touch Regulation: The Rise and Fall of the Irish Banking Sector." *Neoliberal Urban Policy and the Transformation of the City: Reshaping Dublin*, 37-52, edited by Andrew MacLaran and Sinéad Kelly, New York: Palgrave Macmillan.

Kennedy, Sinéad. 2003. "Irish women and the Celtic Tiger economy." In *The end of Irish history? Reflections on the Celtic Tiger*, 95-109, edited by Colin Coulter and Steve Coleman, Manchester: Manchester University Press.

Kennedy Wilson. 2016. "Capital Dock." *YouTube*. Video, September 20, 2016, 3:35. https://www.youtube.com/watch?v=hs4DWEMpdSg.

Kenny, Ciara. 2017. "It's 50 degrees in the Middle East. How do the Irish there cope?" *The Irish Times*, July 7, 2017. https://www.irishtimes.com/life-and-style/abroad/it-s-50-degrees-in-the-middle-east-how-do-the-irish-there-cope-1.3145431.

Kerr, Aphra. 2000. "Media diversity and cultural identities: The development of multimedia 'content' in Ireland." *New Media and Society* 2, no. 3: 286-312.

---. 2007. "Transnational Flows: Media Use by Poles in Ireland." *Mapping Irish Media: Critical Explorations*, 173-188, edited by John Horgan, Barbara O'Connor, and Helena Sheehan. Dublin: University College Dublin Press.

---. 2014. "Placing International Media Production." *Media Industries* 1, no. 1: 27-32.

Kerr, Aphra and Paschal Preston. 2001. "Digital media, nation-states, and local cultures: the case of multimedia 'content' production." *Media, Culture, and Society* 23, no. 1: 109-131.

Kerrigan, Páraic and Anne O'Brien. 2020. "Camping it up and toning it down: gay and lesbian sexual identity in media work." *Media, Culture and Society*, online first. https://doi.org/10.1177%2F0163443720908149.

Kidman, Shawna. 2019. Introduction, in *Comic Books Incorporated: How the Business of Comics Became the Business of Hollywood*, 1-17. Berkeley, CA: University of California Press.

Kilraine, John. 2019. "Permission granted for 3,500 new homes at Dublin's Poolbeg." *RTÉ*, April 11, 2019. https://www.rte.ie/news/dublin/2019/0411/1042035-poolbeg-housing/.

Kitchin, Rob. 2014. "The real-time city? Big data and smart urbanism." *GeoJournal* 79, no. 1: 1-14.

Kitchin, Rob and Brendan Bartley. 2007. "Ireland in the Twenty-First Century." *Understanding Contemporary Ireland*, 1-26, edited by Rob Kitchin and Brendan Bartley. London: Pluto Press.

Kitchin, Rob, Cian O'Callaghan, Mark Boyle, Justin Gleeson, and Karen Keaveney. 2012. "Placing Neoliberalism: The Rise and Fall of Ireland's Celtic Tiger." *Environment and Planning A: Economy and Space* 44, no. 6: 1302–1326.

Kitchin, Rob, Justin Gleeson, Karen Keaveney, and Cian O'Callaghan. 2010. "A Haunted Landscape: Housing and Ghost Estates in Post-Celtic Tiger Ireland." *NIRSA Working Paper Series* 59: 1-66.

Kitching, Karl. 2015. "How the Irish became CRT'd? 'Greening' Critical Race Theory, and the Pitfalls of a Normative Atlantic State View." *Race, Ethnicity and Education* 18, no. 2: 163-182.

Knuth, Sarah. 2019. "Cities and planetary repair: The problem with climate retrofitting."

Environment and Planning A: Economy and Space 51, no. 2: 487-504.

Laird, Heather. 2015. "European Postcolonial Studies and Ireland: Towards a Conversation amongst the Colonized of Europe." *Postcolonial Studies* 18, no. 4: 384-396.

Larkin, Brian. 2008. *Signal and Noise: Media, Infrastructure, and Urban Culture in Nigeria*. Durham, NC: Duke University Press.

---. 2013. "The Politics and Poetics of Infrastructure." *Annual Review of Anthropology* 42: 327-343.

Lawton, Phil. 2013. "Rethinking the Livable City in a Post Boom-Time Ireland." In *Spacing Ireland: Place, Society and Culture in a Post-Boom Era*, 102-115, edited by Caroline Crowley and Denis Linehan. Manchester: Manchester University Press.

---. 2014. "New Paper: Urban Governance and the 'European City': Ideals and Realities in Dublin, Ireland." *Ireland after NAMA*, March 27, 2014. https://irelandafternama.wordpress.com/tag/smithfield/.

Lawton, Phil, Enda Murphy, and Declan Redmond. 2014. "Neoliberlising the City 'creative-class' Style," in *Neoliberal Urban Policy and the Transformation of the City: Reshaping Dublin*, 189-202, edited by Andrew MacLaran and Sinead Kelly. New York: Palgrave Macmillan.

Lazzarato, Maurizio. 1996. "Immaterial Labor." Translated by Paul Colilli and Ed Emory, in *Radical Thought in Italy: A Potential Politics*, 142-157, edited by Paolo Virno and Michael Hardt. Minneapolis: University of Minnesota Press.

---. 2012. *The Making of Indebted Man: An Essay on the Neoliberal Condition*. Translated by Joshua David Jordan. Los Angeles: Semiotext(e).

LeCavalier, Jesse. 2016. *The Rule of Logistics: Walmart and the Architecture of Fulfillment*. Minneapolis: University of Minnesota Press.

Lee, Benjamin and Edward LiPuma. 2002. "Cultures of Circulation: Imaginations of Modernity." *Public Culture* 14, no. 1: 191-213.

---. 2004. *Financial Derivatives and the Globalization of Risk*. Durham, NC: Duke University Press.

Lefebvre, Henri. 1991 (1974). *The Production of Space*. Translated by Donald Nicholson Smith. Cambridge, MA: Blackwell.

Levidow, Les. "Marketizing higher education: neoliberal strategies and counter-strategies," in

The Virtual University? Knowledge, Markets and Management, 227-248, edited by Kevin
Robins and Frank Webster. Oxford, UK: Oxford University Press, 2002.

Levinson, Marc. 2016. *The Box: How the Shipping Container Made the World Smaller and the
World Economy Bigger*. Princeton, NJ: Princeton University Press.

Liang, Lawrence. 2005. "Porous Legalities and Avenues of Participation." *Sarai Reader 05:
Bare Acts*, edited by Lawrence Liang, 6-17. Delhi: The Sarai Programme.

Lima, João Marques. 2019. "Ireland Needs Urgent $10bn Energy Investment To Power Data
Centres." *Data Economy*, August 23, 2019. https://data-economy.com/ireland-needs-
urgent-10bn-energy-investment-to-power-data-centres/.

Lima, Valesca. 2018. "Delivering Social Housing: An Overview of the Housing Crisis in
Dublin." *Critical Housing Analysis* 5, no. 1: 1-11.

Limerick.ie. N.d. "Creative Limerick." Accessed July 29, 2020.
https://www.limerick.ie/creative-limerick.

Linehan, Denis and Caroline Crowley. 2013. "Introduction: Geographies of the Post-Boom Era,"
in *Spacing Ireland: Place, Society and Culture in a Post-Boom Era*, 1-14, edited by
Caroline Crowley and Denis Linehan. Manchester: Manchester University Press.

LiPuma, Edward. 2017. *The Social Life of Financial Derivatives: Markets, Risk, and Time*.
Durham, NC: Duke University Press.

Lloyd, David. 2003. "Rethinking national marxism: James Connolly and 'Celtic Communism.'"
Interventions: International Journal of Postcolonial Studies 5, no. 3: 345-370.

Lobato, Ramon. 2012. *Shadow Economies of Cinema: Mapping Informal Film Distribution*.
New York: Palgrave Macmillan.

Lobato, Ramon and Julian Thomas. 2015. *The Informal Media Economy*. Boston: Polity Press.

Lovink, Geert and Ned Rossiter. 2007. "Proposals for Creative Research: Introduction to the
MyCreativity Reader," in *MyCreativity Reader: A Critique of Creative Industries*, 11-17,
edited by Geert Lovink and Ned Rossiter. Amsterdam: Institute of Network Cultures.

Lowe, Lisa. 2015. *The Intimacies of Four Continents*. Durham, NC: Duke University Press,
2015.

Lukinbeal, Chris. 2011. "'On Location' Filming in San Diego County from1985–2005: How a
Cinematic Landscape Is Formed Through Incorporative Tasks and Represented Through
Mapped Inscriptions." *Annals of American Geographers* 102, no. 1: 171-190.

---. 2018. "A Geographic Approach to Old Tucson." *Mediapolis*.

      https://www.academia.edu/39331302/A_Geographic_Approach_to_Old_Tucson.

Lynch, Suzanne. 2017. "Apple fails to confirm Athenry data centre plans at Varadkar meeting."

      The Irish Times, November 3, 2017.

      https://www.irishtimes.com/business/technology/apple-fails-to-confirm-athenry-data-

      centre-plans-at-varadkar-meeting-1.3279061.

MacArthur, Joan. 2017. "Poolbeg West – Draft Planning Scheme." *SAMRA*. July 3, 2017.

      https://samra.ie/wp-content/uploads/2018/12/P20170703-SAMRA-POOLBEG-SDZ-

      Rev-2-3-7-17-Letter-Dublin-Docklands-DCC.pdf.

MacLaran, Andrew and Sinéad Kelly. 2014a. "Irish Neoliberalism and Neoliberal Urban

      Policy." *Neoliberal Urban Policy and the Transformation of the City: Reshaping Dublin*,

      20-36, edited by Andrew MacLaran and Sinéad Kelly. New York: Palgrave Macmillan.

---, editors. 2014b. *Neoliberal Urban Policy and the Transformation of the City: Reshaping*

      Dublin. New York: Palgrave Macmillan.

Mains, Susan P., Julie Cupples, and Chris Lukinbeal, editors. 2015. *Mediated Geographies and*

      Geographies of Media. New York: Springer.

Massey, Doreen. 2005. *For Space*. New York: Sage.

Marazzi, Christian. 2011. *The Violence of Financial Capitalism*. Translated by Kristina

      Lebedeva and Jason Francis McGimsey. Los Angeles: Semiotext(e).

Marks, Laura. 2020. "Streaming video, a link between pandemic and climate crisis." *Harun*

      Farocki Institut, April 16, 2020. https://www.harun-farocki-

      institut.org/en/2020/04/16/streaming-video-a-link-between-pandemic-and-climate-crisis-

      journal-of-visual-culture-hafi-2/?fbclid=IwAR3jb2gG4Xye8f-0u5NijLPBPJaA-

      6axLcbKDk4Jb_BeihTD23AlBqRD9Qw.

Marx, Karl. 1992. *Capital: Volume 1: A Critique of Political Economy*. Translated by Ben

      Fowkes. New York: Penguin Classics.

Mattern, Shannon. 2013. "Infrastructural Tourism." *Places*, July, 2013.

      https://placesjournal.org/article/infrastructural-tourism/?cn-reloaded=1.

---. 2017a. "A City Is Not a Computer." *Places*, February 2017.

      https://placesjournal.org/article/a-city-is-not-a-computer/?cn-reloaded=1.

---. 2017b. *Code, Clay, Data, and Dirt: Five Thousand Years of Urban Media*. Minneapolis:

University of Minnesota Press.

---. 2018. "Maintenance and Care." *Places*, November 2018.
https://placesjournal.org/article/maintenance-and-care/.

---. 2020. "Andrew Cuomo's Covid-19 Briefings Draw on the Persuasive Authority of
PowerPoint." *Artnews*, April 13, 2020. https://www.artnews.com/art-in-
america/features/andrew-cuomo-covid-briefings-powerpoint-slideshow-authority-
1202683735/.

Maxwell, Richard. 2014. "Media industries and the ecological crisis." *Media Industries Journal*
1, no. 2: 36–39.

Maxwell, Richard and Toby Miller. 2013. "Learning from Luddites: Media Labour, Technology,
and Life Below the Line," in *Theorising Cultural Work: Labour, Continuity and Change
in the Cultural Industries*, 113-121, edited by Mark Banks, Rosalind Gill, and Stephanie
Taylor. New York: Routledge.

Mayer, Vicki. 2011. *Below the Line: Producers and Production Studies in the New Television
Economy*. Durham, NC: Duke University Press.

---. 2017. *Almost Hollywood, Nearly New Orleans: The Lure of the Local Film Economy*.
Berkeley, CA: University of California Press.

Mayer, Vicki, Miranda J. Banks, and John T. Caldwell. "Introduction: Production Studies:
Routes and Routes," in *Production Studies: Cultural Studies of Media Industries*, 1-12.
New York: Routledge.

Mbembe, Achille. 2003. "Necropolitics." Translated by Libby Meinjes. *Public Culture* 15, no. 1:
11-40.

McCabe, Conor (@CMacCaba). 2020. "There's a creation myth about modern Ireland that needs
debunking. It's the one of an inward protectionist state until 1958 when Whitaker/Lemass
saved us with tax breaks & FDI. It's popped up in my current research on the Apple case
& its presence is highly frustrating 1/" *Twitter*, August 11, 2020, 7:33pm.
https://twitter.com/CMacCaba/status/1293329614924914688.

McCarthy, Anna. 2001. *Ambient Television: Visual Culture and Public Space*. Durham, NC:
Duke University Press.

McCormack, Derek. 2018. *Atmospheric Things: On the Allure of Environmental Envelopment*.
Durham, NC: Duke University Press.

McDonald, Henry. 2012. "Ireland is cool for Google as its data servers like the weather." *The Guardian*, December 23, 2012.
https://www.theguardian.com/technology/2012/dec/23/ireland- cool-google-data-servers-weather.

McGovern, Mark. 2002. "'The 'Craic' Market': Irish Theme Bars and the Commodification of Irishness in Contemporary Britain." *Irish Journal of Sociology* 11, no. 2: 77-98.

McLaughlin, John. 2015. "Data: Clouds and Precipitation." In *Infrastructure and the Architectures of Modernity in Ireland 1916-2016*, 185-199, edited by Gary A. Boyd and John McLaughlin. Burlington, VT: Ashgate.

McLoone, Martin. 2000. *Irish Film: The Emergence of a Contemporary Cinema*. London: British Film Institute.

---. 2008. *Film, Media and Popular Culture in Ireland: Cityscapes, Landscapes, Soundscapes*. Dublin: Irish Academic Press.

---. 2009. "National Cinema and Global Culture: The Case of Irish Cinema." In *Cinemas of Ireland*, 14-27, edited by Isabelle le Corff and Estelle Epinoux. Newcastle upon Tyne: Cambridge Scholars Publishing.

McMahon, Páraic. 2019. "Ennis Data Centre 'will be the same as having a goldmine.'" *The Clare Echo*, March 23, 2019. https://www.clareecho.ie/ennis-data-centre-will-be-the-same-as-having-a-goldmine/.

McRobbie, Angela. 2002. "Clubs to Companies: Notes on the Decline of Political Culture in Speeded Up Creative Worlds." *Cultural Studies* 16, no. 4: 516-531.

McWilliams, David. 2006. "A Warning from Deserted Ghost Estates." *David McWilliams*, October 1, 2006. http://www.davidmcwilliams.ie/a-warning-from-deserted-ghost-estates/.

Melhuish, Clare, Monica Degen, and Gillian Rose. 2016. "'The Real Modernity that Is Here': Understanding the Role of Digital Visualisations in the Production of a New Urban Imaginary at Msheireb Downtown, Doha." *City and Society* 28, no. 2: 222-245.

Melia, Paul. 2013. "EU Court Blocks Bypass over Fears of Damage to Protected Limestone." *Independent.ie*, April 12, 2013. https://www.independent.ie/irish-news/eu-court-blocks-bypass-over-fears-of-damage-to-protected-limestone-29191203.html.

Memery, Clodagh. 2001. "The Housing System and the Celtic Tiger: The State Response to a

Housing Crisis of Affordability and Access." *European Journal of Housing Policy* 1, no. 1: 79-104.

Meyer, Macy. 2018. "North Carolina film industry regains footing with revived film incentives." *The Daily Tar Heel*, October 8, 2018. https://www.dailytarheel.com/article/2018/10/film-incentives-1007.

Mezzadra, Sandro. 2013. "Double opening, split temporality, and new spatialities: an interview with Sandro Mezzadra on 'militant research.'" Interview by Glenda Garelli and Martina Tazzioli. *Postcolonial Studies* 16, no. 3: 309-319.

Mezzadra, Sandro and Brett Neilson. 2013a. *Border as Method: Or, the Multiplication of Labor*. Durham, NC: Duke University Press.

---. 2013b. "Extraction, Logistics, Finance: Global Crisis and the Politics of Operations." *Radical Philosophy* 178: 8-18.

---. 2015. "Operations of Capital." *The South Atlantic Quarterly* 114, no. 1: 1-9.

---. 2019. *The Politics of Operations: Excavating Contemporary Capitalism*. Durham, NC: Duke University Press.

Miller, Rich. 2009. "Google Unveils Its Container Data Center." *Data Center Dynamics*, April 1, 2009. http://www.datacenterknowledge.com/archives/2009/04/01/google-unveils-its-container-data-center.

---. 2011. "Outage in Dublin Knocks Amazon, Microsoft Data Centers Offline." *Data Center Knowledge*, August 7, 2011. https://www.datacenterknowledge.com/archives/2011/08/07/lightning-in-dublin-knocks-amazon-microsoft-data-centers-offline.

Miller, Toby. 2016. "The New International Division of Cultural Labor Revisited." *Icono 14* 14, no. 2: 97-121.

Miller, Toby, Freya Schiwy, and Marta Hernández Salván. 2011. "Distribution: the forgotten element in transnational cinema." *Transnational Cinemas* 2, no. 2: 197-215.

Miller, Toby, Richard Maxwell, Nitin Govil, and John McMurria. 2001. *Global Hollywood*. London: British Film Institute.

Mishra, Suman and Rebecca Kern-Stone. 2019. Introduction. *Transnational Media: Concepts and Cases*, 1-9, edited by Suman Mishra and Rebecca Kern-Stone. Hoboken, NJ: Wiley Blackwell.

Mitchell, Timothy. 2011. *Carbon Democracy: Political Power in the Age of Oil*. Brooklyn: Verso.

Molotch, Harvey. 1976. "The City as Urban Growth Machine: Toward a Political Economy of Place." *American Journal of Sociology* 82, no. 2: 309-332.

Moore, Hayden. 2020. "Excess Amazon heat to give low-cost hot water to Tallaght area." *Echo.ie*, February 19, 2020. https://www.echo.ie/show/article/excess-amazon-heat-to-give-low-cost-hot-water-to-tallaght-area.

Moore, Jason W. 2011. "Wall Street Is a Way of Organizing Nature." Interview by Tom Keefer. *Upping the Anti: A Journal of Theory and Action* 12: 39-53.

---. 2017. "The Capitalocene, Part I: on the nature and origins of our ecological crisis." *The Journal of Peasant Studies* 44, no. 3: 594-630.

Morby, Alice. 2016. "Airbnb unveils new headquarters in a disused Dublin warehouse." *Dezeen*, December 16, 2016. https://www.dezeen.com/2016/12/16/airbnb-unveils-new-headquarters-abandoned-dublin-warehouse/.

Mulally, Una. 2017. "Why are stunning Dublin murals being painted over?" *The Irish Times*, December 2, 2017. https://www.irishtimes.com/culture/art-and-design/why-are-stunning-dublin-murals-being-painted-over-1.3309756.

---. 2018. "Artist group Subset calls on council to change street art regulations." *The Irish Times*, June 15, 2018. https://www.irishtimes.com/culture/art-and-design/visual-art/artist-group-subset-calls-on-council-to-change-street-art-regulations-1.3531933.

Mulcahy, Niamh. 2017. "Entrepreneurial subjectivity and the political economy of daily life in the time of finance." *European Journal of Social Theory* 20, no. 2: 216-235.

Mulhall, Anne. 2013. "The Feng Shui of Lough Derg: Therapeutic Landscapes and the Marketing of Spirituality in Contemporary Ireland," in *Viewpoints: Theoretical Perspectives on Irish Visual Texts*, 13-28, edited by Claire Bracken and Emma Radley. Cork: Cork University Press.

Murphy, Denis. 2018. "Ardmore Studios, Film Workers, and the Irish State: Creative Labour in the 'Decade of Upheaval.'" *Saothar: Journal of the Irish Labour History Society* 43: 69-82.

Murphy, Denis and Maria O'Brien. 2015. "Irish Film Finance Rebooted: The New Section 481." *Estudios Irlandeses* 10: 225-27.

Murphy, Enda, Linda Fox-Rogers and Berna Grist. 2014. "The Political Economy of Legislative Change: Neoliberalising Planning Legislation," in *Neoliberal Urban Policy and the Transformation of the City: Reshaping Dublin*, 53-65, edited by Andrew MacLaran and Sinéad Kelly. New York: Palgrave Macmillan.

Murphy, Niall. 2018. "#Industry: Olcott Entertainment strikes deal for Ardmore Studios." *Scannain: Irish for Movies*, March 23, 2018. https://scannain.com/irish/industry/ardmore-studios-olcott-entertainment-purchase/.

National Asset Management Agency. N.d. "Our Work." Accessed July 29, 2020. https://www.nama.ie/our-work.

Neilson, Brett and Ned Rossiter. 2008. "Precarity as a Political Concept, or, Fordism as Exception." *Theory, Culture and Society* 25, no. 7-8: 51-72.

---. 2017. "'Buy Cheap, Sell Dear.'" In *Logistical Worlds: Infrastructure, Software, Labor*, 7-14, edited by Brett Neilson and Ned Rossiter. London: Open Humanities Press.

Neves, Joshua. 2013. "For the City Yet to Come: Planning's New Visual Culture." *Sarai Reader 09: Projections*, 291-297, edited by Raqs Media Collective and Shveta Sarda. http://archive.sarai.net/files/original/afb232aa9790b94453a01dc2b09cc4aa.pdf.

Newenham, Pamela. 2016. "An Bord Pleanála gives green light for Apple data centre." *The Irish Times*, August 12, 2016. https://www.irishtimes.com/business/construction/an-bord-plean%C3%A1la-gives-green-light-for-apple-data-centre-1.2754006.

Nitzsche, Susan. 2013. "From Periphery to Core (and Back)? Political, Journalistic, and Academic Perceptions of Celtic Tiger- and post-Celtic Tiger-Ireland." *Studi irlandesi: A Journal of Irish Studies* 3: 115-135.

Nye, Joseph S. 1990. "Soft Power." *Foreign Policy* 80: 153-171.

O'Brien, Anne. 2014. "'Men *own* television': why women leave media work." *Media, Culture and Society* 36, no. 8: 1207-1218.

O'Callaghan, Cian, Cesare Di Feliciantonio, and Michael Byrne. 2018. "Governing urban vacancy in post-crash Dublin: contested property and alternative social projects." *Urban Geography* 39, no. 6: 868-891.

O'Callaghan, Cian, Mark Boyle, and Rob Kitchin. 2014. "Post-Politics, Crisis, and Ireland's 'Ghost Estates.'" *Political Geography* 42: 121–133.

O'Callaghan, Cian, Sinéad Kelly, Mark Boyle, and Rob Kitchin. 2015. "Topologies and

Topgrahies of Ireland's Neoliberal Crisis." *Space and Polity* 19, no. 1: 31-46.

O'Connell, Dióg. 2010. *New Irish Storytellers: Narrative Strategies in Film*. Chicago: Intellect.

O'Donoghue, Paul. 2017. "Why Apple Has Been Stuck in a Three-Year Battle over Its Athenry Data Centre." *TheJournal.ie*, September 14, 2017. www.thejournal.ie/apple-data-centre-athery-explained-2- 3597680-Sep2017/.

---. 2018. "Amazon's grand plans for its new Dublin data centre could use as much power as a city." *TheJournal.ie*, January 14, 2018. https://www.thejournal.ie/amazon-data-centre-dublin-mulhuddart-3-3805691-Jan2018/.

O'Dwyer, Davin. 2015. "Ireland's data centre boom set to continue." *The Irish Times*, March 5, 2015. https://www.irishtimes.com/business/technology/ireland-s-data-centre-boom-set-to-continue-1.2126081.

O'Halloran, Barry. 2017. "IDA to Seek Advance Planning Permission for Future Data Centres." *The Irish Times*, October 16, 2017. https://www.irishtimes.com/business/work/ida-to-seek-advance-planning- permission-for-future-data-centres-1.3256935.

O'Halloran, Marie. 2017. "Ardmore Studios Site Planning Restrictions Will Maintain It as Film-Only Zone." *The Irish Times*, January 26, 2017. https://www.irishtimes.com/news/politics/oireachtas/ardmore-studios-site-planning-restrictions-will-maintain-it-as-film-only-zone-1.2952946

O'Hearn, Denis. 2001. *The Atlantic Economy: Britain, the US and Ireland*. Manchester: Manchester University Press.

---. 2016. "Ireland in the World System: An Interview with Denis O'Hearn." Interview by Aidan Beatty, Sharae Deckard, and Maurice Coakley. *Journal of World-Systems Research* 22, no. 1: 202-213.

Olsberg SPI with Nordcity. 2017. *Economic Analysis of the Audiovisual Sector in the Republic of Ireland*. https://www.chg.gov.ie/app/uploads/2018/06/economic-analysis-of-the-audiovisual-sector-in-the-republic-of-ireland.pdf.

O'Mahoney, Eoin and Philip Lawton. 2019. "Image circulation, development hoardings and new strategies of urban change." *Geografiska Annaler: Series B, Human Geography* 101, no. 3: 202-218.

O'Neill, Paul. 2018. "On Dublin, Amazon, and the 'Secret Region.'" *Dublin Inquirer*, November

28, 2018. https://www.dublininquirer.com/2018/11/28/paul-on-dublin-amazon-and-the-secret-region.

---. 2019a. "A guided tour of Dublin's physical Internet infrastructure." Interview by Régine Debatty. *We Make Money Not Art*, September 27, 2019. https://we-make-money-not-art.com/a-guided-tour-of-dublins-physical-internet-infrastructure/.

---. 2019b. "Underwater Cables Leave Ireland Tangled—and Implicated—in the Internet." *Dublin Inquirer*, February 20, 2019. https://www.dublininquirer.com/2019/02/20/paul-underwater-cables-leave-ireland-tangled-and-implicated-in-the-internet.

Ong, Aihwa. 2000. *Flexible Citizenship: The Cultural Logics of Transnationality*. Durham, NC: Duke University Press.

---. 2006. *Neoliberalism as Exception: Mutations in Citizenship and Sovereignty*. Durham, NC: Duke University Press.

Opaque Media: A Workshop. 2017. Accessed July 29, 2020. https://opaquemediaworkshop.wordpress.com/cfp/.

Ormston House. N.d. "About." Accessed July 29, 2020. http://ormstonhouse.com/about/.

O'Toole, Emer. 2017. "Waking the Feminists: Re-imagining the Space of the National Theatre in the Era of the Celtic Phoenix." *Lit: Literature Interpretation Theory* 28, no. 2: 134-152.

O'Toole, Fintan. 2015. "Beyond Belief – Why Did We Grant Disney's Skelligs Wish?" *The Irish Times*, September 1, 2015. https://www.irishtimes.com/opinion/fintan-o-toole-beyond-belief-why-grant-disney-s-skelligs-wish-for-star-wars-1.2335310.

---. 1997. *The Ex-Isle of Erin: Images of a Global Ireland*. Dublin: New Island Books.

Parc, Jimmyn. 2017. "The effects of protection in cultural industries: the case of the Korean film policies." *International Journal of Cultural Policy* 23, no. 5: 618-633.

Parker, Matt. 2019. "An Apple a day: Listening to data centre site selection through a sonospheric investigation." *Culture Machine* 18: 1-15. https://culturemachine.net/vol-18-the-nature-of-data- centers/an-apple-a-day/.

---. N.d. "Fields of Athenry." Accessed July 29, 2020. https://www.earthkeptwarm.com/fields-of-athenry/.

Parks, Lisa. 2005. *Cultures in Orbit: Satellites and the Televisual*. Durham, NC: Duke University Press.

---. 2009. "Around the Antenna Tree: The Politics of Infrastructural Visibility." *Flow Journal*,

March 6, 2009. https://www.flowjournal.org/2009/03/around-the-antenna-tree-the-politics-of-infrastructural-visibilitylisa-parks-uc-santa-barbara/.

---. 2015a. "'Stuff You Can Kick': Toward a Theory of Media Infrastructures," in *Between Humanities and the Digital*, 355-373, edited by Patrik Svensson and David Theo Goldberg. Cambridge, MA: MIT Press.

---. 2015b. "Water, Energy, Access: Materializing the Internet in Rural Zambia," in *Signal Traffic: Critical Studies of Media Infrastructures*, 115-136, edited by Lisa Parks and Nicole Starosielski. Champaign, IL: University of Illinois Press.

Parks, Lisa and Caren Kaplan, editors. 2017. *Life in the Age of Drone Warfare*. Durham, NC: Duke University Press.

Parks, Lisa, Lindsay Palmer, & Daniel Grinberg. 2017. "Media Fieldwork: Critical Reflections on Collaborative ICT Research in Rural Zambia," in *Applied Media Studies*, 97-116, edited by Kirsten Ostherr. New York: Routledge.

Parks, Lisa and Nicole Starosielski, editors. 2015. *Signal Traffic: Critical Studies of Media Infrastructures*. Champaign, IL: University of Illinois Press.

Paul, Mark. 2016. "Apple Remains Stuck in Mud in Fields of Athenry." *The Irish Times*, October 28, 2016. https://www.irishtimes.com/business/technology/apple-remains-stuck-in-mud-in-fields-of- athenry-1.2845918.

Perren, Alisa. 2013. "Rethinking Distribution for the Future of Media Industry Studies." *Cinema Journal* 52, no. 3: 165-171.

Peters, John Durham. 2015. *The Marvelous Clouds: Toward a Philosophy of Elemental Media*. Chicago: University of Chicago Press.

Pettitt, Lance. 2000. *Screening Ireland: Film and Television Representation*. Manchester: Manchester University Press.

Phelan, Sean. 2014. *Neoliberalism, Media, and the Political*. New York: Palgrave Macmillan.

Posor, David. 2014. "'End of the Line': Griffith College Student documents a Dublin Art Space's last Exhibition." *The Circular*, April 23, 2014. http://thecircular.org/end-of-the-line-griffith-college-student-documents-the-last-days-of-a-dublin-art-space/.

Povinelli, Elizabeth. 2011. *Economies of Abandonment: Social Belonging and Endurance in Late Liberalism*. Durham, NC: Duke University Press.

---. 2016. *Geontologies: A Requiem to Late Liberalism*. Durham, NC: Duke University Press.

Preston, Paschal. 2007. "Ireland's Way to the Information Society: Knowledge(s) and Media
      Matters," in *Mapping Irish Media: Critical Explorations*, 79-92, edited by John
      Horgan, Barbara O'Connor, and Helena Sheehan. Dublin: University College Dublin
      Press.

Preston, Paschal, Aphra Kerr, and Anthony Cawley. 2009. "Innovation and Knowledge in the
      Digital Media Sector: An Information Economy Approach." *Information,
      Communication, and Society* 7: 994-1014.

Pricewaterhouse Coopers. 2016. *Making sense of a complex world: Film financing
      arrangements*. *Media Industry Accounting Group* 11.
      https://www.pwc.fr/fr/assets/files/pdf/2016/07/film-financing-arrangements.pdf.

---. 2020. *Section 481 & The Film/TV Industry: Insights on the Sector's Contribution to the Irish
      Economy*.
      https://www.screenireland.ie/images/uploads/general/Screen_Industry_EIA_report.pdf.

Quigley, Mark. 2003. "Modernity's Edge: Speaking Silence on the Blasket Islands."
      Interventions: The International Journal of Postcolonial Studies 3, no.5: 382-406.

radiokerrynews. 2017. "Star Wars May Return to Kerry This Month." *Radio Kerry*, March 3,
      2017. https://www.radiokerry.ie/star-wars-may-return-west-kerry-month/.

Raleigh, David. 2018. "Troy Studios looks to bag more Netflix shows with expansion." *The Irish
      Times*, September 24, 2018. https://www.irishtimes.com/business/media-and-
      marketing/troy-studios-looks-to-bag-more-netflix-shows-with-expansion-1.3639515.

Rampazzo, Giovanna. 2016. "The production of *Ek Tha Tiger*: A marriage of convenience
      between Bollywood and the Irish film and tourist industries." *South Asian Popular
      Culture* 14, no. 3: 167-184.

Reddan, Fiona. 2019. "No social housing at trio of top Dublin docklands developments." *The
      Irish Times*, April 30, 2019. https://www.irishtimes.com/business/no-social-housing-at-
      trio-of-top-dublin-docklands-developments-1.3875456.

Regan, Aidan and Samuel Brazys. 2018. "Celtic Phoenix or Leprechaun Economics? The
      Politics of an FDI-led Growth Model in Europe." *New Political Economy* 23, no. 2: 223-
      238.

Republic of Ireland. 1993. Dáil Éireann, Ceisteanna, Questions. Oral Answers. - Film Industry.

Dublin, April 29, 1993. Houses of the Oireachtas.
https://www.oireachtas.ie/en/debates/question/1993-04-29/20/.

Rockett, Kevin. 2013. "Irish Film Censorship: Refusing the Fractured Family of Foreign Films,"
in *Silencing Cinema: Film Censorship around the World*, 207-220, edited by Daniel
Biltereyst and Roel Vande Winkel. New York: Palgrave Macmillan.

Rockett, Kevin, Luke Gibbons, and John Hill. 1987. *Cinema and Ireland*. London: Croom Helm.

Roggero, Gigi. 2011. "The Production of Living Knowledge." *The Production of Living
Knowledge: The Crisis of the University and the Transformation of Labor in Europe and
North America*, 87-111, translated by Enda Brophy. Philadelphia: Temple University
Press.

Rose, Gillian, Monica Degen, and Clare Melhuish. 2014. "Networks, Interfaces, and Computer-
Generated Images: Learning from Digital Visualisations of Urban Redevelopment
Projects." *Environment and Planning D: Society and Space* 32, no. 3: 386–403.

Rossiter, Ned. 2016. *Software, Infrastructure, Labor: A Media Theory of Logistical Nightmares*.
New York: Routledge.

RTÉ. 2018. "NAMA cuts exposure to ghost estates from 335 in 2010 to just 8." January 4, 2018.
https://www.rte.ie/news/business/2018/0104/931057-nama-2017-review/.

RTÉ News. 2017. "Permission Sought to Appeal Apple Athenry Decision to Supreme Court."
RTÉ News, December 5, 2017. https://www.rte.ie/news/courts/2017/1205/925069-apple-
athenry/.

Sadowski, Jathan and Frank Pasquale. 2015. "The Spectrum of Control: A Social Theory of the
Smart City." *First Monday: Peer-Reviewed Journal on the Internet* 20, no. 7.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2653860.

Sarkar, Bhaskar. 2010. "Tracking 'Global Media' in the Outposts of Globalization," in *World
Cinemas, Transnational Perspectives*, 34-58, edited by Nataša Durovicová and Kathleen
E. Newman. New York: Routledge.

Sassen, Saskia. 2001 (1991). *The Global City: New York, London, Tokyo*. 2nd edition. Princeton,
NJ: Princeton University Press.

Savvas, Antony. 2018. "Dublin To Become Biggest European Data Centre Market In 2019."
Data Economy, November 6, 2018. https://data-economy.com/dublin-to-become-biggest-
european-data-centre-market-in-2019/.

Schwab, Klaus. 2015. "The Fourth Industrial Revolution: What It Means and How to Respond." *Foreign Affairs*, December 12, 2015. https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution.

Scott, Allen J. 1999. "The cultural economy: geography and the creative field." *Media, Culture and Society* 21, no. 6: 807-817.

---. 2008. *Social Economy of the Metropolis: Cognitive-Cultural Capitalism and the Global Resurgence of Cities*. Oxford, UK: Oxford University Press.

Screen Skills Ireland. N.d. "Who We Are." Accessed July 29, 2020. https://www.screenskillsireland.ie/who-we-are/.

SEAI. 2017. *Ireland's Data Hosting Industry 2017*. https://www.seai.ie/publications/Irelands-Data-Hosting-Industry-2017.pdf.

Searle, Llerena Guiu. 2016. *Landscapes of Accumulation: Real Estate and the Neoliberal Imagination in Contemporary India*. Chicago: University of Chicago Press.

Sharpe, Kenan Bezhat. 2016. "The Lobster: Debt, Referenda, and False Choices." *Blind Field: A Journal of Cultural Inquiry*, July 1, 2016. https://blindfieldjournal.com/2016/07/01/the-lobster-debt-referenda-and- false-choices/.

Sheller, Mimi. 2014. "Global Energy Cultures of Speed and Lightness: Materials, Mobilities and Transnational Power." *Theory, Culture and Society* 31, no. 5: 127-154.

Siggins, Lorna. 2017. "Delight as Apple decision heralds 'Silicon Valley of west of Ireland.'" *The Irish Times*, October 12, 2017. https://www.irishtimes.com/news/ireland/irish-news/delight-as-apple-decision-heralds-silicon-valley-of-west-of-ireland-1.3254139.

Silicon Republic. 2016. "What makes Ireland the ultimate data centre capital of Europe?" *Silicon Republic*, March 27, 2016. https://www.siliconrepublic.com/enterprise/data-centre-network-ireland.

Simone, AbdouMaliq. 2004. "People as Infrastructure: Intersecting Fragments in Johannesburg." *Public Culture* 16, no. 3: 407-249.

Simpson, Tim. 2017. *Tourist Utopias: Offshore Islands, Enclave Spaces, and Mobile Imaginaries*. Amsterdam: Amsterdam University Press.

Slaby, Alexandra. 2011. "Whither Cultural Policy in Post Celtic Tiger Ireland?" *The Canadian Journal of Irish Studies* 37, no 1-2: 76-97.

Slattery, Laura. 2016. "Docklands Film Studio Should Go Ahead, Say Poolbeg Backers." *The*

Irish Times, December 19, 2016. https://www.irishtimes.com/business/media-and-marketing/docklands-film-studio-should-go-ahead-say-poolbeg-backers-1.2910553.

---. 2017. "Creative Ireland plan reaching 'squeaky bum time.'" *The Irish Times*, May 11, 2017. https://www.irishtimes.com/business/media-and-marketing/creative-ireland-plan-reaching-squeaky-bum-time-1.3079690.

Smith, Neil. 2008 (1984). *Uneven Development: Nature, Capital, and the Production of Space*. Third Edition. Athens, GA: University of Georgia Press.

Solocheck.ie. N.d. "Blackthorn Studios Limited." Accessed July 29, 2020. https://www.solocheck.ie/Irish-Company/Blackthorn-Studios-Limited-515616

Srnicek, Nick. 2016. *Platform Capitalism*. New York: Polity Press.

Star, Susan Leigh. 1999. "The Ethnography of Infrastructure." *American Behavioral Scientist* 43, no. 3: 377-391.

Starosielski, Nicole. 2015. *The Undersea Network*. Durham, NC: Duke University Press.

---. 2019. "Internet Infrastructure: Where foreign affairs and the climate crisis intersect." *OpenCanada.org*, July 30, 2019. https://www.opencanada.org/features/internet-infrastructure-where-foreign-affairs-and-climate-crisis-intersect/.

Stengers, Isabelle. 2017. "Autonomy and the Intrusion of Gaia." *South Atlantic Quarterly* 116, no. 2: 381- 400.

Steyerl, Hito. 2013. "How Not to Be Seen: A Fucking Didactic Education .MOV File." *Artforum*. Video, 15:52. https://www.artforum.com/video/hito-steyerl-how-not-to-be-seen-a-fucking-didactic-educational-mov-file-2013-51651.

---. 2017. *Duty Free Art*. Brooklyn: Verso.

Suess, Solveig. 2018. "Distributed Resistance, Streamlined Silk." *Synoptique: An Online Journal of Film and Moving Image Studies* 8, no. 1: 65-79.

Sullivan, Ben. 2016. "Facebook Is Doubling The Size Of Its Irish Data Centre." *Silicon.co.uk*, April 6, 2016. https://www.silicon.co.uk/cloud/datacenter/facebook-doubling-size-ireland-data-centre-189501.

Sundaram, Ravi. 2010. *Pirate Modernity: Delhi's Media Urbanism*. New York: Routledge.

---. 2015. "Publicity, Transparency, and the Circulation Engine: The Media Sting in India." *Current Anthropology* 56, supplement: S297-S305.

Szczepanik, Petr and Patrick Vonderau. 2013. Introduction. In *Behind the Screen: Inside*

European Production Cultures, 1-9, edited by Petr Szczepanik and Patrick Vonderau. New York: Palgrave Macmillan.

Tadiar, Neferti X. M. 2013. "Lifetimes of Disposability within Global Neoliberalism." *Social Text* 31, no. 2: 19-48.

Tanklar, Allar. 2017. "Investing in Forestry: for the Cash Flow, but also the Violins and the Poetry." *The European Investment Bank*, June 18, 2017. http://www.eib.org/en/stories/investing-in-forestry.

Taylor, A.R.E. 2019. "The Data Center as Technological Wilderness." *Culture Machine* 19. https://culturemachine.net/vol-18-the-nature-of-data-centers/the-data-center-as/.

Teicher, Jordan G. 2014. "A Stroll Through Ireland's Eerie Ghost Estates." *Slate*, August 10, 2020. https://slate.com/culture/2014/08/valerie-anex-photographs-ghost-estates-in-ireland-in-her-series-ghost-estates.html.

Terranova, Tiziana. 2000. "Free Labor: Producing Culture for the Digital Economy." *Social Text* 18, no. 2: 33-58.

Thomas, Cónal. 2017. "In a Thriving Corner of the City, Some Small Businesses Are Struggling." *Dublin Inquirer*, October 25, 2017. https://www.dublininquirer.com/2017/10/25/in-a-thriving-corner-of-the-city-some-small-businesses-are-struggling.

---. 2019. "'A spotlight on vacancy': Dublin 8 locals gather to protest vacant former factory." *Thejournal.ie*, January 26, 2019. https://www.thejournal.ie/a-spotlight-on-vacancy-dublin-8-locals-gather-to-protest-vacant-former-factory-4458801-Jan2019/.

Thrift, Nigel. 2008. *Non-Representational Theory: Space, Politics, Affect*. New York: Routledge.

Tipton, Gemma. 2009. "Life for the boom's dead spaces." *The Irish Times*, June 30, 2009: 17.

Titley, Gavan. 2015. "All aboard the migration nation." In *Ireland under Austerity: Neoliberal Crisis, Neoliberal Solutions*, 192-215, edited by Colin Coulter and Angela Nagle. Manchester: Manchester University Press.

Tom Fleming Creative Consultancy. 2015. *Cultural and creative spillovers in Europe: Report on a preliminary evidence review*. October 2015. https://www.artscouncil.org.uk/sites/default/files/download-file/Cultural_creative_spillovers_in_Europe_exec_sum.pdf.

Tourism Ireland. N.d. "Trip Idea: *Star Wars* on the Wild Atlantic Way." Accessed July 29, 2020.

https://www.ireland.com/en-no/articles/tripideas/star-wars-wild-atlantic-way/.

Tracy, Tony and Roddy Flynn. 2016. "Quantifying National Cinema: A Case Study of the Irish Film Board 1993–2013." *Film Studies* 14, no. 1: 32-53.

Trentmann, Frank. 2009. "Materiality in the Future of History: Things, Practices, and Politics." *Journal of British Studies* 48: 238-307.

Tsing, Anna. 2005. *Friction: An Ethnography of Global Connection*. Princeton, NJ: Princeton University Press.

---. 2009. "Supply Chains and the Human Condition." *Rethinking Marxism: A Journal of Economics, Culture and Society* 21, no. 2: 148-176.

---. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton, NJ: Princeton University Press.

Ulin, Julieann Veronica, Heather Edwards, and Sean O'Brien, editors. 2013. *Race and Immigration in the New Ireland*. South Bend, IN: University of Notre Dame Press.

Urry, John. 2014. *Offshoring*. Boston: Polity Press.

Urry, John and Jonas Larsen. 2011. *The Tourist Gaze 3.0*. New York: Sage.

Van Egeraat, Chris, Sean O'Riain, and Aphra Kerr. 2013. "Social and Spatial Structures of Innovation in the Irish Animation Industry." *European Planning Studies* 21, no. 9: 1437-1455.

Velkova, Julia. 2016. "Data that warms: Waste heat, infrastructural convergence and the computation traffic commodity." *Big Data and Society* 3, no. 2: 1-10.

---. 2020. "The Art of Guarding the Russian Cloud: Infrastructural Labour in a Yandex Data Centre in Finland." *Digital Icons: Studies in Russian, Eurasion, and Central European New Media* 20: 47-63.

Vercellone, Carlo. 2007. "From Formal Subsumption to General Intellect: Elements for a Marxist Reading of the Thesis of Cognitive Capitalism." *Historical Materialism* 15, no. 1: 13-36.

Virno, Paolo. 2004. *A Grammar of the Multitude: For an Analysis of Contemporary Forms of Life*. Translated by Isabella Bertoletti, James Cascaito, and Andrea Casson. Los Angeles: Semiotext(e).

Vonderau, Asta. 2019. "Scaling the Cloud: Making State and Infrastructure in Sweden." *Ethnos: Journal of Anthropology* 84, no. 4: 698-718.

Vonderau, Patrick. 2014. "Industry Proximity." *Media Industries Journal* 1, no. 1: 69-74.

Vonk, Lisa. 2018. "Paying Attention to Waste: Apple's Circular Economy." *Continuum: Journal of Media and Cultural Studies* 32, no. 6: 745-757.

Wakefield, Stephanie. 2020. "Urban resilience as critique: Problematizing infrastructure in post-Sandy New York City." *Political Geography* 79: 1-12.

Wall, William. 2011. *Ghost Estate*. Ennistimon, IE: Salmon Poetry.

Wallerstein, Immanuel. 1976. "Semi Peripheral Countries and the Contemporary World Crisis." *Theory and Society* 3: 461-483.

Ward, Russ and John Carcone. 2015. "A New Approach to Financing Your Data Center." *Sirius Edge*, April 3, 2015. https://edge.siriuscom.com/infrastructure-operations/a-new-approach-to-financing-your-data-center.

Watkins, James. 2017. "Fintech companies vie for some of that Irish luck." *Ozy*, January 4, 2017. https://www.ozy.com/around-the-world/fintech-companies-vie-for-some-of-that-irish-luck/74576/.

Watts, Laura. 2018. *Energy at the End of the World: An Orkney Islands Saga*. Cambridge, MA: MIT Press.

White, Pauline. 2010. "Creative industries in a rural region: *Creative West:* The creative sector in the Western Region of Ireland." *Creative Industries Journal* 3, no. 1: 79-88.

Wilson, Sheena, Adam Carlson, and Imre Szeman, editors. 2017. *Petrocultures: Oil, Politics, Culture*. Montreal: McGill-Queen's University Press.

Woods, Killian. 2020. "Data centres use same amount of water as large towns." *Business Post*, June 14, 2020. https://www.businesspost.ie/utilities/data-centres-use-same-amount-of-water-as-large-towns-b1092219.

WRAP Fund. N.d. "Production." Accessed July 29, 2020. http://wrapfund.ie/wrap-funding/production/.

Wuerthele, Mike. 2018. "Apple's $1 billion Athenry, Ireland data center approved after legal challenges squashed." *Apple Insider*. https://appleinsider.com/articles/17/10/12/apples-1-billion-athenry-ireland-data-center-approved-after-legal-challenges-squashed.

Xu, Kathy. 2018. "Facing a Cloud-First Future, Ireland Is the Gateway to Europe: Data Center Post Interview with Tanya Duncan, Managing Director of Interxion." *Data Center Post*, February 22, 2018. https://datacenterpost.com/facing-a-cloud-first-future-ireland-is-the-

gateway-to-europe-data-center-post-interview-with-tanya-duncan-managing-director-of-
interxion/.

Yusoff, Kathryn. 2018. *A Billion Black Anthropocenes or None*. Minneapolis: University of
Minnesota Press.

Zayo. 2017. "Spotlight on Dublin: the world's data centre." May 30, 2017.
https://www.zayo.com/uk/spotlight-dublin-worlds-data-centre/.

Zıraman, Zehra Cerrahoğlu. 2019. "European co-productions and film style: Nuri Bilge
Ceylan." *Studies in European Cinema* 16, no. 1: 73-89.