Information, Immunity and Incredulity

An ethnographic study of HPV and COVID vaccine information practices in Dublin, Ireland

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PhD in Anthropology

For Helen, Finn and Callie

In memory of Gill, Alex and Jo

Declaration

I, Dan Nightingale, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

This thesis explores the relationship between vaccines, information and marginality in Dublin, Ireland. At its core, I ask why it is that many conversations about vaccines can be so difficult to hold or mobilise such strong sentiments. In particular, conversations about vaccine damage occur at the intersection of multiple, conflicting understandings of bodily events which ‘ricochet up’ through wider society with devastating effects (Parkhurst et al. 2017). As such, I do not position this work as an ethnography of ‘vaccine hesitancy’ (McDonald et al. 2015) amongst a particular group but use it as an emic concept that actively constructs and reconfigures social relations that form around vaccines. Central to this are questions of information; whose understandings and experiences of vaccination and the world are deemed important or admissible? At what points are specific ideas rejected, challenged or marginalised, and with what consequences for who? And how do tacit understandings of information, facts, data and their affordances shape the conversions within which they actively participate as opposed to merely represent?

By explicitly situating vaccines within the socio-material milieu as actors in their own right, I ethnographically trace their entanglements with different dimensions of life in Ireland such their relationships with scientific expertise, questions of gender, bodily norms and individual autonomy; the power of facts and the existence of putative alternatives; and the question of how failure is materialised when things go wrong through vaccine injury or a drop in public trust. I ultimately argue that a focus on vaccine “refusal” or “hesitancy” can at times produce the very forms of resistance that it seeks to overcome. Through

attending to the wider social dynamics that vaccines participate inI aim to explore different, less confrontational framings of conversations in public health, whilst also showing how anthropology is especially well-suited to engage with urgent contemporary conversations.

Impact Statement

In 2019 the World Health Organisation identified vaccine hesitancy as one of the ‘top ten threats’ to global health (WHO 2019; cf. McDonald et al. 2015). Despite being a scientifically robust, affordable, scalable and indeed widely celebrated cornerstone of public health, vaccination is periodically beset by public controversies. Amongst the more recent of these has been global fears around the side effects of the HPV vaccine, which offers near immunity to cervical cancers and significant protection against many others. In Japan the HPV vaccination rate dropped to just 0.1% after the government removed the vaccine from the recommended schedule (Yagi et al 2024), with smaller but significant drops occurring in France, Ireland, Denmark and others (Vaccine Confidence Project 2018).

“Vaccine hesitancy” itself has been subject to robust criticism as an inadequate framework for understanding the complexity of relationships that a particular group of people may have with vaccines. It has become a ‘catch-all’ term which fails to differentiate attitudes, behaviours and decision-making processes. It wraps together everything from small doubts about vaccine safety to hardened anti-vaccine activism (e.g. Peretti-Wattel et al. 2015, Bussink-Voorend et al. 2022). My work explores the situated social politics of vaccination in Dublin, Ireland through eighteen months of ethnographic fieldwork in two nine-month blocks with an eighteen-month gap caused by the COVID-19 pandemic. Adapting research initially focused on the HPV vaccine, I included the impact of the pandemic in my fieldsites.

Most existing works attempt to understand ‘vaccine-hesitancy’ for the purpose of restoring vaccine confidence or uptake.In contrast, I attend to the wider conversations that vaccines participate in within Ireland. This thesis looks to situate vaccines in broader cultural dynamics at a time of profound global change. Where the authority of facts struggles and public trust in governments is markedly volatile, what is to be done? By using ethnography as a tool to approach questions that are often beyond the scope of public health analysis this thesis can help to reformulate approaches, engage disenfranchised communities and sensitively engage immensely complex issues like vaccine injury and safety. Rather than trying to return to a stable status quo, my analysis explores how vaccines are entangled with shifting epistemic norms and wider cultural conversations in Ireland. In tracing these complex contours, I raise questions of how vaccines and vaccination programmes might be envisioned in a changing world.

Acknowledgments

Writing a PhD thesis is no small task, but – rather in keeping with the theme of this thesis – it isn't something undertaken alone. Rather, it is achieved with the help of a great many others. Whilst caffeine, snacks and the odd beer are of great importance amongst these, I will risk being accused of anthropocentrism (at least, by those that subscribe to the same types of social theory that I do) by privileging the humans over the non-human actors who made this endeavour possible.

It felt and feels daunting to write *anything* about vaccines – HPV, COVID or otherwise – given their complexity and the intensity of the conversation around them. On that basis, I owe a great deal of thanks to a great many people; peers, colleagues, participants, friends and family who supported me through the stresses and struggles that came along the way. Despite my misgivings, I hope that what I've written in the following chapters makes a small contribution to how we collectively think not just about vaccines, but the way we talk about them and to each other. Whether or not the following chapters make a worthy contribution, I leave to my examiners and any others that somehow end up reading this thesis. And if you *are* taking the time to read even the smallest part of this work: thank you for doing so.

First and foremost, I owe an enormous debt of gratitude to my supervisors – Hannah Knox, Aaron Parkhurst and Heidi Larson. Hannah has patiently provided valuable advice and feedback since I wrote my dissertation for my MSc far, far too long ago. Supervising me entailed reviewing what, at times, was little more than dog-eared bundles of theory-heavy notes kicked over the fence as I staggered from one crisis to the next. I think it's fair to say I wouldn't have finished this thesis in one piece without her supervision. Likewise, I want to thank Aaron Parkhurst for providing support, grounding and reassurance - particularly from the perspective of medical anthropology with which I was once much less familiar. And finally, I owe thanks to Heidi Larson's incredible depth of knowledge about vaccines, their politics, and their sensitivities. These have been invaluable in helping me navigate the turbulent waters of debates around vaccines. The orientation and grounding for this project would've been truly impossible without her input. I feel extremely lucky for the support that I've been given, so thank you to all three of you.

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For everyone I met in Ireland – be you a friend, a participant or both, you are missed. To everyone at the PHMT, thank you for the time you gave me – particularly amidst the stress of the pandemic. To Alison, Leanne, Stevie, Petya, Davey, Dave, Ruth, March, Leanneine, Miranda, Jenni, Rosie, Si, Moss, Laura, Marvin and so many others – you were a lifeline at challenging moments and excellent people to share many and various forms of craic with. Whether impromptu daytrips to castles, forty-person meet-ups for Dublin-wide Dungeons and Dragons, drinks down Street 66 or retreats in the Wicklow Mountains they're all memories I'll treasure wherever life takes me next.

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Most of all, thank you to Helen. Surviving the process of a PhD wouldn’t have been remotely possible without your love, support and patience. Thank you for being a brilliant wife, partner and best friend through the stresses and strains of the years it’s taken me to write this. Whilst I’ve endeavoured not to use dirty words like ontology at the dinner table, you’ve still listened to me talk about vaccines for far too long now. Finishing this acknowledgments section means that I can find another exciting topic to talk to you about - whilst actually getting paid for it!

Finally, thank you to Gill for convincing me to bail on the corporate world to go and study a thing called Digital Anthropology at UCL. We all miss you.

UCL Research Paper Declaration Form: referencing the doctoral candidate’s own published work(s)

2. For a research manuscript prepared for publication but that has not yet been published (if already published, please skip to section 3):

(a) What is the current title of the manuscript? Of Needles and Informational Haystacks: Vaccine (Mis)Information Practices in Dublin, Ireland

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d) List the manuscript’s authors in the intended authorship order: Dan Nightingale (nee Artus).

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4. In which chapter(s) of your thesis can this material be found? Chapter 5, edited to fit back in with the thesis.

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Dan Nightingale

Date: 24/11/2024

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1. Introduction: Of Haystacks and Needles

'…what if we think of vaccines as social and political from the start, and in fact already the subject of a firestorm of claims about what they are and what they do?'

-Anna Kirkland, *Vaccine Court* (2016, p.6)

'We Westerners are absolutely different from others!' - such is the moderns' victory cry, or protracted lament. The Great Divide between Us - Occidentals - and Them - everyone else, from the China seas to the Yucatan, from the Inuit to the Tasmanian aborigines - has not ceased to obsess us. Whatever they do, Westerners bring history along with them in the hulls of their caravels and their gunboats, in the cylinders of their telescopes and the pistons of their immunizing syringes'

-Bruno Latour, *We Have Never Been Modern* (1993, p.97)

1.1 Regrettable Encounters

It was November of 2019, three months into my time in Dublin. I was exploring the aftermath of a drop and recovery in Human Papilloma Virus (HPV) vaccine uptake in the Republic of Ireland, working with the Health Service Executive's (HSE) Public Health Mobilisation Team (PHMT) and the local community in an area known as Dublin 8. On that day, I was sitting at my laptop crafting a message to a group of people who thought that their children had been injured by the HPV vaccine.

The group called themselves REGRET[1] and they politely told me that they weren't interested in speaking with yet another academic, reporter or somebody else who didn't understand or would deliberately misrepresent their story. They also told me in no uncertain terms that they weren't 'vaccine hesitant' at all. Defined as 'delay in acceptance or refusal of vaccination despite availability of vaccination services', (MacDonald et al. 2015), it was a term I'd used to describe them, thinking that it sounded neutral from my immersion in literature on the topic. My interest was in exploring their experiences through the lens of critical medical anthropology - less in speaking to their core concern of a causal link between the HPV vaccine and the girls, but to tracing the ways that vaccines circulate in public discourses in Ireland.

They corrected me immediately on the basis that vaccine hesitancy wasn't an appropriate label and belied my lack of understanding of their experiences, as they made the simple point that they quite literally hadn't hesitated[2]. They'd read the information provided by the school, signed the consent form. They had trusted the nurses that administered the vaccine, the whole raft of state institutions that co-ordinated the endeavour, and - ultimately - trusted the HPV vaccine itself. This left me with a question that persisted for much of my fieldwork: why were they so hurt by the label 'vaccine hesitant?'

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[1] Which stands for 'Reactions and Effects of Gardasil Resulting in Extreme Trauma' - Gardasil being the marketing name for Merck's HPV vaccine in the European market.

[2] The term typically operates under the 'Three Cs' model of complacency, convenience and confidence. Additions have included collective responsibility and communication. Others have critiqued the term a 'catch-all term' too broad to be operationalised in any meaningful sense (Peretti-Wattell et al. 2015), failing to differentiate between attitudes and behaviour (Bussink-Voorend et al. 2022; cf. Larson 2022).

And, as I'd come to ask myself in the post-COVID part of my fieldwork[3], why were conversations that could be labeled 'vaccine hesitant' so charged? And what concepts are available to talk about the experiences of a group like REGRET for an ethnographer seeking to understand their experiences?

It should first be understood that they began with a remarkable level of support from the Irish public when they first started telling their story (Holland, Rosenberg and Iorio 2018, England et al. 2020). There were articles in major newspapers, politicians speaking up in the Seanad (the senate or upper chamber of the Irish government) and even a prime-time news documentary on ITV that explored the experience of the girls whose families were part of the organisation. Their sympathetic exposure in the mainstream media coincided with the drop in vaccine uptake that I'd originally gone to investigate (put in its wider transnational context in section 1.2 below). Some of REGRET's organisers were invited to speak with a committee made up of senior figures in the Irish Health Service Executive (HSE), clinicians and politicians to present their concerns. The stories that they told about the group that were termed 'the Gardasil girls' tend to fall into a familiar cadence.

Before they received the HPV vaccine these girls were depicted as talented young women with their whole lives ahead of them. They excelled at studies, had busy social lives, enjoyed hobbies of sports, music, art, dance and more. They had plans for the future once they'd gotten their school 'leaving cert'

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[3] I explain the impact of COVID on my fieldwork more fully in the methodology section. I interrupted my fieldwork for eighteen months, causing me to keep largely the same questions and research emphasis but adapted towards both vaccines.

(awarded at the end of school studies). And they took their HPV vaccines like any responsible citizen would, to the government-recommended schedule of three doses. Within a few weeks of receiving the HPV vaccine they would experience strange symptoms - lethargy, chronic pain, headaches, brain fog, memory impairment and seizures. Whilst sometimes they felt better after the first dose, these symptoms returned with greater intensity and duration after the second or third shots. General Practitioners (GPs) were unable to offer help or suggest a cause. Whilst parents initially didn’t link the symptoms with the HPV vaccine, they began searching online for anybody experiencing similar phenomena. Encountering other parents through social media and local networks, they began discussions and came to the conclusion that the symptoms the girls were experiencing were similar enough to each other, and close enough in time after receiving the HPV vaccine that it was the likely culprit. These discussions would transform into a campaign that tried to raise awareness of their daughters’ situations. For a moment it looked like they might be heroes - whistleblowers, advocates for their daughters and would-be protectors of the nation’s younger girls as yet unharmed by this vaccine.

Yet events did not play out this way and their fortunes swiftly reversed. They gave evidence to a major epidemiological review by the European Medical Association (EMA), which ultimately found no linkage between the symptoms that had been reported across Europe. Bundled into Chronic Regional Pain Syndrome (CRPS) and Postural Orthostatic Tachycardia Syndrome (POTS), there was no suggestion that vaccinated girls had any higher instance of these conditions than the general population (EMA 2015). They considered that the symptoms were broadly similar to Myalgic Encephalomyelitis (ME) and Chronic Fatigue Syndrome (CFS), which appeared with a similar rate of frequency to CRPS and POTS. After the EMA review, the highly respected Cochrane Institute published a meta-analysis of the safety and efficacy of the HPV vaccine, systemically reviewing the literature on the topic. Similar to the EMA they found no evidence to back up the claims of groups like REGRET. The Cochrane review also reaffirmed the efficacy of the vaccine in preventing the cancers associated with the virus (Arbyn et al. 2018). Action too came from the Irish state, as the government formed the ‘HPV Alliance’ in 2017 – a cross-sector partnership involving more than thirty public, private and charitable organisations – focused on rebuilding public confidence in the HPV vaccine. With coordinated digital and traditional media campaigns HPV vaccine uptake gradually recovered to near pre-controversy levels (Corcoran et al. 2018). Public opinion concerning REGRET shifted in turn. They went from being a group of grieving parents, suffering young women and whistle-blowers to deluded agitators who risked the health of Irish women through leaving them vulnerable to now-preventable cervical cancer. Having once been believed, they were now described as ‘emotional terrorists’ by the head of the HSE (Ring 2017).

So, if REGRET are neither vaccine ‘hesitant’ nor deserving of the hyperbolically unkind terrorist label, then what language is appropriate to talk about their experiences? My proposal is, in one sense, very straightforward and draws on a familiar language: that of marginalisation. My proposal is that REGRET (and others that vocally criticise vaccines) can be considered a marginalised group. They depict themselves as advocates for their injured daughters, whistleblowers acting in the public interest and activists that have been crushed by the weight of powerful corporate and government interests. By their accounting, they have been persistently ignored, mocked and sidelined. Taking marginalisation as ‘a context-dependent social process of “othering”—where certain individuals or groups are systematically excluded based on societal norms and values—and the resulting experience of disadvantage’ (Fluit, Cortes-Garcia and von Soest 2024, p.7), I think it can be plausibly applied. Yet even if we can agree that REGRET are marginalised, what comes next? Typically, a diagnosis of marginality comes with suggestions for how a group can better be included in society and the barriers to their exclusion can be overcome. Does it therefore follow that society should de-stigmatise speaking about potential vaccine injuries and critically questioning vaccines more broadly, or that the HPV vaccine programme should be paused?

The friction that starts to emerge in these questions cuts to the heart of this thesis. My central concern is less establishing that REGRET is marginalised, and more a curiosity as to the ways in which heterodox interactions with vaccines can produce marginality. I propose/use the term ‘vaccine heterodoxy,’ by which I intend to denote behaviours and attitudes that could be described as ‘hesitant’ or ‘anti’, but stripped of any prior assumption of the desirability of vaccines (which I later term a methodological agnosticism). This allows for vaccination as a social phenomenon, equally concerned with orthodox belief sustained through social relations as it is with the science to which points. The prevailing separation of fact and value that often characterises vaccine discussion is an analytic precondition of modernity that also defends vaccines from speculative attack, and for the purpose of this thesis I reject it.

Activism and contesting margins were a common occurrence in my fieldsite in Ireland. My participants in Rialto, an area described by one participant (with their tongue slightly in their cheek!) as part of the ‘Independent Soviet of Dublin 8’ (D8 being the post-code or eircode) had been involved in community organising and activism for marginalised groups in many forms. Many residents had campaigned intensely in pro-choice, reproductive justice and wider feminist issues in the bleakness of women’s history in twentieth century, independent Ireland (e.g. Hogan 2022, Fitzsimmons 2020). Others were involved in smaller independent socialist parties, People Before Profit-Solidarity , Greens and Labour. Local housing estates that had struggled through decades of heroin addiction, crime and the attached stigma, fought for the right to be represented in the otherwise top-down regeneration plans that sought to strip away the old name and identity.

International politics and national history would mobilise this wider concern for solidarity too. Irish historico-political consciousness is steeped in rich stories of rebellion and resistance after centuries of English exploitation, colonialism and violence. These stories are mirrored in Irish culture as both popular and government support for underdogs on the global scale - as I observed firsthand when my neighbourhood quickly organised to offer support for Ukrainian refugees after the Russian invasion in 2022, at the very end of my fieldwork. Similar ongoing, long-term support for Palestine makes the headlines as Ireland continues to speak out against Israel in the United Nations, maintaining a strong presence in peacekeeping missions (Quinn 2018).

However, there is not always consensus on what constitutes a legitimate claim to marginal status in Ireland or elsewhere. On an anti-lockdown march in late 2021 I saw numerous Palestinian flags being flown alongside the Irish tricolour. There were banners rejecting discrimination against the unvaccinated, and the slogan ‘my body, my choice’ was being chanted - in this case in reference to behavioural restrictions or vaccine mandates. The political milieu was dizzyingly complex as I wondered whether comparisons were being made between Irish people under lockdown and the inhabitants of the Gaza Strip. Some of my participants would angrily reject any comparison between their feminist activism for bodily autonomy and the use of the historically pro-choice phrase in the context of the unvaccinated. They viewed it as a standard tactic of bad-faith appropriation by the far right, aiming to sway credulous centrists who elided bodies and lived experience by claiming their perspective was rooted in pure ‘reason.’

While both arguments can be made, my principle aim in this thesis isn’t in establishing that REGRET and similar groups are or aren’t ‘marginalised.’ Rather it concerns the processes by which claims to marginality are made, evaluated, accepted, contested or rejected in relation to vaccine heterodoxies. As I explore in more detail below, marginality is not a stable or single state; it is not totally definitive of any person or group, nor rooted in a fixed set of recognised categories. The material and temporal dimensions of the margins are particularly complex when they concern vaccines. Insofar as being ‘antivax’ is socially stigmatised, at what point does a view about a vaccine become surfaced and sustained as an identity, community or movement? When, where and how are these forms of marginality enacted? Put differently, outside of exceptional situations like the COVID-19 pandemic, nobody knows about your views on or experiences with vaccines when you’re walking down the street. As Ela Drazkiewicz writes, the strangeness of the ‘Otherness’ that comes with HPV vaccine hesitancy in Ireland consists solely in a person’s views on vaccination (Drazkiewicz 2021, p.73). So, how can this be engaged in ethnographic and empirical terms?

My approach is a multi-sited ethnographic study that cuts across both sides of the Covid-19 pandemic (which lead to an eighteen month interruption during the periods of lockdown). I worked with the Irish government’s Public Health Mobilisation Team (PHMT), my local community in Rialto where I lived and studied (predominantly through secondary literature, media and observation) REGRET and what I’ve termed the Freedom Activist Network (FAN). I take a multi-sited approach in response to a methodological challenge that comes with studying vaccination - that, generally, they don’t materially feature much in everyday life and are hard to access when they do. So, whilst particular parts of my fieldsite centre or frequently concern vaccines, they are in the main engaged through their representations. However, this raises the spectre of a problem that is central to my later analysis - the suggestion that vaccines exist as a stable, more-or-less immutable biomedical artefact about which correct and incorrect representations circulate. Many approaches to the ‘problem’ of vaccine hesitancy are contingent on minimising the impact of negative representations through fact-checking, banning prolific spreaders of ‘misinformation’ or adding disclaimers about controversial topics and public campaigns. This emphasis foreclosed discussion of many of the complex social dynamics at play.

I do not intend to deny the importance of robust scientific research into immunisation or properly-funded public health services to see them distributed. However, the deep-rooted ontological divide between fact and value serves as a protective mechanism for vaccines and the authority of public institutions that administer them. In being able to depict particular information as true and false, vaccines are stable and protected. Yet as epistemic commons fray at the edges, those studying threats to vaccine confidence need ‘to look at the new realities of contested science, challenged governments and publics armed with their own notions of evidence’ (Larson 2022, p.160). Where it is demanded that ‘mere’ belief is always-already subordinated to reason, a simple refusal leaves it twisting in the wind. That is, when it is asserted that vaccines simply work, refusal to take them is in many ways an ultimate regaining of power. Read frequently as ‘reality denial’, it leads one to the question as to what exactly is rejected along with a vaccine.

To that end, my approach is not to simply ask why people won’t take vaccines but to ethnographically sketch the realities with which their heterodoxies are interwoven. The margin I propose to explore is underpinned by a radical rupture with the epistemic, moral, political and social standards that vaccines constitute (but from which conventional framings render them separate). The common presumption may be of a culture that accepts scientific information, but this hegemony is powerless in the face of erosion or refusal of this acceptance. An analytic framework to account for this erosion requires careful tracing of how these components interlock. To that end, I view vaccines as distributed material-semiotic phenomena that are distributed through bodies, stories, media, ideas, memory and information. As Bernice Hausman puts it:

> “Experience matters. Belief matters. Science matters. All three are moving targets in the information society. If we follow Latour (1993) and refuse the nature/culture split, refuse the notion that science provides a kind of purified knowledge regardless of social context and individual experience, and embrace the ambivalence of the hybrids we are responsible for, then vaccination controversy provides an opportunity to reframe both the goals and practice of public health” (2016, p.197).

Thus my task is to develop a conceptualisation of information, itself rooted in the social and affective processes of establishing an intelligible common world from which one can be shunted to the margins. Put differently, I ask how a material-semiotic conception of marginalisation can support ethnographic engagement with

1.2 The HPV Vaccine: History and Context

Human Papillomavirus (HPV) is a double-stranded, non-enveloped virus that ‘infects squamous epithelia including the skin and mucosae of the upper respiratory and anogenital tracts' (2021, p.1). There are over one hundred known types of the virus, which are separated into high and low risk categories. The former are linked with various forms of cancer, with cervical cancers being by far the highest incidence at 99.7% (Wallboomers et al. 1999, Burd 2002). Despite this association, the vast majority of HPV infections pass without incident – some 90% clearing within two years of infection without complications. The long-term degradation of the basal cell epithelial layer – that is to say, the essentially undifferentiated 'stem' cells that specialise as they move towards the surface – while infected with HPV means that cells eventually lose their ability to reproduce correctly. Reproduction of cells without adequate biological quality-control mechanisms is, in the simplest terms, what allows cancers to form. The disruption to natural error-checking has hugely diverse aetiologies, but cellular infection by HPV is the chief mechanism for cervical cancer and a potential contributing factor for others.

HPV was linked with cervical cancers following the work of Harold zur Hausen and his team where traces of papillomavirus DNA were discovered in cervical cancer cells (Durst et al. 1983). As they write, 'the regular presence of HPV DNA in genital cancer biopsy samples does not per se prove an etiological involvement of these virus infections, although the apparent cancer specificity of HPV 16 is suggestive of such a role' (ibid., p.3815). Some sixteen years later, a landmark paper confirmed the association by findingthat 99.7% of the studied cervical cancer tissue samples were HPV-positive, representing 'the highest worldwide attributable fraction ever identified for a specific cause of human cancer' and therefore proposing that a 'prophylactic vaccination might almost eliminate cervical cancer worldwide' (Wallboomers et al. 1999, p.18). The authors also note the costs of running regular cervical screening programmes at a population level, which could become obsolete if vaccination eliminated such a high proportion of cases - making a prophylactic vaccine particularly attractive in the poorer countries of the Global South (ibid.).

With the link between HPV and cancer recognised, the race to develop the vaccine began in earnest. Akhatova et al. provide a recent review and summary of the history of the HPV vaccines, with the US-based pharmaceutical company Merck marketing Gardasil in 2006, followed by GSK offering Cervarix in 2007 (2022). In 2008, Merck would introduce a nonavalent version of Gardasil which targeted further high-risk strains of the virus beyond the two types associated with cervical cancer (Yusopov 2019). These vaccines were rapidly rolled out across the world, operating in over 80 countries, with the European Medical Association (EMA) providing marketing authorisation for Gardasil 4 in 2006 and Gardasil 9 in 2015. Developments continue to occur, with bivalent vaccines made in China having recently entered the market – ZerunBio's Walrinvax and Xiamen Innovax's Cecolin. These are significantly cheaper than the existing European and American-made vaccines, although they are only in the early stages of rollout in China (Wang et al. 2023). Being the vaccine used in Ireland, I will focus on Gardasil and use the term interchangeably with 'the HPV vaccine'. Ireland's programme began in 2009, using the Gardasil 4 on a three-dose schedule with an uptake consistently above 80%, with a high of 89.9% in 2014/15. However following the publicization of REGRET's stories, rates in some Irish counties dropped as low as 30% (HSPC 2023).

This sort of decrease in HPV vaccine acceptance echoed far beyond Ireland, caused by a wave of stories about long-term, life-altering side-effects. Around the world, vaccine uptake and confidence plummeted in their wake, most dramatically in Japan from 90% to 0.1% as the government dropped the vaccine from the recommended schedule (e.g. Larson et al. 2016, Yagi, Ueda and Kimura 2024). Whilst Japan is amongst the most extreme of examples, there were stories similar to Ireland's in Colombia, Denmark, France, India and Australia. By the time my fieldwork began in August 2019, rates had not recovered to the 86.9% high of 2014. Corcoran et al. praise the 'swift action' of the HPV vaccine alliance - a cross-sector partnership of more than thirty-five organisations - that worked to rebuild public confidence in the vaccine through public outreach with prominent scientists and media events (2018).

From 2010, there were small-scale reports of side-effects from the HPV vaccine emerging in the United States of America. Norma Erickson, a self-described 'citizen journalist', began to gather and publish these stories as part of her website, SaneVax.org. With the MMR-Autism controversies simmering away in the background (of which the infamous Andrew Wakefield was only a small part) the United States (US) had undertaken a large, public hearing in their Vaccine Court known as the Omnibus Autism Proceedings (OAP)[4]. This large-scale trial evaluated a series of test cases to set a precedent for the future

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[4] A now-retracted paper published in the Lancet by Andrew Wakefield suggested a link between the MMR vaccine and 'regressive autism'. This meant that otherwise healthy children without developmental issues would become non-verbal. Wakefield was famously exposed by the journalist Brian Deer in a landmark documentary in 2004, highlighting flaws in the paper itself but also identifying conflicting financial interests on the part of the former doctor.

handling of a far larger series of claims that vaccines had caused autism in children that had received them (Kirkland 2016). As such, the issue was prominent in public consciousness in the US. Waloo et al. also present an edited volume on issues around HPV controversies, focused on the US but containing much material relevant for a global picture (2010).

As of 2014, the issue became more global in scope. A flashpoint has been identified in which videos were circulated of adolescent girls who had received the HPV vaccine ‘fainting, twitching and arriving unconscious at emergency rooms’ in the poor, rural province of Carmen de Bolivar (Simas et al. 2019, p.163). The issue became of sufficient national importance that the president and government ministers were helicoptered into the province to directly address the situation. As Simas et al. describe:

> … the Colombian president, in an attempt to reassure the population, affirmed the symptoms being experienced by the school girls did not have a biological relation with the HPV vaccine, but that they were, in fact, a mass psychogenic reaction provoked by anxiety and perceptions of risk following the HPV vaccination… Deeming such dramatic symptoms to be psychological was seen as woefully inadequate, even insulting in a rural population suffering from social deprivation, severely affected by intra-familial violence and guerrilla/paramilitary violence.’ (ibid., p.165)

The contexts of social neglect and disenfranchisement that the residents of Carmen de Bolivar experienced was thus reinforced. Being told that what they experienced wasn't 'real' but merely psychosomatic amounted to being ignored and disbelieved. The capacity of the state and scientific experts to pronounce what is or isn't real reinscribes the division between the periphery and the centre. It is a boundary that, by definition, is incontestable - it presents a line between the real and the unreal, fact and fiction, truth and lies. I next turn to the concept of marginalisation itself and its relation to both vaccines and anthropology.

1.3 Anthropology, Vaccines and Marginalisation

A margin is a small strip at the edge of a page, usually separated by a vertical line. Running in parallel to the centre, it is chiefly notable due to being so visibly, markedly smaller. Margins originated, apocryphally, to protect valuable written content from the gnawing of rats - if they only chew at the edges, then they only consume empty space. Today they presumably remain due to some combination of habit, readability and a space to make notes and comments. In both narratives, the margin exists in a subordinate or subservient relation to the main page. It points beyond itself by virtue of its existence, telling you what is important by virtue of the fact that it, itself, is not. It takes up less space; it exists to be empty, chewed up or contain cramped commentary on the main text. For all the nuances of how social theories of marginality have been developed, the sense of a periphery measured against a centre runs through them. And, in both senses of the word margin, the notes quietly written there are often the most interesting things.

The term was first applied to people and groups by the sociologist Robert Park as a way to think about social integration in the late-industrial Cosmopolis (1927). The argument runs relatively straightforwardly; that specialized economies and global trade brought different peoples (he focused on racial and cultural groups) into close quarters through migration. As he puts it, ‘old clan and kinship groups are broken up and replaced by social organisation based on rational interest and temperamental predilections’ (ibid., p.890). The sociological question was one of how they would live, both alongside each other and in relation to the dominant culture. Throughout history, the ‘problem’ of co-existence and assimilation has often been dealt with violently or coercively, wherein war, conquest and slavery enforce assimilation (or at least submission) to a dominant culture. Whilst inter-group conflicts may be naturally resolved through time (with populations mixing and racial boundaries dissolving), the character of modern migration - free, fragmented and rapid - presented specific challenges to early twentieth century European empires. As a means of studying this complex problem at scale, Park suggests that it occurs in miniature in the figure of the ‘marginal man’: a person caught between two worlds yet belonging fully to neither, ‘of two cultures and two societies, which never completely interpenetrated and fused’ (ibid., p892). He saw in such a figure the microcosm of these wider problems of Imperial-industrial social integration, and used the example of the itinerant, intellectually and culturally sophisticated Jews that were nonetheless shunned as untrustworthy outsiders (a chilling example, given the events that would unfold in Europe less than a decade after he wrote). He believed that these marginal individuals internalised the broader sociopolitical tensions, providing an opportunity to study ‘the processes of civilisation and progress’ in minute detail (ibid., p.893).

Working later with Everett Stonequist, Park would develop this theory around the question of multi-culturalism and integration (1935). Whilst the concept of marginalisation has significantly developed through the twentieth century, it nonetheless retains the ‘problem’ of social integration. Particularly notable is the broadening of the ways in which a given person or group can be marginalised. Sixty years after Parks’ initial essay, Billison (1988), for example, remarks that marginalisation can be thought of in the three forms; the original form of cultural marginalisation, ‘social role marginalisation’ in which individuals struggle fit into or slip between social roles (e.g. adolescents, women entering particular professions) and structural marginalisation which drew on ‘conflict perspectives on oppression and exploitation’ (ibid., p.185). Key to Billison’s argument is that marginalization could be expanded beyond the cultural frame of ‘the marginal man’ set out by Park and Stonequist. This is reflected in a definition provided by Vargheese and Kumar who suggest marginalization can refer to ‘people or communities on the lower spectrum of the hierarchy in terms of economic, social or cultural resources or power’ (Vargheese and Kumar 2022, p.23).

Over the years, as many review articles of the concept would come to state, the term ‘marginalization’ has been ‘stretched into an elasticity approaching the proverbial Procrustean bed’ (Billison 1988, p.183; cf. Pilar and Udasco 2004). The situation is little better nearly forty years later, as Fluit, Cortes-Garcia and von Soest note that 'the multitude of research perspectives and different types of operationalizations of social marginalization tend to rather blur than clarify the field’ (2024, p.2). The ambiguity of the concept can make it challenging to discuss marginality in a coherent way, thus making it harder to allow interventions or comparison between marginalised populations. Both the concept itself and the criteria by which marginality can be identified are a dizzying mess. I will not visit the critiques in particular detail beyond this for the moment, save to say that the heterogeneity, complexity and instability of the category do not undercut the need for a language to talk about various forms of exclusion and disempowerment.

Both reviews focus on the need to explore how purportedly marginalised populations understand and experience social exclusion. Vargheese and Kumar, for example, suggest that the sociological literature on marginalisation tends to focus on either the ‘objective’ criteria for identifying marginality or the ‘subjective’, experiential dimensions (that they term ‘marginal personality). They suggest that, instead, the two should be considered intimately connected, in that ‘marginality is constituted by marginal personality and marginal situation’ (2022, p.36). Similarly, the review by Fluit, Cortes-Garcia and von Soest suggests a lack of attention ?in the literature to the experience of marginalised communities and groups, proposing that ‘incorporating self-perception metrics could significantly enhance our understanding of the subjective and perceptive aspects of marginalization, which has been understudied. These tools could also help identify groups in society that experience marginalization but are not currently recognized as such by researchers’ (2024, p.7). The challenges of studying a phenomenon as complex at marginalisation on a global scale cannot be overstated, which returns us to the questions that I set out in the first section above. How is it that social scientists know a group is marginalised and what happens once they are identified as such? Moreover, how are particular forms of marginality identified, legitimised and contested in different situations?

As I stated in the opening section of this introduction, I find the contextual and dynamic definition of marginalisation provided by Fluit, Cortes-Garcia and von Soest the most helpful as a general starting point. That is, as ‘a context-dependent social process of “othering”—where certain individuals or groups are systematically excluded based on societal norms and values—and the resulting experience of disadvantage’ (ibid., p.7). There are, within this, specific dynamics that emerge with a holistic, ethnographic approach to marginalisation. For example, marginalisation is not static, but subject to highly variable temporalities - such as an abrupt change of economic circumstances (e.g. Whelan 1996) or centuries of colonial domination, as is the case with Ireland (e.g. Ohlmeyer 2024). It is also key to recognise that while margins are vital to consider in order to fully understand the groups that inhabit them, even under the worst of conditions they do not encompass the whole of a given group or person’s being.

This is also reflected through changes in how anthropology has constructed its participants across time. Whilst initially treating the social groups they studied as natural phenomena, identifying structures, rules and patterns. This ignored the ways in which colonial administration framed the interactions between anthropologists and participants. Growing out of protest politics and social movements of the 1960s, critical attention to these dynamics undermined both the epistemological and ethical basis of how ethnography was undertaken (Asad 1973; Clifford and Marcus 1986; Gough 1960, 1993). Attention was increasingly drawn to how anthropology had supported colonial administrations, exacerbating the conditions of marginalisation, exploitation and suffering. Whilst there are many wider dynamics at play here, in no small part ethnographic studies engaged human suffering and marginality that the discipline had been both blind to and complicit in. This can be seen in relation to what Ortner terms ‘dark anthropology’ (2016) of the 1980s which turned its attention to sites of suffering and violence. Joel Robbins proposed that the ‘suffering slot’ had overtaken the classic image of ‘primitive’ peoples as those appropriate for anthropological study (2013). He argued that for people to be defined solely in terms of their pain ignores more complex dimensions of human life which are worthy of attention, such as attention to cross-cultural conceptions of ‘the good’ which human lives pursue. Other rejections of suffering and marginality as ethnographic preconditions also construct our participants as passive, helpless or in need of saving (e.g. Abu-Lughod 2013).

In sum, anthropological approaches to marginalisation are sensitive to the contexts in which marginal identities are produced. My task, in applying this to my immediate contexts in Ireland, is to explore the contours of how vaccines work in order to constitute and produce the particular form(s) of marginality experienced by vaccine heterodox groups or individuals. Indeed, where marginality is proactively claimed by those not vaccinated against COVID during lockdown or by REGRET, the local imbrications with other forms of activism and resistance make for a highly complex picture. Whilst sociological literature on marginalisation looks for thematic consistency and coherence tempered by subjective experience, cases proposed by vaccine heterodoxy raise awkward questions about the overarching logics of the category itself. What underpinning basis is there to the experience of marginality and what does an attempt at inclusion look like? Does this entail a wholesale rejection of the claims that the HPV vaccine is dangerous or merely a caveated sympathy subordinated to wider priorities of public health?

Making sense of marginality and vaccine heterodoxy in Ireland is, needless to say, a complex affair comprising many overlapping threads. Indeed, considered in terms of literature on vaccination, perhaps the most common depiction of marginalised groups is of those who lack access to immunisation services. There may be a mistrust of the state or contemporary biomedicine, language barriers or wider cultural reasons for not getting vaccinated. Margins in this construction present a barrier between people and vaccines to be overcome through public health campaigns, patient advocacy, clinical communication and so on (e.g. Gillibrand et al. 2024). These groups start off marginalised, and as part of this status also decline vaccinations. My work, however, depicts the experiences of some individuals and groups for whom the reverse is true - who may have previously had access to the mainstream, but who have entered the ‘margins’ partly or solely because of their decline or regret of vaccines. The reversal of this logic - of how resistance to vaccines is interlinked with marginality - produces the unique challenges that require careful explanation.

A common facet of the literature looking at marginalisation is a focus on the Global South, and consideration of the complex relationship between marginalisation and modernity. For example, Rajesh writes of the way in which Keralan state authorities depict the Adivasi (indigenous and tribal peoples) community in Southern India. Rajesh writes that:

> ‘...the Kerala state’s official discourse about Adivasi life, one that attributes to them the status of being ‘marginal’ concerning the mainstream, is associated with their alleged economic and educational ‘backwardness’, ‘primitive’ agricultural practices, the lack of infrastructural and institutional facilities such as roads, transportation, health centres, schools in Adivasi areas, poverty, their perceived ignorance and alcoholism…one of the fundamental presuppositions ingrained in these notions is that ‘marginality’ has been constituted ‘naturally’ against their disinclination to become ‘modern’’.
>
> (Rajesh 2023, p.336-337).

Modernity and margins are thus intimately entwined for the Keralan Adivasi community in the discourses of the Keralan state. Whilst their experience cannot be exhausted or solely depicted in terms of their being ‘non-modern’, the term carries significant weight in its public and institutional framings. My proposal is that vaccines can be positioned as intimately imbricated with wider imaginaries of modernity and techno-scientific progress. In the logics of global and public health, vaccine hesitancy in the global south is often presumed to be linked with cultural and geopolitical factors of ‘non-modern’ peoples, requiring complex forms of negotiation and translation to overcome. Many clinicians, scientists, public health professionals and politicians assume - often incorrectly - that those who question vaccination must be non-modern, they must have not accessed or not understood ‘the science.’ For my participants, this was rarely the case, which brings us to the complexities of constituting vaccine heterodox ‘inner margins’ in the Global North.

To make these connections plain requires a sense of the relationship between vaccination, modernity, global health and wider humanitarian discourses. Henderson, for example, writes of ‘the miracle of vaccination’ and the ‘grimness of life in a time before their invention’ (1997, p.236). Writing an editorial for the WHO’s global immunisation week in 2022, Binns and Low refer to vaccines as ‘among the greatest of all public health and medical advances’ which ‘has revolutionized the way that populations and individuals have gained the upper hand against infectious diseases’ (2022, p.329). For public health professionals, vaccination is such an obvious presumed positive that anyone with access to scientific education and information ‘must’ want them. Conversations about vaccine hesitancy instigated from this side often draw out tensions between visions of a modern, scientifically uplifted humanity and unenlightened ‘local’ populations whose hesitancy stands in the way of a disease-free utopia and universal progress. Insofar as vaccine acceptance is utterly mundane in the Global North, hesitancy (or resistance) is exceptional, and presumed both local and pathological in subaltern or minority populations. Didier Fassin highlights these ambiguities and complexities which rest in the ’global’ of Global Health, which ‘is inextricably worldwide and universal’ (2012, p.106) in an expansive and sweeping way that displaces everything that comes before it. This is particularly visible in the idea of the ‘worldwide’ which Fassin highlights as pointing to not only a spatial or territorial dimension, but a (sometimes silent) European exceptionalism where the (Western) general stands in for the particular, becoming normalised and reified in the process. Vincanne Adams highlights a similar perspective, as she writes that:

> ‘...the ‘global’ in global health today is frequently premised upon universalist notions of humanity by treating humanity as a given, a process that began during the era of human rights and has persisted in humanitarian-driven global health programs…’ (2016, p.186).

She registers the specific ways in which this image of the ‘global’ is caught up in universalist narratives of human progress. She proposes that the ‘Global’ can thus be considered in methodological as well as geographical terms to open up the situatedness of seemingly universal epistemic processes ‘to questions of how and when different kinds of evidence get produced and to what ends’ (ibid., p.191). She also highlights the tension between a spatially dislocated globalism and the localised social that ‘is not so much defined by particular narratives or even solely by the people we study, but by the objects, conceptual sites, and on-the-ground entanglements we are following’ (2016, p.188). The ‘Global’ within the construction of global health thus functions not just as magnanimity towards all of humankind, but in so doing actively constructs this post-political, scientific vision. Within these logics there is no place for anything other than grateful receipt and mutual celebration - to resist vaccines is therefore to resist progress itself.

The moral and epistemic confidence of this attitude plays out in various ways critically depicted by Eugene Richardson on the ‘coloniality of global health’ and the ‘epidemic of illusions… propagated by the coloniality of knowledge production' which 'ultimately privilege particular perspectives over others' (2020, p.5). He particularly critiques the indefatigable moral confidence and epistemic certainty with which global health initiatives and epidemiological methods - particularly those driven by 'big data' - construct their suffering, impoverished and grateful subjects. In a portrayal of the World Health Organisation's (WHO) response to the Ebola epidemic in 2013, and notably high West African mortality rates, he undertakes a playful ethnography of the WHO scientists as

> 'the primitive tribes of Lake Geneva, whose peculiar customs and beliefs have long played a leading role in shaping practices of "global health". Since the magical beliefs and practices of these barbarians have rarely been studied, it seemed desirable to investigate them as an example of the extremes to which human behaviour can go' (ibid., p.30).

Richardson concludes the book with a call to 'democratize knowledge production in the See of Global Health' through a type of epistemic Reformation through 'devolving scientific authority from "centres of calculation" in the Global North' (ibid., p.132). In wider terms, he hopes that the *pandemicity* - an optimistically global linkage through shared vulnerabilities of contagion - might rupture the insulation of the privileged communities and their 'conservative fables under a veil of scientism' (ibid, p.142).

In questioning the structures of the WHO, Richardson is not critiquing the provision of accessible healthcare for people in desperate situations, but rather the centralisation of knowledge production within a ‘global’ centre without consideration of the realities that unfold in the local peripheries that it purports to serve. In this modern, global, universalism there is no outside - only temporary forms of resistance to be overcome through being drawn into an ever-expanding centre. My proposal is that this very line between the modern and the non-modern is a constantly shifting boundary that is drawn and re-drawn across highly complex socio-material milieux. Within a public health context, who and when a person is modern is indexed in no small part by attitudes to vaccination, with its rejection being constitutive of a hostility to modernity itself.

This is borne out in recent ethnographic analyses of vaccine hesitancy. Writing on HPV vaccination in Barbados, Nicole Charles explores the local contexts that make sense of how vaccines are warily encountered in the long shadow of colonial violence. She draws attention to a popular meme commonly referred to as the ‘sceptical third world child’. It shows a picture of a young African boy with his arms folded and eyebrows raised, inevitably asking uncomfortable questions of residents in the Global North. It is obliquely and explicitly critical of the unexamined privileges of wealthier countries, resting on Western constructions of Africa. For example, one meme has him query that if he accepts a bible whether he’ll also receive food - commentary on the priorities of missionaries. Another has him ask why it is that people who have access to clean water via flushing toilets proceed to relieve themselves in it. This meme makes light of global inequalities, resting on uncomfortable essentialisms and assumptions. In the context of vaccines, the sceptical child questions the way in which some Western people refuse the vaccines he so willingly accepts. As Charles puts it 'the image grew to become the site of popular memes that juxtapose supposedly irrational Western behaviours, actions, and attitudes with the scepticism expressed by this young Ugandan child'. It suggests that 'those who might decline immunisation are less informed, knowledgeable, or educated than even the young boy in this image, who would seemingly always accept vaccinations, without hesitancy, if only he were given the chance' (2022, p.3).

For the purposes of Charles' analysis, this image works to deconstruct the (perhaps well-intentioned but) often cavalier arguments in favour of vaccines. Through highlighting deeply embedded colonial legacies, gendered and racialised hierarchies, and assumptions about vaccine-related behaviours, she moves to make space for locally-informed framings of vaccines that render otherwise seemingly 'irrational' attitudes eminently understandable. She intends 'to depathologize vaccine hesitancy through the Barbadian framing of suspicion' (p.13). She notes the localised, historical realities that produce suspicion as a protective, generative and affective expression of care in the face of the residues of historic colonial domination and contemporary economic precarity that her participants face. Charles traces the historical assonances of 'hesitancy' back to histories of 'racialized science, dispossession, and exploitation, all of which characterized the colonial period' (p.16). Furthermore, as the HPV vaccine can be constructed as prophylactic against a sexually transmitted infection, she highlights the construction of black female sexuality alongside the history of 'hypersexuality and erotic subjugation under slavery' (p.150). As she writes:

> ‘Suspicion demands that we sit in proximity to these histories. It implores that we rethink and revise our relationality to biomedicine, its inescapable entanglements in these histories of racism, pain and discomfort and in the understandings of care that these pasts continue to animate across space and time’ (ibid., p.8).

Charles takes pains to highlight the tensions between the models of neoliberal, biomedical rationalities and risk reduction with the lingering experiences that might propagate suspicion. She also points out that suspicion read specifically as an affective experience also charts a path back to the depiction of ‘hesitancy’ as irrational or misinformed. As she writes, with ‘antiscience viewpoints and disinformation increasingly mischaracterized on a global scale as merely irrational and nonsensical emotions’ (ibid., p.146), there is a tacit insistence that vaccine-seeking behaviour is predicated purely on rational acceptance of scientific data. For my purposes, the legacy of colonial violence in Barbados contextualises suspicion as an eminently reasonable response to the insistence on HPV vaccination.

Despite this critical analysis, Charles recognises the disparities in the burden of cervical cancer in Barbados and the importance of immunisation. Her call for engagement with ‘suspicion’ is a call for closer and more nuanced engagement with HPV vaccination rather than a caveating or a rejection. She calls for the continuing efforts of public health officials to promote vaccination, hoping that her work can ‘urgently inform and enrich these energies and support the holistic health of our populations with an ethics of radical care' (ibid., p.147). As such, a critical attention to the legacies of colonial violence and marginalisation renders seemingly 'irrational' behaviours as both eminently understandable and entirely justified (regardless of whether or not one agrees that vaccine refusal or acceptance is the 'right' course of action). The onus thus shifts towards institutions that promote vaccination to become sensitized to these politics as opposed to displacing them before the grand modernist bulldozer.

Despite this, vaccine hesitancy does not always occur within the Global South or countries that have such an explicit colonial legacy. I find Ben Kasstan's work *Making Bodies Kosher* on the Haredi Jewish community in Manchester useful to explore how cultural and religious differences exist within minority communities within the urban Global North (2019). His focus often draws on the far-reaching concept of immunity, particularly as it centres on the protection of a specific cultural way of life from outside influences. Writing about the positioning of his Haredi Jewish participants as 'hard-to-reach' for the public health measures of the British state, Kasstan's focus is on the differing and protective priorities of state biopolitics and the cultural, religious and ethnic identity of the Haredi jews. As he writes, he 'addresses the multiple ways in which a Jewish minority continuously attempts to manage encounters with the external world by focusing on the body as a terrain of intervention – especially in the context of maternity and infant care' (ibid., p.16). Presented as 'difficult' and intransigent by the British state, the framing of vaccine hesitancy constructs a wider tendency for public health to 'assimilate minority groups, but also how protective responses are subsequently fielded on the part of minorities' (ibid., p.24). Kasstan ultimately works to show how the community's self-understanding and protective impulses are at odds with the framings of large-scale immunisation campaigns. An expertise of the Haredi Jewish population is displayed in acts of translation between deeply embedded community understandings of bodies and selves, and the homogenising logics of state immunisation campaigns. The question of what is to be protected - cultural and religious identity, as opposed to solely biomedical conceptions of health - is what becomes visible when one attends to such questions of immunity.

If we read the experience of groups like REGRET in terms of marginalisation, then established and recognized forms of difference provide a legitimate defence (if not exemption) for delaying or refusing vaccination. If religious and cultural identity is something that vaccination must negotiate with, or colonial histories render worthy of suspicion, what sense can be made of vaccine hesitancy *within* the cultural mainstream of a wealthy, European country like Ireland (albeit one with its own complex history of English colonial domination)? If we attend to groups like REGRET, the FAN or any resistance towards vaccines, then what forms of margins are produced in the process and how can they be productively understood or engaged?

1.4 Writing Ireland, Writing Vaccines: Ethnography and Acceptable Margins

The argument so far runs that It is seemingly impossible for a rationally-minded individual to reject a vaccine on the basis of modern epistemic standards. Non-compliance with these standards is legitimated through historical and present experiences of modernity, either in the legacy of colonialism or more contemporary excesses of global capitalism and Western geopolitical outflow (e.g. Jegede 2007). Where the hand holding the syringe once prodded, beat and strangled you it's more than reasonable not to trust it when it claims to be acting in your benefit. Thus as I have traced above, the modern / non-modern divide becomes materialised and reproduced through vaccination campaigns themselves. It is eminently reasonable to be mistrustful of the beneficence of the wealthy Europeans and Americans when both history and present show the consequences. In the absence or remoteness of these histories, how are these phenomena to be explained in wealthy countries of the global north?

Ireland problematises this question from the start by having one of the longest single experiences of colonial domination in history. The country was, for centuries, under varying degrees of English control as a dominion, a colonial laboratory during the plantation period (Ohlymeyer 2024), Cromwell's slaughterhouse (o'Siourchu 2008), a member of the United Kingdom alongside Scotland and Wales, the still not-quite Free State (the peace with Britain after the revolutionary war required fealty to the crown despite granting independence, resulting in the Irish civil war) and eventually the independent, modern republic that it is today. I will not dwell on the details of this history at this stage, suffice to say that it is both remarkably complex and one largely forgotten about by the English (such as they ever truly knew it at all). Today Ireland bridges Europe and the United States in a way that Britain once did as a member of the European Union, exerting significant soft power on the global stage (Coakley 2024).

As it concerns marginality, then, I think few would describe Ireland as a marginalised country today or the Irish as a generally marginalised group. Indeed, as many of my participants also told me, the Irish could be considered as broadly popular around the world as the English weren't[5]. Yet within the century of independent Ireland's history there are groups that have been considered marginalised. Long-standing discrimination against travelling communities (Koca-Helvaci 2016) and the inhabitants of 'sink estates' carry deep-rooted social stigma (Conway, Corcoran & Cahill 2011) alongside wider class-related inequalities (Whelan 1996, Lowe 2022). As one youth worker I spoke with remarked, young people looking for work would frequently have their CV thrown in the bin as soon as a potential employer saw their postcode. The decline of the moral authority of the Catholic Church during the 1990s and joining the European Union oversaw a reorientation towards international trade and significant liberalisation on issues of gender and sexuality (Wilson & Hastings 2003). This culminated in referenda that legalised gay marriage in 2015 and legalised abortion in 2018. This combined with a colonial legacy baked into public historical-political consciousness has made Ireland a staunch defender of global underdogs, frequently acting as a mediator in conflicts and a frequent participant in United Nations Peacekeeping initiatives. To that end, the collective memory of historically marginal status informs both popular and

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[5] This playfully antagonistic banter was good-natured teasing, less predicated on history itself than general English ignorance concerning it combined with a willingness for the English to explain that history back to the Irish. I was introduced to the rather entertaining term 'Tansplaining' to capture this problem (the English are sometimes referred to as 'Tans', for the improvised black and tan uniforms of infamously brutal auxiliaries to the Royal Irish Constabulary fighting the IRA). There are interesting points to be made about the sociality of non-knowledge from my experience in the field as they concern both Ireland and vaccines, but I have opted to remove these for space and too strong a slant towards the autoethnographic. For more on non-knowledge / ignorance in anthropology, see Dilley and Kirsch (2015).

government ethos in the contemporary state. The question this raises, then, is how do vaccine heterodox marginalities unfold in this milieu?

Despite the optimistic picture and progress on many issues, historic problems still persist. This is particularly the case as regards women and healthcare. The HPV vaccine comes in the shadow of the CerviCheck scandal. The Irish government outsourced the analysis of cervical smear test results to a CerviCheck – a company based in the United States. In 2018 it was revealed that various test results had been misreported to more than two hundred Irish women (O'Donovan et al. 2021). Whilst this led to disastrous consequences for many women, the case of Vicky Phelan drew particularly significant media attention. Being given a false negative in 2011, her cervical cancer advanced untreated over the course of several years – ‘had Phelan’s test results been correctly interpreted in 2011, she might have had a 90% chance of survival’ (Dyer 2018, p.1). Phelan tragically died in November 2022. Whilst this produced an uptick in people seeking cervical screening, it also contributed to a loss of trust in state healthcare amongst Irish women (e.g. O'Donovan et al. 2021). The mishandling combined with publicly visible, tragic consequences amounted to pouring petrol onto what one participant called a ‘bonfire of [negative] publicity’ around wider cervical cancer care of which HPV vaccination was a part.

This itself should be situated in conversations about women’s histories in Ireland, the focus of chapter six. In the context of wider women’s healthcare, a recent study by Huschke identifies a long-critiqued ‘paternalistic and hierarchical, embedded in a mistrust of women’ (2021, p.331) that underlies technocratic, highly medicalised model of care in pregnancy and birth. Reproductive healthcare in Ireland has its own lengthy history in the story of women's rights, with the repeal of the eight amendment legalising abortion in 2018 – nearly forty years after it was passed by popular referendum in 1983 (Fitzsimmons 2021). A propensity to mistrust HPV vaccination must thus be interpreted in the context of wider conversations about women's healthcare and the relationship with the state. Ela Drazkiewicz suggests that a transformation on the specific issue of vaccination must be accompanied by changes in how women are treated by the medical establishment and the state. As she proposes, 'once women are trusted and we create more fairness (encouraging partnership rather than hierarchical relationships), this suspicion towards vaccines will also begin to fade' (2021, p.72).

It might therefore be easy to connect wariness towards the HPV vaccine with these wider conversations. The moments when women become marginalised in the healthcare system concern not being listened to, taken seriously or overruled by physicians. I find two things interesting at this potential intersection between vaccine heterodox marginality and gender. The first is that REGRET, in their media narratives, made little appeal to these wider feminist politics. Drazkiewicz highlights a single tweet from the handle @vaccinecurious in her article (2021). This is an account that a participant in the PHMT they believe to be run by a conservative American vaccine sceptic utilising feminist politics to build their own wider arguments against vaccination.

Yet a recent article by Sundstrom (2021) presents REGRET's experiences in the language of a targeted 'misinformation campaign', not mentioning the group’s experiences. Rather, they are simply faceless actors that seek to repress women through leading them away from available healthcare. The author concludes with a redoubled need for a feminist approach to women’s healthcare rooted in reproductive justice. Whilst access to the HPV vaccine is unarguably a feminist issue where it is lacking a call for ‘solidarity’ against a marginalised group shows a momentary political short-circuit. Irish women still face a host of challenges and have fought tooth and nail to deconstruct the margins that they have been hemmed in by; morally, politically, legally and socially.

Reproductive healthcare entered the mainstream through the referendum, becoming co-opted by the state. As it became clear which way the wind was blowing, the government silently shifted their stance to become pro-choice – then-Taoiseach Leo Varadkar proclaiming the victory as a ‘quiet revolution’ in Dublin Castle. The activists, many of whom had been campaigning for decades, had been anything but quiet and felt that the government had co-opted the movement at the last moment. It overlooked the track records of many politicians that had been neutral at best or voted against pro-choice measures in the dail. To that end, claiming to be in favour of women’s rights downplayed the struggle against patriarchal marginalisation has been ongoing for most of the twentieth century (Hogan 2020). Certainly, the Irish healthcare system maintains its patriarchal history in how women are treated by many doctors. More importantly still, it is critical to recognise that access to equitable and even-handed healthcare remains a feminist issue.

Reproductive healthcare moved from an issue contested from the margin to one that enjoyed public, state and media support. Speaking of ‘solidarity’ against a misinformation campaign sits strangely when there’s no mention of a group of women speaking out against what they believe to be the side-effects of a pharmaceutical product. Even if, as the overwhelming amount of scientific evidence suggests, there is no causal link between the vaccine and the experiences of the young women represented by REGRET, it still amounts to the silencing and demonisation of a group of women and girls by powerful institutions. As I explore in chapter five, the category of ‘misinformation’ itself aligns critical feminist discourses with the epistemic hegemony that it so often critiques. Read from a vantage point of considering how vaccine heterodoxy produces marginal identity, the interaction between gendered marginality and vaccine heterodoxy plays out in the opposite way to what one might expect. I do not mean to say that REGRET’s experiences should be interpreted as a feminist issue, or that Irish feminists should have supported them. Rather in the analyses I have referenced here, it is interesting that quite the opposite happened; REGRET were represented as faceless antagonists attacking women. Their experience as a marginalised group of women was erased. Read through an anthropological lens that attends to marginality, vaccines reconfigured the intersection of marginal categories and resistance at a complex inflection point in the history of reproductive healthcare. From this, despite wider histories of women’s complex relationship with healthcare, it was public criticism of the HPV vaccine which was the primary determinant of REGRET’s marginal status.

Outside of the complexities of gender, Irish history and political consciousness surfaced in protests around public health measures during COVID. Lockdowns, ‘vaccine certs’ and the looming possibility of vaccine mandates mobilised highly visible public resistance in the form of rallies and marches. The largest of marches in Dublin that I attended in 2021 and 2022 took place outside the General Post Office (GPO) that had been the site of the Easter Rising in 1916. Repeated appeal was made to the histories of resistance and rebellion against unjust oppressors which had won the nation’s independence a century ago. Positioning the Irish as a people that would resist tyranny and injustice in any form came across in speeches and recitals at these rallies. A schoolteacher from an outlying Dublin suburb thundered lines from Padraig Pearse’s famous poem ‘the rebel’. This rebel spirit was invoked against what they held to be the tyranny of the day; restrictions on leaving homes and international travel, particularly the curtailment of the liberties of ‘the unvaccinated’ (those that had not taken COVID vaccines). Placards were waved and speeches angrily questioned the requirement for proof of vaccination to go about day-to-day business. Others highlighted the rapid development of the COVID vaccines and the usage of new mRNA technologies in several of them, questioning if they could even be called a ‘vaccine’ at this point. Vaccines and public health were being resisted via appeal to historical themes, invoking Ireland’s historically marginalised status and liberty hard fought for so easily surrendered.

These provocative comparisons were echoed as the phrase ‘my body, my choice’ was used at the marches as well. There remain open questions as to the motives of the speakers. The complexities of Irish right-wing politics are beyond the scope of what I can capture here. I will be circumspect in that I cannot adjudicate the extent to which activists that were there believed what they were saying as disingenuous opportunism.

Intellectual or principled arguments against lockdown and questioning vaccines were, outside of the immediate milieu of Irish politics, also vanishingly rare. , I return to the moment at which the famous political-legal philosopher Giorgio Agamben extended his arguments about the state of exception and Homo Sacer to a critique of global lockdown policies (2021; cf. MagShamhráin 2022). There is nothing intrinsically objectionable about his wider theories - indeed, he is widely used by Irish feminists in the discussion of women's marginal condition in relation to the state, with Lentin even coining the term 'femina sacer' (Lentin 2006, 2011). What interests me is why it is that vaccines are different, insofar as it concerns the imposition of state power on bodies. Why is Agamben applied to one case and not the other? This property of vaccines, that I term vaccine exceptionalism, subverts critical impulses.

For example - in her classic feminist work The Woman in the Body, Emily Martin is sharply critical of the construction of monthly menstruation as unnecessary, hurtful and even unnatural within the marketing of a new birth control pill named Seasonale. The pill promised a reduction in periods to four a year, or one per season. Martin traces the work of several anthropologists. notably Beverly Strassman, and her coverage of Seasonale in the New York Times. Strassman had worked with the Dogon women of Mali, noting that they experienced only 100 periods in their lives versus the average of 350 to 400 for Western women. For Martin, the implication is that the Dogon women stand in for a non-Western ‘state of nature’, without the inconvenience of muscle cramps and physical pain or more significant medical risks of anaemia. The narrative is thus that ‘ovulation and menstruation are not only abnormal, evolutionarily speaking, but dangerous to women’s health’ (2001, p.xiii). Martin is especially critical that ‘synthetic hormones could replicate a Dogon hormonal experience represents quite a leap’ (ibid., p.xviiii). The imaginaries of the body, femininity and nature contribute to pressures that women and their reproductive cycles constantly face. I am particularly interested in Martin’s critique of Seasonale specifically as a pharmaceutical object:

> “As the clinical trial results come in, I hope readers of this book will be able to ask the promoters of Seasonale questions like the following: Are you saying that the to return to the “natural” “real biology” found among the Dogon, we have to take a most “unnatural” thing: a pill made of synthetic hormones and designed by scientific researchers in collaboration with a pharmaceutical industry (Barr Laboratories), which stands to create a huge market for this product? Are not the long-range effects of synthetic hormones unknown? Are not the secondary effects of synthetic hormones also largely unknown, especially now that that recent evidence has shown that steroids (akin to synthetic hormones) are produced in and act on many regions of the brain…” (ibid, p.xiv)

Martin's questions are reminiscent of many of the concerns expressed by groups like REGRET that are critical of vaccines; the allegations that a market is being artificially created (Holland, Rosenberg & Iorio 2017, p.87) and the usage of new technologies are being released to market without the appropriate clinical safety data (ibid. p.42-57; Gotzsche & Jorgensen 2022; Jorgensen, Gotzsche & Jefferson 2020)[6].

This draws me back to a central problem of this thesis - what happens if we use the language of marginality as an alternative frame to vaccine hesitancy? The first response is to propose that, actually groups like REGRET or the FAN are not in fact marginalised at all. The exceptional character of vaccines - in which I mean both exemplary and excepted - produces margins of a particular character. I've heard arguments that being vaccinated is a choice, that it's for the collective good rather than just the individual, that it's not a question of value or a moral choice but of simple science. I think the construction of 'antivaxx' identities, resting - as Bernice Hausman puts it As Bernice Hausman writes, 'public controversy over vaccination depends upon a particularly damaging kind of group character assassination, much to the detriment of ongoing democratic dialogue… the image of the gullible,

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[6] Whilst I believe that Iorio, Rosenberg and Holland's work can be fairly called 'Grey Literature', doing the same is more with the work of Professor Peter Gotzsche and his colleagues. Gotzsche, once the head of the prestigious Nordic Cochrane Institute, raised concerns over how an EMA study on vaccine side effects had been conducted, as well as the extent to which pharmaceutical companies had gained influence over the organisation. He was subsequently ejected from the Cochrane Institute following a narrowly passed vote by the organisation's board. He positions himself as asking legitimate scientific questions which were shut down by the interests of the pharmaceutical companies looking to squash scientific enquiry and protect their profits. Whilst the efficacy of the HPV vaccine is not in doubt, the tension between the interests of private corporations, public health and their publics is far more ambiguous. He could certainly be read as a bitter man with a dubious agenda and an axe to grind. Even though it is important to highlight the existence of these debates, engaging with its minutiae falls outside the scope of this thesis (Gotzsche 2022).

misinformed parent circulates in pro-vaccine portrayals' (2020, p.13). As she also notes these are 'various beliefs and practices that are not that unusual in American society, and that much skepticism is sustained by popular suspicions of government, sponsored scientific research, and pharmaceutical companies' (ibid.). The question shifts, then, to the consequences of marginalised status. Does it follow that vaccine heterodoxy produces marginality if there is no sympathy, identification with their cause or desire to overcome these margins? Is solidarity a precondition for using this language?

Considering the collaborative mode of ethnography itself (e.g. Fleur-Lobhan 2007) that unfolded in the wake of the disciplinary shifts I alluded to above. To restate my key point, then, such normative questions cannot be settled without an interrogation of particular norms themselves. The question that this leaves, then, is how can we gain an understanding of the character of this marginality? I think an answer can be found as Drazkiewicz writes that 'what really determines the otherness of those not taking part in immunisation programmes are their views on vaccination (Drazkiewicz 2021, p.73). Marginality in this sense is not linked to a social category like race or gender, but rather in the cultural constitution of vaccines themselves. It may be tempting to read this as saying that this is a case of what vaccines can be said to represent or mean; that rejections of vaccines are readily perceived as rejections of the systems, epistemologies, scientific consensus and mutual relations of care which characterise 'normal life' for many in contemporary Ireland.

Marginality is, in no small part, epistemic. REGRET’s description of themselves as ‘injected and neglected’ and the phrase ‘our girls aren’t rumours’ when held in tension with discourses on misinformation and the Irish government’s urge to ‘get the facts, get the vaccine’ that I discuss in chapter two highlights a fundamental epistemic question. Likewise, the language of ‘science‘ or ‘reality denial’; the question from one participant as we spoke after an anti-lockdown march who was curious if they ‘had anything rational to say’, the insistence on ‘get the facts, get the vaccine’ (HSE 2019), of ‘emotional terrorists’ (Poole 2017) and ‘anti-vaccine barbarians’ (Simpson 2018). The problem is framed in terms not just of scientific information about vaccines, but wider social questions about the kinds of information that are and aren’t considered meaningful under particular circumstances. As Drazkiewicz notes, this is not a call for:

> ‘…the suspension of faith in the scientific evidence that vaccinations work, but instead an acknowledgement that not everything can be reduced to knowledge and evidence’ (2021, p.82)

However, many framings of the issue precisely echo this assumption. Alongside the COVID-19 pandemic the WHO declared an infodemic, defined ‘as too much information including false or misleading information in digital and physical environments during a disease outbreak’ (WHO 2023). Within this, discourses around misinformation, which can be defined as untrue information shared without an explicit intent to mislead (e.g. Polleri 2022). As I explore in chapter five, many of the embedded representational logics that accompany the concept of information itself reduce the issue to one of being able to identify the ‘correct’ information. Heidi Larson writes in a similar vein of the need to rethink the centrality of facts in analyses of vaccine hesitancy in the first place, in that ‘vaccine reluctance and refusal are not issues that can be addressed by merely changing the message or giving ‘more’ or ‘better’ information… cycles of rumouring are needed to reinforce social networks, share sentiments, and make sense of unknowns’ (2020, p.xxviii). I follow Larson further as she writes:

> ‘This is not a call to throw scientific facts out the window in favour of a sole focus on emotions and beliefs. The point is that we need a more holistic, context-aware and dynamic engagement between publics and those who develop the technologies and determine the policies and which depend on public cooperation for their success’
> (ibid, p.xxxiii).

A similar point is made by Fairhead and Leach in their criticism of the ‘deficit model’ of science communication, predicated on ‘default… ignorance or misunderstanding’ on the part of a general public (2007, p.23). Despite this, these same publics are ‘often alert to the particular social and political commitments that underpin what may be presented as objective, neutral and authoritative science’ (ibid.). If things cannot be reduced to knowledge and evidence, then what alternatives are available?

The ‘relational’ approach that Drazkiewicz proposes holds that that the social, experiential and affective needs to be taken into account in these conversations (2021). Indeed, much of the anger felt by groups like REGRET is rooted in a feeling of not being heard. Yet their claims are made in a scientific register, contesting not configurations of knowledge and power through critique or deconstruction. Rather, they seek to highlight flaws in safety trials and vested interests. Their claims are directed at vaccines themselves, as opposed to simply hesitancy. ‘Being heard’ within this sense is a conceptual impossibility, but one that contributes to and constructs vaccine heterodox marginalities. This ontological division between the social and the informational echoes wider modernist dualisms of facts / values, nature / culture, vaccines / hesitancy, science / politics. To ask how we can ‘add’ the social, political or experiential to the realm of facts, science and vaccines where the latter will always dominate the former is the mechanism by which vaccine heterodox marginality is produced. When considered in this frame, the response from society at large is simply ‘they’re wrong. What do you want us to do about it?. Scientific problems have social stakes. The modern / non-modern margin that surfaces in the global south or for cultural or religious minorities in the global north is reinscribed as a type of inner margin within the Irish cultural mainstream. These vaccine heterodox marginalities are produced through the very epistemic framings and ontological divisions that attempt to resolve them. Without an exemption from modernity’s epistemic standards via cultural, religious, political or historical difference, there is no accommodation to be made. This marginality exists in this complex landscape. If it is, as I have suggested, predicated on these ontological divisions, my approach is to fold these controversies - facts, values, truth, belief, vaccines, bodies, information, misinformation, normality - into the frame itself. It leaves the question, how is it that we can approach such a problem empirically and ethnographically?

1.5 Theoretical Framework: Margins, Information and Immunity

My proposal is that in order to make sense of vaccine heterodox marginalities we need to be able to speak of vaccines and information in the same breath. This rests, as I briefly set out in the introduction, on a set of theories called material semiotics (e.g. Law 2019). Put simply, it rejects the idea of 'the view from nowhere', instead attending to the processes, actors and contexts through which knowledge is produced and then circulates (e.g. Latour and Woolgar 1987, Latour 1989, 1999; Haraway 1987; Law 2019). Rather than 'hesitancy' and 'belief' producing alterity in the abstract through being simply 'wrong' (which echoes the evaluation and framings of information in public and media discourses of hesitancy), attending to the work these framings do as interwoven with and pulling apart from. Vaccine heterodoxy, then, is not an abstracted form of incorrect or even stigmatised knowledge but a material-semiotically constituted part of the phenomenon of vaccines itself.

As John Law puts it, material semiotics 'takes social enquiry to be contexted and situated, which means that impartial overviews are impossible', within which 'theory and the empirical cannot be levered apart' (Law 2019, p.2). It should be remembered that material semiotics specifically has its roots in philosophical and ethnographic accounts of scientific practice - things that explain how facts come from a pen to a page, but then seemingly escape the context of their production to become transcendentally, generally true. As such, whilst Law speaks of the empirical and theoretical we might also speak of continuity between objects and representations, or vaccines and information.

A good entry-point for material-semiotic analyses in public health is the work of Emily Yates-Doerr (2017, 2020). Drawing on her work at a Guatemalan obesity clinic, she explores the way in which bodies are not considered as pre-extant, stable artefacts that are judged and treated. Rather, the question of what they ‘are’ is open-ended, dynamic and participatory; the endless calibration of scales, positively and negatively framed lists of foods, interactions with doctors in the clinic all work to produce the ‘thing’ that we call the body. She proposes that we ‘centre analytic techniques that do not claim to know how bodies are structured from the outset’ (2017, p.145), treating bodies as created in the midst of conversations about them and practices that seek to reshape them. She ultimately argues that conceptualisations of health in medical anthropology focus on the body to the exclusion of other factors and approaches which might observe the process of research and reflect the priorities of our participants. As she writes:

> Instead of adopting the methods or goals of medicine and public health as our own, we might show how these methods and goals supplement, change, or fall short of the kinds of health people actively work towards outside of clinical spaces… [but rather] shifts the purpose of our research away from generalizable description of bodies and toward situated engagement with what bodies are made to be, leaving open the possibility that bodies do not figure at all (2017, p. 146)

The connotation is that questions about health can be read in terms broader than bodies, and that bodies themselves have a wider existence that goes far beyond the skin. In asking how they are constituted across a range of actors and practices, stories that belong to particular places emerge as opposed to starting with prefigured and general understandings. Vaccines, then, emerge as an ontologically heterogenous, distributed phenomenon ‘made up’ through a similarly diverse range of actors; bodies, memories, patient information leaflets, papers, books, text messages, epidemiological datasets, youtube videos, conversations, arguments and negotiations. Insofar as marginality might be thought of as a disengagement of relations, it begs the question of which relations vaccines can be traced through. This privileges neither bodily experience, but attempts to account for all of them. Rather than describing vaccines as dangerous or safe, effective or ineffective, it considers the circumstances under which these things are experienced and how they work in concert to actively constitute the phenomena. Thus rather than collapsing into correct or incorrect information about vaccines, I rather attend to how these different forms of evidence ripple through the social world, leaving particular groups outside it. So, a material-semiotic reading of vaccines sits them as a constituent part of the social world - the way that they reconfigure particular relations and rupture others is an eminently practical way to read marginality. What can be said of the concept of information, then?

I follow Gregory Bateson’s proposal that information can be considered ‘the difference that makes a difference’ (1972, p.459). A father to the nascent discipline of cybernetics, he saw information as present in recursive feedback loops and open systems. These he considered to be explicitly rooted in the material world, bridging divisions between different kinds of actors and their significatory capacities. Contemporary anthropological works draw on him as an inspiration for asking ‘can forests think?’ (Kohn 2013) or how disparate systems like climate change operate and can be known (Knox 2020). This approach helps us overcome the dualisms that I sketched in the previous section. As Hannah Knox writes of Bateson:

> ‘If we take nature “out there” to be material, and interpretations “in here” to be ideational, then it is necessary to decide at which point the material is transformed into the ideation — when the “raw” becomes ”cooked,” or when “reality” becomes ”data”. But if we follow Bateson in concerning ourselves not with the question of whether something is real but with its form, then things *and* data *and* their interpretation by humans or machines can all be addressed on the plane of signs. The task of the analyst thus becomes one of observing the interactions not only of a community of people but of an ecology of ideas of which people and their ideas are just one part.’ (2020, p.7)

This focus on difference - and which kinds of difference matter in which places - is the nexus that draws together the conceptual frame. Vaccines are not neatly separable from information about them, but rather continuous with them within this relational ecosystem. This links information explicitly to the social, material and other worlds - drawing it from being purely representational to something that is always more-than-socially entangled. Information actively co-produces and exists in the social world through producing and reconfiguring connections. Vaccine heterodox marginalities then become a question of how these negotiations, interminglings, comings-apart and ruptures unfold in a way that disconnects groups like REGRET from wider society. It isn’t that they’re ‘wrong-about-vaccines’, but that their ‘wrongness-about -vaccines’ entails wider sets of relations that are categorically left out of the picture. What, then, provides a means of drawing all of this together?

The concept I have in mind is that of immunity. At its core, it can be defined as a ‘protective response in the face of risk’ (Esposito 2011, p.1). Key here is that this is far wider than the clinical domain, as the concept has roots that go back far beyond the confines of modern immunology and medical discourses of something called an immune system (Martin 1990; Napier 2003, 2013, 2016, 2017). It spills over into realms as diverse as theology, law, biology, politics, communications and more besides (Esposito 2013, Silverstein 2009). As such, immunity is an expansive concept which goes beyond viral or bacterial pathogens towards a broader view of ‘contagion; where what was secure, healthy and identical to itself, is now exposed to a form of contamination that risks its devastation’ (2011, p.2). The line between similarity and difference can be articulated as vaccine heterodoxy and orthodoxy. It concerns the interplay of similarity and difference across a dividing line, of an inside and an outside riven by a hard border and mechanisms for allowing traffic across it. Another language for expressing what happens when somebody or something undesirable is forced across this boundary is marginalisation.

David Napier identifies the ready appeal of immunology as a cultural metaphor or cognitive patterning, noting that most cultures have some mechanism for the engagement of dangerous Others. For example, drawing on his ethnographic work in Bali he examines ritual dance as an immunitary strategy. He considers it a sophisticated means of negotiating and engaging with demons - a pronouncedly hostile, external Other (2003). How to navigate risky relations with prospectively hostile non-selves is at the root of many cultural practices, surfacing in different ways with different priorities. Yet he is also critical of how immunology and its discourses manifest in 'modern' cultures, particularly in their image of a neatly bounded self protected through the destruction of a hostile, external 'non-self' (cf. Martin 1990). Our hostile, external Other is - in this immunitary framing - vaccine heterodox communities and individuals.

Immunity thus initially makes sense as a world of hard borders - be they a cell membrane, the wall of a house, border controls or even behavioural norms (think of the phrase when somebody has 'crossed a line'). The thrust of Napier's contention with what he calls the 'age of immunology' is the loss of risky, transformative encounters with various kinds of Other. The force of his critique is targeted at what he identifies as a de-risked, post-political 'complacent centre' which congratulates itself for having tamed difference and even rendered it hospitable in the form of a 'cross-cultural potluck at which we each bring a different dish but eat by the same rules' (2003, p.5). One attendant at this dinner may well bring their delicacy, but people look askance at them when they eat with their hands or have dessert first before their main course. One of the silent rules of participation in this modern potluck is vaccination, whilst varying shades of momentary hesitancy are that which can be accommodated. Embedded deeply within this comfortable exchange is a narrow, existential-epistemic hypochondria where the capacity to engage with the certain kinds of difference that one might find uncomfortable or threatening is lost.

Napier expands and explores the connotations of an ‘immunological self’ and its lineage in an autonomous, Cartesian subject that has been dominant since the enlightenment. In a call to embrace xenophilia that echoes the call of post-humanists (e.g. Haraway 2016), he points out that human beings are never separated from their environment - be it socially, culturally or even in terms of the legions of symbiotic microbes that we share ‘our’ body with (2017). Shared patterns of acceptable relations determine who and what it is appropriate to relate to in what ways. This sense of self and selves strikes a fine balance between openness and closure that is quintessential to immunitary logics of inclusion and exclusion. Such as this model of immunity is predicated on the modernist dualisms - with hard borders, clear selves and Others - it is an engine that produces vaccine heterodox marginalities. What is the alternative proposed by Napier?

This comes through the linkage of information with immunity, as he suggests that immunity can be parsed as information-gathering behaviour, or ‘reconnaissance’, beyond the figurative and literal city walls. As he writes:

> ‘There is more information to be gathered in the world around us than any immune repertoire could ever suppose. Like the very migrants the xenophobic seek to keep out, the world coming your way has more on you - knows more about you - than you have on it, or probably know about it. Yes, we can fence ourselves in when we feel a deep and abiding fear about our own future welfare. We can claim that the house is full instead of admitting that its cupboards need replenishing from the fields beyond the fortress. But closing off the outside is only a short-term answer that can bring no new life’ (2017, p.79).

Napier’s is not a call to abolish borders and completely dissolve the self into entirely undifferentiated primordial goo, but rather to grapple seriously with questions of difference and what it entails. In the Batesonian sense given above, one might be said to be asking which kinds of difference matter in which ways. Information here spills over precisely into immunity – as one’s ability to carefully identify what one is aiming to protect. It is to recognise the impossibility of growth without exposure to meaningful forms of difference. Vaccine heterodoxy as a marker of difference does not demand simple acceptance, but more than simple rejection on the basis of being right or wrong. The conditions under which vaccines orthodoxy

Put differently, much of the scientific strength of vaccines relies fundamentally on cultural acceptance. Napier’s rejection of an easy delineation between self and other echoes a shift towards the relational approach that I take here. In turn, this is part of a wider shift away from the dualisms with which modernity is identified. As I stated above in my discussion of vaccine hesitancy and anthropological difference, the ‘great divide’ between civilisation / barbarism, rationality / superstition, science / politics, facts / values, technology / society surface in conversations about vaccines. To be vaccinated is to signify participation in modernity, just as to reject it from within signifies a failure of modernity. Whilst ‘the great divide’ acts as a protective immunitary boundary from hostile Others, non-vaccinating behaviour within the Global North represents an ontological fault-line *within* the ‘fortress walls’ that Napier describes.

It isn’t that framings for why people don’t want to take vaccines don’t exist or that they aren’t useful or important. It’s that the ones available can have deleterious effects when they come into direct contact with the people that public health authorities and governments most want to get vaccinated. My proposal is that a material-semiotic view of vaccines transforms them from an immunological object into an immunitary one. That is, vaccine heterodox marginalities can be understood through this informationally-mediated dance of recognition and non-recognition. Questions of right or wrong about vaccines become reconnected with the epistemic, material, moral, social, political, experiential milieu that they have always been part of. As Bernice Hausman writes:

> ‘Vaccination is therefore never just an issue of science or evidence, knowledge or ignorance, nature or society, but, in a profoundly Latourian

> sense, a hybrid that demonstrates its multiplicity by the epistemological and moral quandaries that it engenders. As a result, vaccination controversy and the stories that comprise it demonstrate the wager of modernity and its consequences' (2016, p.195).

Ethnographic attention to vaccine heterodox marginalities renders vaccines both stronger and weaker; more complex and more vulnerable. Culture does not only matter as an awkward mismatch with self-confidently universal, well-intentioned biomedical paradigms. Rather, it forces us to reckon with the taken-for-granted culture that sustains acceptance of vaccines, science and facts. Through forgetting what we think we know about vaccines, a material-semiotic approach proposes that we start with an open question. In order to understand the strength of the margins that vaccine heterodox can produce, we need to understand the deeply-entrenched values, attitudes and histories that have made them what they are – as well as the mechanisms that let those 'soft' social, cultural and political relations slip from view. To understand the marginality of groups like REGRET, then, entails an understanding of the common orthodoxies that hem them in.

1.6 Methodology & Ethical Considerations

My fieldwork consisted of 18 months of immersive ethnography across three main sites: Dublin (mostly via Rialto), the Public Health Mobilisation Team (PHMT) and the Freedom Activist Network (FAN). This period of time was split into two sections of nine months, with a break of another eighteen months during the pandemic. Rialto Village where I lived in Dublin, was a relatively conventional bounded field-site. Whilst I considered pseudonymising the place, its proximity to several prominent and historical landmarks – the site of the New Children’s hospital, its relationship with the Guinness Brewery, being adjacent to the South Circular Road – add context and ethnographic depth to many of the chapters ahead. Especially given some of the neighbouring parts of the community have complex histories that are well-studied, referencing the literature or first-hand accounts that the residents themselves have produced about living in the area would not be possible if using pseudonyms. As for my participants, themselves, I have outright pseudonymised and anonymised them. If anybody is more publicly named, I have confirmed that they are happy to be named in specific instances. There are likely other details present from interviews under a separate name – the import of the stories, themselves, remain the same.

A question that I frequently encountered from my participant was ‘why here? Why this community, this city, this country?’. What is it that makes Ireland an interesting place to study vaccination? The question of ‘why Rialto’ can be answered via that of sheer happenstance. How anthropologists select their particular fieldsites is at least as much owing to circumstance and expedience as it is direct interest in a particular place. Nancy Scheper-Hughes opens her book *Saints Scholars and Schizophrenics* with the experience of taking her letters of reference around a number of small villages until she found ‘Ballybran’ as somewhere that she was able to work (1995). I selected Dublin as a fieldsite given the presence of HSE bodies involved in delivering immunisation services. It is, admittedly, an oddity as far as Ireland is concerned and rather atypical of the wider country. I ended up living in Rialto for the simple reason of pragmatism; it was where I could find a room. As it transpired, there was a rich history involved with the origins of smallpox vaccination in Ireland (as I explore in the first body chapter). The area's complex social history, related to social deprivation and an epidemic of heroin use in the 1970s, made many of my participants involved in community work reassured that I'd come to live there by accident rather than opting to study a marginalised community.

There are also ethical and positional questions. Despite the complexities of my position as an Englishman in Ireland that I discussed in section 1.5, I do not believe there are intrinsic ethical problems of my contributing to the ongoing 'invention' of Ireland (Kilberd 1995). Rather, it demands respect for both my participants, the history and the frustrations that this has produced and continues to produce. This thesis is not an ethnography of Ireland of a particular community in it in the sense of writing an ethnography sense that Ben Kasstan (2021) or Nicole Charles have done above (2022). My entry-point into Ireland was because of the drop in HPV vaccine uptake, directed as a potentially interesting case-study by a supervisor.

As I was interested in attending to the everyday life of vaccines rather than just focusing on controversy (and the reification of conceptually inadequate identities that this entails), I was presented with a particular conundrum. Most people are vaccinated. The encounter is momentary, in hard-to-access spaces, the effects long-lasting and (by design) invisible outside of sophisticated epidemiological analyses. If we step away from the ethical imperative to 'get people to take vaccines' implied by the framing of hesitancy, we are left with an open field that enfolds the framings within it. Vaccines were my ethnographic focus. My intent is not to privilege or foreground any specific epistemology, but rather to map a field of multiple interactions across boundaries. The question of what it is to study vaccines as opposed to vaccine hesitancy ethnographically is thus one of the strands that run through this thesis.

Within this, however, I was keen to find spaces where vaccines did ‘happen’ in one way or another. Taking the principle that they are enacted and distributed, most present in information, conversation, memory and experience, the administrative centres. This brings me to the second of my field-sites I refer to as the Public Health Mobilisation Team (PHMT) - a pseudonymised, blended aggregate of the various public health teams I worked with. Prior to the pandemic, I anticipated little controversy in sharing the specific teams I was able to speak to and spend time with. However, given the rise in profile of many of these otherwise generally obscure organisations throughout COVID, my participants here requested a high degree of anonymity. The titles of specific roles have been changed, split apart and recombined where appropriate. Distinctions remain between clinical and non-clinical staff, although the broad remit includes cross-channel public health communication, logistics, health surveillance around both vaccines and in a wide range of other areas.

Finally, the Freedom Activist Network (FAN) is, again, an aggregate of the spaces I observed in their public activities. The network itself is made of dozens of public chat-rooms, websites, events and protests, rooted in local political networks that go far beyond resistance to vaccination. To protect the anonymity of those I observed and, indeed, the spaces themselves, I have blended data from multiple platforms and sources. I have avoided using direct quotations, occasionally referencing publicly shared memes or images with non-identifying information. Where quotations or identifying information is described, it has been from interviews, the speeches given in public at rallies in prominent urban locations (typically in front of the GPO in central Dublin), or from where these stories have featured prominently in national or local news media.

As concerns REGRET, I interviewed several members of an adjacent group at the beginning of the project. They were uncomfortable with signing the consent form, but the conversations shaped my understanding of the politics of the issue. I used secondary literature, the ‘grey’ literature published in works like *The HPV Vaccine on Trial*, *Shattered Dreams and From Trust To Betrayal* to gather stories that paralleled what I was told in interviews. This foreclosed substantial ethnographic engagement with these groups, but gave me enough of a sense of the affective and political dimensions of the work to undertake what I refer to as a limited ‘proxy ethnography’. It lacks the empirical depth and immersive work that allows me to make authoritative statements about these particular groups of individuals, but identifies the points of contact and ethical-methodological problems that are at the core of this thesis. To that end, I have been conservative and clear in the extent to which I have generalised these groups – rather moving ‘around’ vaccines in the material-semiotic manner which I have described.

My research made use of typical ethnographic techniques such as participant observation in physical and public digital spaces, alongside ethnographic and semi-structured interviews. In total, I conducted around 50 interviews with the same number of stakeholders; some were repeat interviews with key informants, others were more formal, institutional interviews with multiple stakeholders. Demographically, this included men and women with outliers as young as 20 or as old as 90, but mostly between 40 and 60. Whilst Dublin itself is a largely ethnically diverse city, my fieldsites were predominantly ethnically white Irish. This was largely typical for the area; members of the PHMT were typically middle-class background, whilst Rialto was a mix of working and middle class. Whilst I interviewed several men, a significant number of my participants were women. There were a mix of clinicians, allied public health professionals (largely in communications and administration around vaccine programmes). My participants in Rialto skewed towards those that worked in local community centres, others worked in research and the public sector.

Alongside this were hundreds of hours of casual interactions with friends, strangers and acquaintances as part of living in Dublin. Whilst many of my interlocutors were friends, many of my friends I would only at very specific moments ask to become my interlocutors, who became used to me occasionally going ‘Ooh, can I write that down? Thanks!’. Even with my anthropologist hat formally ‘off’, everything builds to inform a wide contextual understanding that comes from immersive fieldwork. Otherwise, there were chance encounters with strangers that left an impression - these produced selective quotes and short vignettes through chance encounter with strangers – such as a meeting with– some off-duty sailors outside a Dublin nightclub who shared their distaste for the city and the 'stuck-up' character of the people that lived there. Small, happenstance interactions in a large city form part of the fabric of everyday life; of how to think about and relate to the places they live.

There is also an important ethical question as regards my positionality around vaccines. Does undertaking the task of a material-semiotic approach It might be said pragmatically that anthropologists do not have the power to significantly influence public conversations one way or another. For the sake of argument, however, when I return to the complexities of studying vaccination this irresolvability and ambiguity is the point rather than the problem. If somebody asked me whether or not they should get vaccinated, I'd ask them about their reasons for asking me. As I was forced to do in many cases, I told them I was a social scientist rather than a clinician. I said that I personally had taken the COVID vaccines, that I'd had predominantly good experiences with vaccines and the UK's healthcare system, but could understand that they might have doubt or mistrust. I maintained what I have described as a 'methodological agnosticism' towards vaccines and was transparent about this with my participants at each stage; I made no false promises of solidarity to parents who thought I might advocate for their cause in arguing that vaccines had injured their children. With clinicians, I was clear that I wasn't there to persuade anybody – rather that the fact that so many people were trying to persuade each-other was precisely the thing I was interested in.

I have also considered whether my lack of a strong normative position on vaccines would be considered harmful. I suspect that a civically-minded clinician may be frustrated that I don’t express more explicit support for vaccines or try to persuade people to take them. I suspect that people who believe that vaccines are riskier than they’re presented as would have similar concerns. I return to my opening story and would suggest that a prefigured normative stance rooted in the seemingly obvious factual information about vaccines, scientific consensus, civic responsibility (and so on) is precisely the opposite of a good ethnographic point of departure. This does not position me as a neutral observer, nor does it push me to strive for a naively ‘balanced’ account in the model of some-or-other public debate that can be neatly resolved in one way or the other. The point is not to re-state the canon of what we call ‘the evidence’, but to highlight – as other analysts have done – that such framings have no small hand in producing the very problems they wish to avoid. Making myself vulnerable in the field forced me to question what norms underpinned my own personal commitments to vaccines, trying to surface those in the wider worlds of my fieldsites in the process.

As with any project, there are limitations. A significant one is the contrasting scale between vaccination and ethnography. Vaccination is a population-level programme, whereas ethnography works at a small scale and slow pace. A key argument of this thesis is precisely that a lack of attention to the situated realities of vaccines, where statistical and epidemiological abstractions contribute to a sense of alienation and disconnection that many individuals feel. I limit the scope of the claims I make and conclusions I draw to focus on ways I found vaccines might problematise and refine the way they're talked about in academic literature and the wider social world.

1.7 Overview of chapters

This section sets out the chapters of the thesis. It can be thought of as two sections with a coda or hinge. Reflecting the structure and experience of my fieldwork, the chapters that follow are organised thematically - with examples taken from my ethnographic data, wider academic literature, media coverage, archival material and self-published accounts (especially those that advocate for those they believe to be injured by vaccines). In movements. By moving between HPV to COVID vaccines, I attempt to chart key areas they overlap and differ in tracing the wider entanglements of vaccines as an open, material semiotic object that produces different hybridities, ruptures and solidarities as they move through the world in different ways.

Taking this introduction as chapter one for the purposes of coherent numbering, chapter two asks the question of how it was that vaccines became the way they are. Sparked by being shown a smallpox vaccine certificate from 1905 that belonged to the grandfather of a participant and subsequently learning that the 1804 Dublin Cowpock institute was fifty metres up the road from where I lived in Rialto, I trace a conceptual history of vaccination. I ask how it was that the practise became embedded in Ireland through the dynamics of the Anglo-Irish relationship, with particular focus on the role of the characteristic system of Irish Dispensaries and Medical Charities. I close with an evaluation of how the cause of Irish nationalism became entangled with anti-vaccine attitudes after 1898, owing to a conscientious objection clause that omitted Ireland in a bill that passed the policy in England and Wales. The debates around vaccination echo questions of politics, personal liberty and science that echo much of the chapters to come.

Chapter three picks up the thread drawn that shows how vaccination emerged as a historical, contested practise to a position of overwhelming strength. I then explore the contemporary way that facts are positioned alongside vaccines in the launch of a ‘gender neutral’ HPV vaccination programme in August 2019 at the Trinity College Science Gallery. I explore the rhetoric of the speeches given on the day and publicity materials that supported the event. In analysing the sovereignty of facts, I position them as a co-actor and participant in the social world alongside vaccines - entwining together to foreclose the possibility of resistance in the rationalist framings of vaccine hesitancy.

Chapter four then moves to look at the entanglement of vaccines with normality and the everyday. Exploring the idea that often nothing much is said about vaccines, I examine the wider domain of everyday life for some of my participants and myself as the pandemic arrived. The pivot to a context where vaccines are absent opens space to consider the quiet work that they do and the other protective norms which arose during their absence. Drawing on Benjamin Highmore’s analysis of the ‘everyday’ (2001, 2011) and Canguilhem’s analysis of normal (1964; cf. Mol 2003, Rose 2007) I press the argument that vaccines sustain and are sustained by the familiar, the habitual and the routine.

Chapter five takes this thread to explore the prominent category of ‘misinformation’ and narratives of ‘infodemics’ that arose during the period of COVID and HPV. Insofar as chapter three identified rhetoric of misinformation and the stories of the girls in REGRET being ‘rumours’, I explore an anti-lockdown protest and the experience of several of my participants who were accused of being anti-vaccine or spreading misinformation for expressing anxieties in online forums. I return to the central concern of information as a fundamentally social concept, entangled within the worlds that it not only represents but actively reconfigures.

Chapter six attends to the question of bodies, bodily experience and autonomy. Having encountered the phrase ‘my body, my choice’ at an anti-lockdown rally, this became an issue that I reflected on with several of my participants who had been involved in campaigning for abortion rights. Tracing the common tension between vaccination as a collective choice and reproductive rights as individuals, I explore the trajectory of bodily autonomy in the stories of my participants and wider literature on women’s rights in Ireland. In using Emily Yates-Doerr’s material-semiotic framing of the body in medical anthropology (2017), I extend the approach taken to vaccines to examine how bodies materialise, overlap and diverge in discourses of both vaccination and women’s rights. Collective and individual bodies exist simultaneously in overlapping ways, but with different stories, histories and politics.

Chapter seven closes by returning to the concern with which I started this thesis: the question of HPV vaccine injury and REGRET. Having traced some of the spaces, histories and points of contact that COVID and HPV vaccines have had in the lives of my participants, I then turn to ask the question of what happens when vaccines fail. Riven with paradoxes, ambivalences, contradictions, sometimes the ‘modern constitution’ that maintains the public separation of science and politics, of fact and values fails to hold. In examining the ways in which vaccine resistance itself produces controversial forms of knowledge, I argue that my approach allows us to see anew how failure is produced and negotiated across differing, intersecting epistemologies. In some cases, as Anna Kirkland traces in the US system, there is consensus on a rare adverse event being caused by a vaccine or that concerns have been justly heard.

2. Becoming Irresistible: Stabilising Vaccination in Ireland

‘It was found that on a sea-voyage it was possible to maintain a supply of fresh lymph for delivery at the destination by the successive vaccination of young people who had not had smallpox. Within a few years, vaccination chains were being used to introduce and extend the practice in many parts of the world…’

-Michael Bennett, *War Against Smallpox,* 2020, p.5

‘…there has never been any doubt as to the direct and determining role of the Institut Pasteur in colonization. If it had been necessary to make colonial society only with masters and slaves, there never would have been any colonial society. It had to be made with microbes, together with the swarming of insects and parasites that they transported’.

-Bruno Latour, *The Pasteurisation of France,* 1990, p.144

‘vaccination was a success, and that success ultimately relied on small-scale local effort, rather than legislation… If this story has heroes, they are the ordinary practitioners, registrars, and administrators who did their best to promote vaccination.’

-Deborah Brunton, The Politics of Vaccination, 1999, p.168

2.1 Serendipities

It’s easy to regard vaccines as a fact of life in a wealthy country like Ireland. Yet everything has a beginning - and it happens that a key part the story of vaccines in Ireland can be found just over the road from where I lived in Rialto, on the site of what today is St James' hospital[7]. I am referring to the 'Dublin Cow Pock Institute', the first dispensary for smallpox vaccination in Ireland, founded in 1804 by Dr John Creighton and ceasing operation in 1889. Whilst the very first vaccinations under Jenner's method of smallpox vaccination had happened in the west of Ireland through the work of John Millner Barry, Creighton's Institute was the first institution to freely provide stocks of the vaccine for local physicians, intended for the benefit of the local poor. As such, it was key to spreading the practice across the small country of Ireland throughout the nineteenth century (Andrews 2009).

Following the material semiotic approach outlined in the introduction, if we don't take vaccines for granted then one must ask where they start. There are, of course, a near-infinite number of potential starting points. Despite my focuses being HPV and COVID vaccination, vaccines in more general terms should be considered as a discourse in their own right. By this I mean that people in Ireland assign particular meanings to the word vaccine which have been shaped through more than two-hundred years of experience, memory and event. They are spoken of as a benefit to humankind and a cornerstone of public health. In speaking of the history of smallpox vaccination in Ireland, I attend to the ground of cultural acceptance for the smallpox programme developed throughout the eighteenth and nineteenth centuries.

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[7] The largest teaching hospital in Ireland, it has its own fascinating history. In Coakley & Coakley's illustrated history of the building, they chart that its evolving purpose is a microcosm of the changing fate of the area (2020).

This is not, however, a history of smallpox vaccination, but rather an account of how vaccination became stabilised and embedded in Ireland, via England. I trace the stories of certain key actors – Lady Mary Wortley Montagu, Edward Jenner and early Irish public health services. I describe the alliances, controversies and other powers which laid the groundwork for vaccines in culture to be what they are today in Ireland. In essence, I give a cultural history of vaccines through smallpox. This is inspired by Latour's analysis of the 'Pasteurisation of France' – that is, how Louis Pasteur's microbial theories spread across France to the point of becoming 'irresistible'. The point, quite simply, is that Pasteur did not act alone but with the help of hygienists, medical practitioners, bureaucrats and many others who came to believe in his findings. Shifting the focus to vaccines asks what help they had in turn; what it was that overcame public scepticism, the points of friction and resistance, and what ultimately stabilised them. In tracing such a story, the contours of the wider terrain on which HPV and COVID vaccination follow. So, how did a single scientific discovery move from the point of its discovery to expand across England, Ireland, and eventually 'cover the world' (Latour 1988, p.5)?

I begin with another story that set me on this path. Starting from the premise that vaccines do not act alone, some of their collaborators are more obvious than others. The one in this story is a smallpox vaccine certificate from 1905, shown to me by some participants.

All of this began on a surprisingly warm October morning in 2021, as I checked my phone and looked at a text from Flora. We'd met after the pandemic following a WhatsApp message I sent to the neighbourhood chat in Rialto. Meeting regularly for coffee or breakfast, we also went on walks around the neighbourhood as she shared her extensive knowledge of local history. Amongst all of this, she'd asked if I'd be interested in interviewing her parents Peter and May, given that they'd grown up at a time when the city's relationship with vaccine-preventable diseases – Tuberculosis and Polio in particular - had changed. Peter had grown up in the King's Street tenements on Dublin's North side – an area reputedly still poorer and rougher than pockets of the wealthier south and south-east of the city. I apologised to my friend who was visiting from London that I'd have to step out for a couple of hours, picked up my voice recorder and headed to the address that Flora sent me. Despite being a weekend on the cusp of winter, the weather was unseasonably warm – after a short walk down to their house, I knocked on the door and was greeted by Flora. She gestured me inside to a comfortable-looking living room, all dark-wood, knick-knacks and floral patterns.

Sat in one arm-chair was May, who has sadly passed away since our interview. She was in her eighties at the point we spoke: a gregarious, gleeful woman with a fantastically mischievous laugh. A line that brought a smile to my face when going over the transcript was when Flora started singing 'take me up to Monto, Monto'… and she and May burst out laughing. They told me that the song, (which I'd learn was popularised by the Dubliners in 1958), was about Dublin's then-infamous Red-Light district on Montgomery Road. Near both a garrison and the docks, the sex workers had been kept in business by the occupying British forces. Following the Irish war of Independence, the absence of British forces put the area into decline, leading to the Legion of Mary, a Catholic lay-organisation led by Frank Duffy, to try and 'clean up' the area. May assured me with a broad grin that 'Ireland had the best load of prostitutes going. In all of Europe, that's official!'. There's something about being told that by an octogenarian from an arm-chair that brings a smile to my face.

May told me that she'd lived her entire life in the house we were standing in, having been 'born in the back room there!' – indicated with a wave of her hand. Part way through the interview, Peter arrived back from a rowing outing. As he came in, Flora noted the difference in health between him and his contemporaries who'd 'picked drinking over exercise' (many of whom I suspect I encountered in my afternoons writing down the Bird, watching horse-racing and downing thick, flowing pints). Whilst I return to their stories at a few points in the coming chapters, both recalled a personal history entwined with memories of disease. May's own life had been marked with memories of Tuberculosis, which had significantly impacted her father. She told me about their relationship:

> 'He used to give me sixpence. And once he gave me a kiss. I could smell me dad – that sounds odd, doesn't it? I don't mean he smelt off, but when he put his arms around you, he was my dad. Because you know, no matter where we went, we'd link arms. And he used to bring me up to Tallaght Village on a Sunday, in the season – this season. And I had a bike and he had a bike and we'd cycle over. And then we'd go into this pub and have an orange…. a lovely Club Orange and a ham sandwich. I can never taste ham the same way now!'

She told me about her father’s stay on a Tuberculosis ward:

> ‘I went into the ward and I said ‘where’s dad?’ because the wards were really long in those days, with loads of beds on each side. And I saw this man and I said ‘That’s not my daddy!’. This man was a fat man, my dad wasn’t like that going into hospital. He wasn’t even 10 stone and he came out 17 stone’

> ‘And when he came out of hospital they put him back on the beat, on his rounds for a while, and then he couldn’t cope because he’d developed very bad bronchitis, you see with the weight – and he was a heavy smoker. Very heavy smoker. And they gave me a job at the sorting office… [it] was full of dust! You know, the buildings were old buildings and it was on a main road – you know that now, but you didn’t know that then! Places are lovely now, you don’t see dirty places to work in. I haven’t seen anything that’s dirty at all and the hospital is lovely! But anyway, he died – he had a stroke and he's 30 years dead now.’

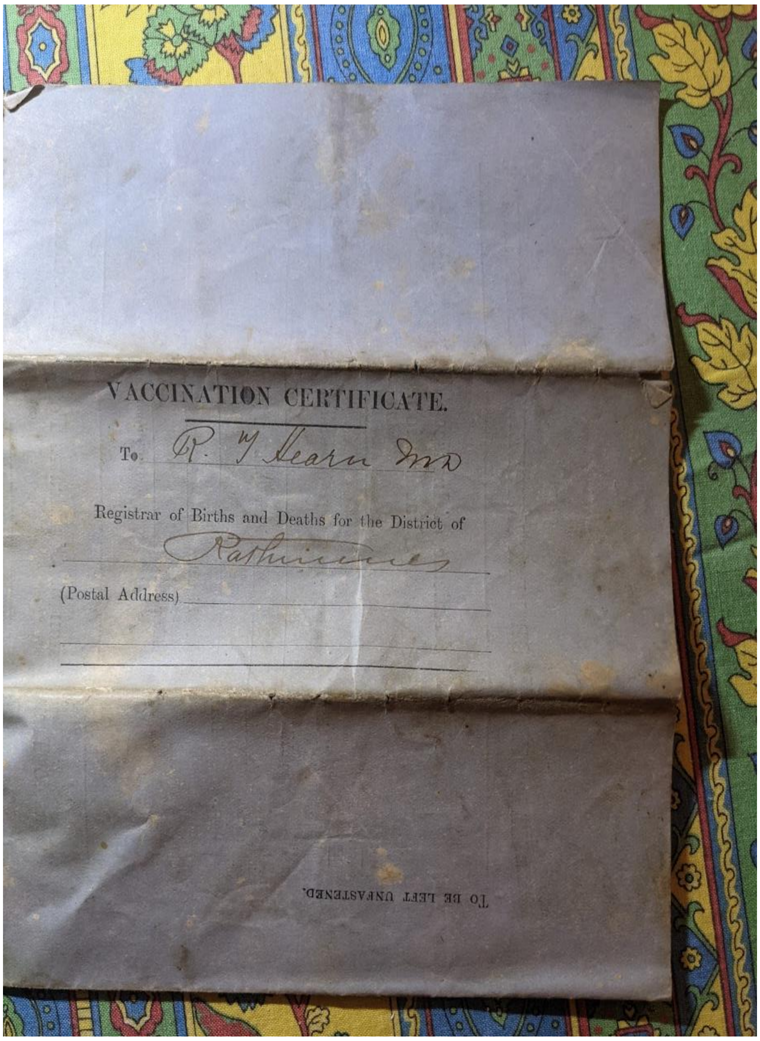
Flora gently interceded in May’s recollections - asking her whether her experiences were before vaccines were available.

> ‘Well, my memory of it was when I started to work in the old Jury’s Hotel, I was in Dane Street at the time, I trained there. And I remember we went up to – you know Christ Church and that area… there was a health centre there, an awful looking place, but that’s where the health centre was, it always looked awful but I had to get up and get the smallpox injection – vaccination. So another girl and myself, she and I went up to

> get a smallpox injection and when we went back to work we let on our arms were very sore!”

My ears pricked up at the memory of a potential side-effect or other physical memory, but she quickly cut across me before I had the chance to ask: ‘We were trying to be devious. We got the afternoon off!’ she told me gleefully.

Later in the conversation, Flora paused for a second and suddenly asked ‘Mam, do you have your da’s smallpox vaccine cert?’. May paused for a second, largely ignored by Flora who vanished upstairs to begin rummaging around in some old boxes. She carefully produced a small, yellow and very official looking piece of paper.



VACCINATION CERTIFICATE.

To R. W. Hearn MD

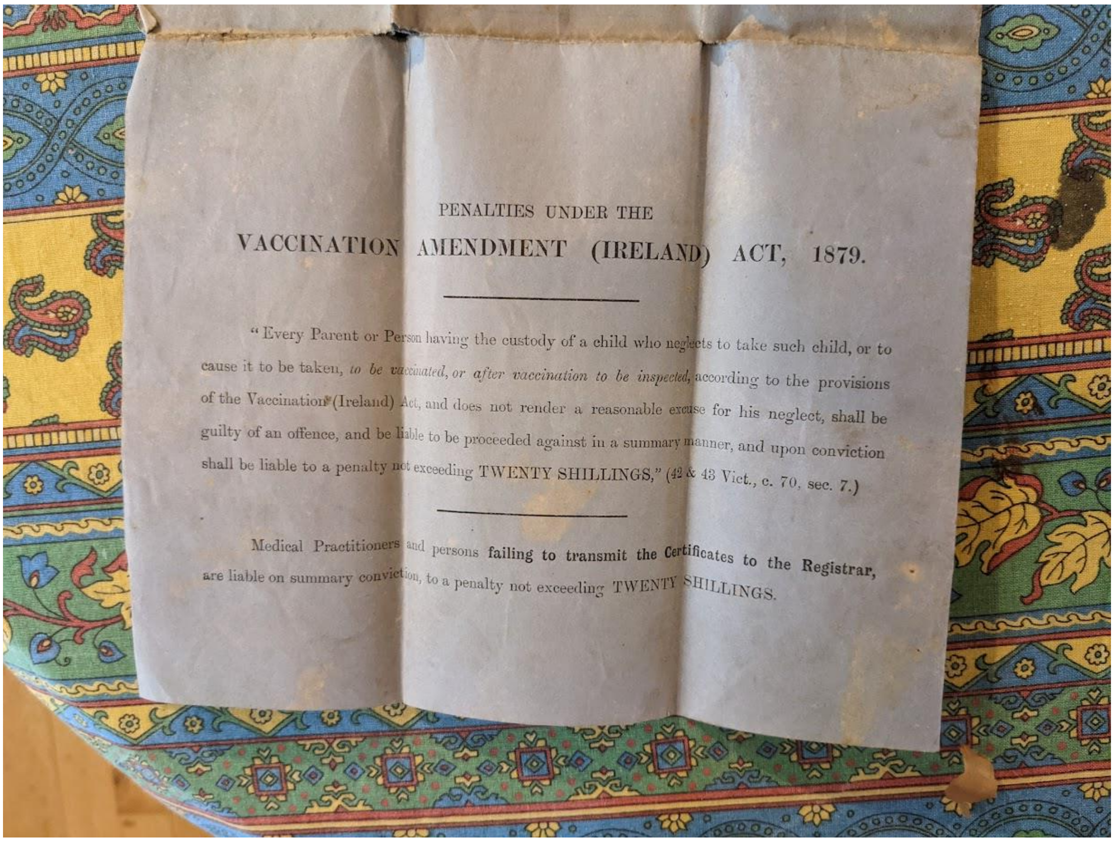
Registrar of Births and Deaths for the District of

Rathmines

(Postal Address)

To be left unfastened.

Figure 2.1 – Smallpox Vaccine Certificate 1



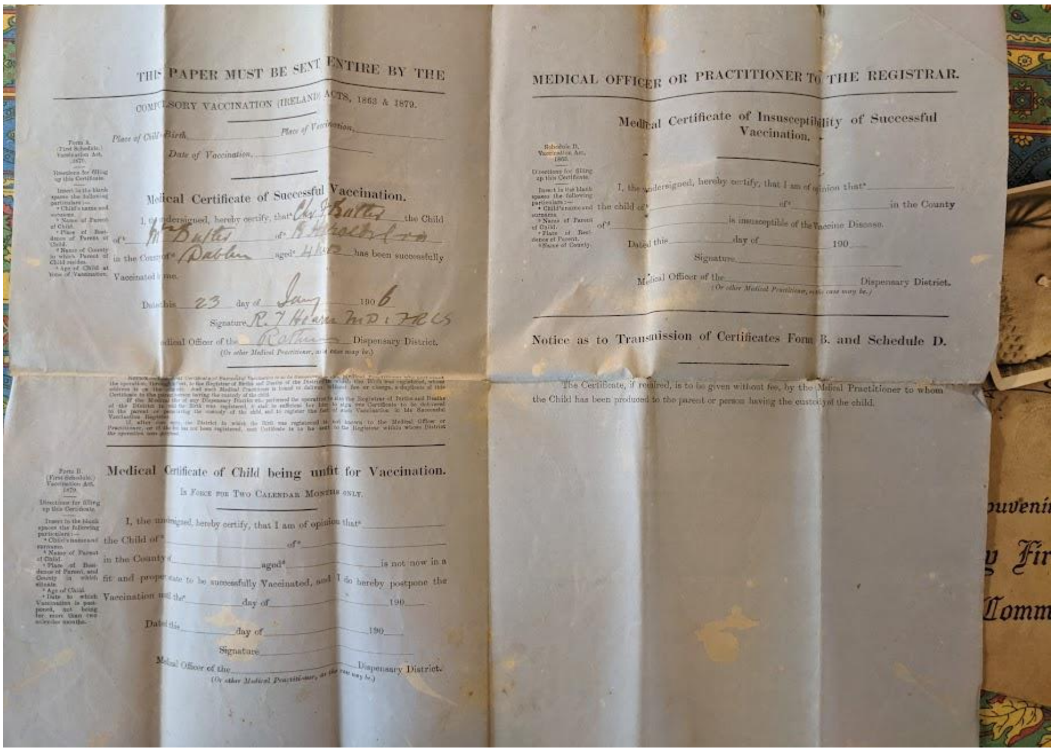
PENALTIES UNDER THE

VACCINATION AMENDMENT (IRELAND) ACT, 1879.

"Every Parent or Person having the custody of a child who neglects to take such child, or to cause it to be taken, *to be vaccinated, or after vaccination to be inspected,* according to the provisions of the Vaccination (Ireland) Act, and does not render a reasonable excuse for his neglect, shall be guilty of an offence, and be liable to be proceeded against in a summary manner, and upon conviction shall be liable to a penalty not exceeding TWENTY SHILLINGS," (42 & 43 Vict., c. 70, sec. 7.)

Medical Practitioners and persons **failing to transmit the Certificates to the Registrar,** are liable on summary conviction, to a penalty not exceeding TWENTY SHILLINGS.

Figure 2.2 – Smallpox Vaccine Certificate 2



THIS PAPER MUST BE SENT ENTIRE BY THE

COMPULSORY VACCINATION (IRELAND) ACTS, 1863 & 1879.

Place of Child's Birth ____ *Place of Vaccination,* ____

Date of Vaccination, ____

Medical Certificate of Successful Vaccination.

I, the undersigned, hereby certify, that Chas J Butler the Child of Wm Butler of 8 Harold's Cross in the County of Dublin aged 4 Mos has been successfully Vaccinated by me.

Dated this 23 day of Jany 1906

Signature R. J. Hearn MD, FRCS

Medical Officer of the Rathmines Dispensary District.

(Or other Medical Practitioner, as the case may be.)

Medical Certificate of *Child* being unfit for Vaccination.

IN FORCE FOR TWO CALENDAR MONTHS ONLY.

I, the undersigned, hereby certify, that I am of opinion that ____ the Child of ____ of ____ in the County of ____ aged ____ is not now in a fit and proper state to be successfully Vaccinated, and I do hereby postpone the Vaccination until the ____ day of ____ 190__

Dated this ____ day of ____ 190__

Signature ____

Medical Officer of the ____ Dispensary District.

(Or other Medical Practitioner, as the case may be.)

MEDICAL OFFICER OR PRACTITIONER TO THE REGISTRAR.

Medical Certificate of Insusceptibility of Successful Vaccination.

I, the undersigned, hereby certify, that I am of opinion that ____ the child of ____ of ____ in the County of ____ is insusceptible of the Vaccine Disease.

Dated this ____ day of ____ 190__

Signature ____

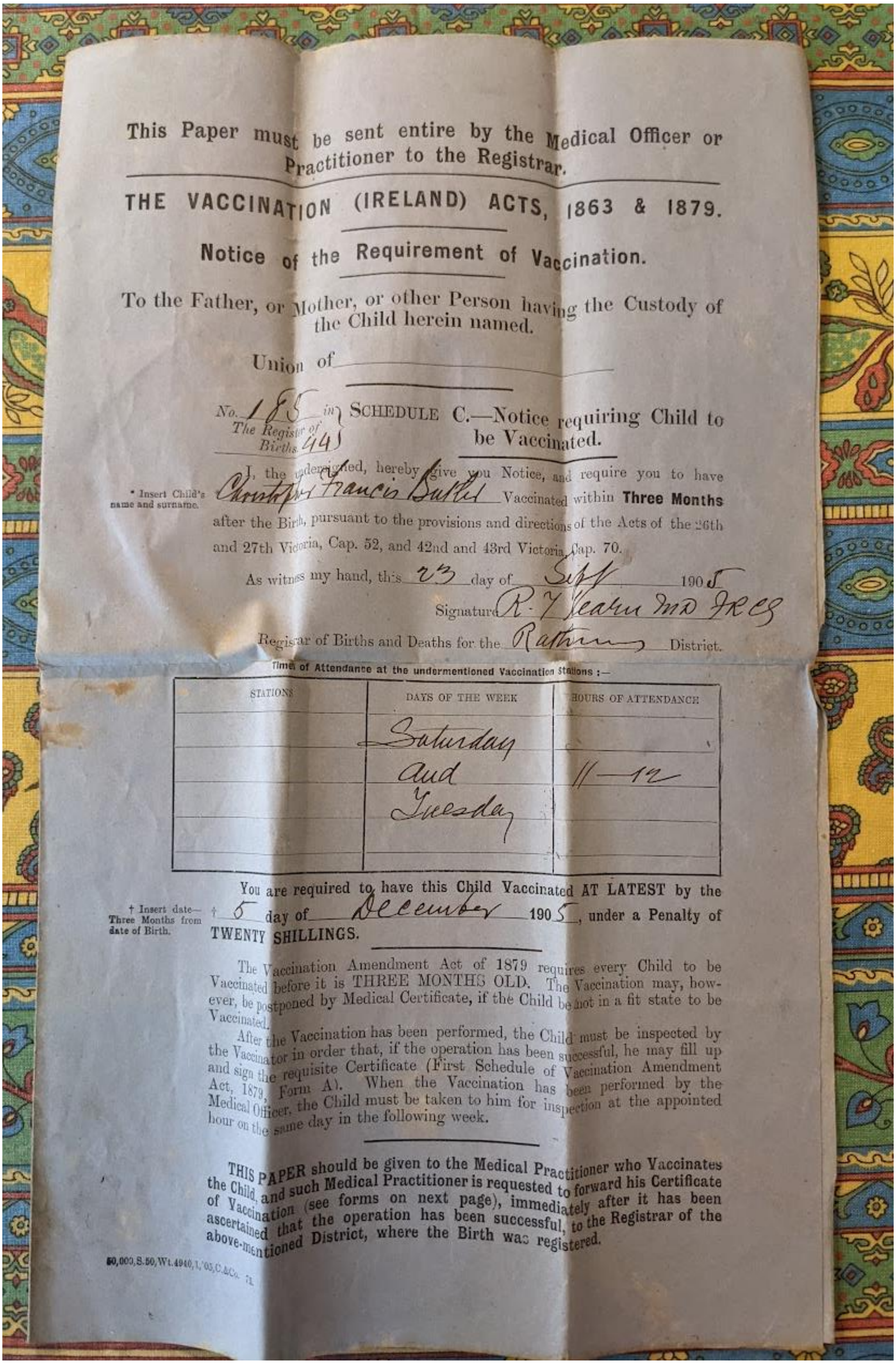
Medical Officer of the ____ Dispensary District.

(Or other Medical Practitioner, as the case may be.)

Notice as to Transmission of Certificates Form B. and Schedule D.

The Certificate, if required, is to be given without fee, by the Medical Practitioner to whom the Child has been produced to the parent or person having the custody of the child.

Figure 2.3 – Smallpox Vaccine Certificate 3



This Paper must be sent entire by the Medical Officer or Practitioner to the Registrar.

THE VACCINATION (IRELAND) ACTS, 1863 & 1879.

Notice of the Requirement of Vaccination.

To the Father, or Mother, or other Person having the Custody of the Child herein named.

Union of

No. 185 in The Register of Births 44 — SCHEDULE C.—Notice requiring Child to be Vaccinated.

I, the undersigned, hereby give you Notice, and require you to have * Christopher Francis Butler Vaccinated within **Three Months** after the Birth, pursuant to the provisions and directions of the Acts of the 26th and 27th Victoria, Cap. 52, and 42nd and 43rd Victoria, Cap. 70.

* Insert Child's name and surname.

As witness my hand, this 23 day of Sept 1905

Signature R. T. Kearn MD FRCS

Registrar of Births and Deaths for the Rathmines District.

Times of Attendance at the undermentioned Vaccination Stations :—

STATIONS	DAYS OF THE WEEK	HOURS OF ATTENDANCE
	Saturday	
	and	11—12
	Tuesday	

You are required to have this Child Vaccinated **AT LATEST** by the † 5 day of December 1905, under a Penalty of **TWENTY SHILLINGS.**

† Insert date—Three Months from date of Birth.

The Vaccination Amendment Act of 1879 requires every Child to be Vaccinated before it is THREE MONTHS OLD. The Vaccination may, however, be postponed by Medical Certificate, if the Child be not in a fit state to be Vaccinated.

After the Vaccination has been performed, the Child must be inspected by the Vaccinator in order that, if the operation has been successful, he may fill up and sign the requisite Certificate (First Schedule of Vaccination Amendment Act, 1879, Form A). When the Vaccination has been performed by the Medical Officer, the Child must be taken to him for inspection at the appointed hour on the same day in the following week.

THIS PAPER should be given to the Medical Practitioner who Vaccinates the Child, and such Medical Practitioner is requested to forward his Certificate of Vaccination (see forms on next page), immediately after it has been ascertained that the operation has been successful, to the Registrar of the above-mentioned District, where the Birth was registered.

60,000,S.50,Wt.4940,1,'05,C.&Co. 71

Figure 2.4 – Smallpox Vaccine Certificate 4

As I gingerly handled the old document to take photos of it, Peter laughed and asked, ‘where are your little white gloves?’. I looked puzzled and Flora explained to me that they used to wear gloves like that when handling archival materials, but that they’d stopped doing it in recent years. Looking at the old certificate, I saw that it referenced two Vaccination Acts (Ireland) passed in 1863 and 1879. It allowed a period of three months after a child was born for them to be vaccinated before a fine of twenty shillings would be issued. May’s father’s certificate was filled in on the 5th of November 1905.

At the height of COVID, my participants and I had become used to the process of showing your ‘vaccine cert’ to a person at the entrance of a pub, cafe or restaurant. It constituted a PDF downloaded via an app; it showed your vaccination status - the number of doses you’d taken, which brands of vaccine and the date they were administered. That presented, you would then provide a contact number, the time of visit and name for the purpose of contact tracing - if an infection was detected at a venue, then protocol demanded that people present quarantine for fourteen days after the fact. In 2021 we were used to the circumstances for which this type of certification might need to exist.

What were the circumstances under which Smallpox vaccine certificates came about? How and why did the various acts of parliament come to bear and how did they contribute to shaping what vaccination ‘is’ in this wider, relational frame I seek to use? The situation of an acute crisis like COVID is different to the sustained brutality of a disease like smallpox over centuries,but both show different glimpses of a world without a vaccine for their respective diseases, where proof that a body has been immunised against an immediate threat urgently matters.

This chapter traces the story of the smallpox vaccine in Ireland, as well as the nascent public health system that administered it. In attending to the forms of resistance that vaccination faced, and providing an understanding of its co-actors and conflicts, I lay the groundwork for the analysis in the chapters that follow. In particular, this history sketches the complexity of how vaccines were politicised in Ireland

2.2 Smallpox

Smallpox – or *Orthopox Variola* – is an ancient disease that is thought to have first flourished around three-thousand years ago in the Fertile Crescent and Indus Valley (Riedel 2005).

The word *Variola* belongs to the Latin for 'speckled' and was first linked to the disease smallpox in the reign of the Byzantine Emperor Justinian in the 6th century. The term 'pocks' and 'pox' belong to the middle ages across a host of European languages; typically referring to the pus-filled eruptions (Manniko 2011), but with some potential links to 'bag' or 'pocket' (Etymonline 2024). The word 'pox' itself was a vernacular way of referring to the disease, but the prefix 'small' was added when the comparatively 'great pocks' of Syphilis became encountered in the 14th century (e.g. Czinn and Hoenig 2023).

The bodily experience of the disease itself is a grisly affair. Generally entering the body through the mouth or nose, the virus nests in the lymph nodes for ten to twelve days before bursting out into the bloodstream. At this point, the sufferer experiences high fever, sickness and a range of other symptoms. A rash then appears, developing into pustules which would leave behind the disease's characteristic 'pock-marks'. These would ultimately suppurate, emitting a disgusting smell and leaving behind disfiguring scars on those that were lucky enough to survive. It was also possible for sores to form in the mouth and throat, impeding the ability to breathe, drink or eat. The suffering caused by the disease was immense and the experience of watching a loved one endure it is horrific to behold.

The disease was especially devastating when it came into contact with previously unexposed populations through European colonisation. A particularly notable example is the arrival of smallpox in the Americas. Infamously, in the Spanish conquest of South America, the disease tore through hitherto unexposed indigenous populations. even being by the conquistadors as a 'providential mandate' for Spanish rule (Bennett 2020, p.9). By the seventeenth century, smallpox was entrenched across much of the world and increasingly blighted the lives of many. As Bennett summarises, 'the eighteenth century in Europe began and was to end in the shadow of Smallpox' (Bennett 2020, p.10).

2.3 The Vaccination of Ireland

The story of smallpox vaccination is well told, with all its myths, heroes, curiosities and controversies. For example, the famous story of Edward Jenner observing the hands of milkmaids was simplified and partially fabricated by his biographer John Barton. The 'real' story is less neat, but no less interesting (Boylston 2013, 2016). It wasn't a eureka moment or a flash of genius, but only because of the curious interaction with an existing nation-wide smallpox immunisation campaign using the method of ‘variolation’. This practice itself was introduced from the backstreets of Constantinople in the 1720s by the too-often forgotten Lady Mary Wortley-Montagu (Grundy 1995). Variolation used the smallpox itself to inoculate against the virus. It was certainly an effective practice, but far riskier than the cowpox vaccination that would follow. Trained inoculators (Jenner himself being one) would certify the success of the procedure by examining the small scar (a single pockmark) left behind at the site of administration. Only on seeing that it had successfully healed and registering the procedure would they receive their commission from the government. However, milkmaids who had already been exposed to cowpox (and so technically being vaccinated after a fashion), found that the smallpox inoculation did not take – to the frustration of many inoculators.

Jenner himself was not the only person to either experiment with smallpox or to try and secure fame for the discovery. Some farmers and rural medical practitioners trialled the procedure, but the transfer of animal matter to a human frame was particularly taboo at the time. Even after Jenner presented papers on his discovery in London, other medical practitioners with access to far greater numbers of potential patients carried out larger-scale studies on the new prophylaxis. Without their help in gathering this evidence base and lending respectability to the procedure, it is quite possible that it would not have caught on as widely as it did. Dr George Pearson in particular contributed to this procedure, but in the process attempted to sideline Jenner, leading to a bitter rivalry with the country physician. Despite (and perhaps because of) some surprisingly petty moves on Pearson's part, it is Jenner's name that is linked with vaccination.

Vaccination became established in England, Scotland, Wales and Ireland over time. A key aspect of this is that vaccination became a socially accepted, normative practice through many 'trials of strength' (Latour 1988). In this I follow Latour in his analysis of the 'Pasteurisation of France', wherein the very term Pasteurisation consolidates the strength of the achievement by one. In a similar manner, the discursive, globalised conception of vaccination conceals a great many other actors that lend it strength – greater even than the heroes like Pasteur and Jenner which brought it to where it is. Thus it is the fate of vaccination in many countries to become 'irresistible.' By this I do not mean that nobody critiques or questions vaccines, but that those who do so are not treated as rational or taken seriously, becoming forced to the margins. To resist is to rupture with the social norms and relations. My interest, then, is to go to a point in time where these norms were not yet embedded and to enquire how this came to be. Doing so allows us to make sense of the curious marginality and political knots that occur as I explore COVID and HPV vaccines two centuries later.

How does Ireland's story overlap with that of vaccines? When we speak of an 'Irish vaccine', do we mean one developed or administered in Ireland? How we theorise and constitute Irishness is as dynamic, unfolding and interrelated as the material-semiotic approach to vaccines that I have proposed. Neither vaccines nor Ireland are independent of each-other, but vaccines – like many objects – are often constructed outside of social relations. Situating vaccines *within* fields of social relations requires an attention to their materiality and their meanings in equal measure. To understand what vaccines are in Ireland, one needs a way to situate them within this milieu without succumbing to relativism or scientism.

And so back to Dublin: by 1804 the virtues of the new prophylaxis had been established and won powerful popular support. Compared to figures like Jenner and Montagu, detailed literature on the adoption of vaccination in Ireland is somewhat scant. What I summarise below is drawn, largely, from Deborah Brunton's work on the politics of vaccination in England and Ireland (2008), Ronald Cassell's work on the medical dispensaries (1997) and Virginia Crossman's work on Poor Law in Ireland (2014). The former attends explicitly to the public health infrastructure that supported the practice, along with the tensions that ran between the characteristic system of medical charities and dispensaries and the English attempt to bring them into line with the new system of Poor Law Unions. Ronald D. Cassell provides a detailed overview of the Irish Medical Charities and Dispensaries, which I used to supplement Brunton's accounts. For an overview of the Poor Laws, I make use of Virginia Crossman's analysis of how they were implemented in Ireland, as well as how this was localised at St James' through Coakley and Coakley's work (2016). I sketch a little of the characteristically Irish dispensary system which provided the infrastructure for administering vaccinations in practice. In tracing the historical infrastructure of public health in Ireland, more complex geopolitical reasons for the failure of vaccination campaigns become visible.

That is, the distinctively Irish system of medical charities and dispensaries was ignored by the English in their attempt to implement public vaccination through the then barely established network of Poor Law Unions. The nature of resistance that vaccination encountered in Ireland was not scientific, but rather a reflection of complex geopolitical realities. The institutional and historical complexities of vaccination again extend ways of thinking through how and why vaccines might be resisted or fail, and consequently what they may be said to be.

The practise of inoculation spread from England to Ireland by 1800, being practised at first in Dublin, Cork, Limerick and Tipperary before spreading across the country more widely in the coming years. Some of the social distinctions in vaccine uptake in Ireland were the same as in England, with the upper classes quickly switching to the new Jennerian method and abandoning the old practice of variolation. The Dublin Cow Pock institute – set up to ensure a supply of cowpox lymph required for vaccinations – reported overwhelming success and a sharp reduction in deaths from Smallpox, which was nearly ‘unheard of’ amongst the middle and upper classes. Interestingly, the residual challenges in embedding the practice were owing to ‘itinerant quacks’ continuing to perform smallpox inoculations on the ‘credulous poor’ (Labatt 1810, p.5). The previous ‘cautious reserve’ concerning the then-new practice of vaccination had ‘been laid aside - [as] the efficacy of the practice has been established’ (ibid., p.6). As Labatt further commented, if there had been divine assistance to ‘suppress variolous inoculation and encourage vaccination’ then Smallpox itself might well have been eliminated in its entirety on the island of Ireland (ibid., p.5). The visions of a country and a world without smallpox were alive and well some two centuries before the vision would be realised. However, the means by which this confidence would spread from medical professionals to the general population remains unclear. How was it that Ireland – in the cultural as well as the medical sense – became vaccinated?

The beginning of the answer to this lies in the nascent Irish public health system: the dispensaries and medical charities. Cassell defines medical charities as organisations for which '…funds were largely or wholly contributed by private donors or were drawn from endowments or government subsidy, or their medical personnel served without remuneration' (Cassell 1997, p.1). With massive population growth (from 2 million in 1767 to 8 million by 1845) resulting in huge amounts of rural poverty, the absence of basic medical care for large amounts of the population was all too apparent. Whilst charitable largesse was able to fund many such initiatives in England, Ireland was comparatively too poor and rural to warrant such an endeavour. A thinly-spread population made it rare for medical practitioners to establish private practices as each location would have few patients, and fewer still that would be able to afford their services. In an attempt to remedy this the Infirmaries Act was passed in 1765, which allowed for the establishment of infirmaries in every county of Ireland (save for Waterford and Dublin, both of which already possessed such facilities). As well as mandating their existence, this also provided an administrative and funding model for how to establish these infirmaries.

Each infirmary was to be supervised by a corporation drawn from local dignitaries and funders. It was the latter that formed the bulk of the corporation, who paid an annual subscription of three guineas or purchased a lifetime membership for twenty. The duties of the corporation were limited, largely managing the finances and deciding on admissions policies. The benefits of membership included the right to recommend patients for treatment and the ability to vote on the election of the surgeon. Whilst the dispensaries were funded in part by a grant from the Irish treasury, they also received funds that were levied by the regional ‘Grand Jury’ - a local administrative body akin to a local council.

The early infirmaries varied massively in size and the quality of care available. Some were properly established facilities, whereas others were little more than a rented cottage or room. John Howard, the English hospital and prison reformer, travelled through Ireland in 1787-8, noting the poor state of some infirmaries. He described the Tralee facility as ‘a ruinous house [with] the roof falling in’, and the Maryborough facility for Queen’s county as ‘very dirty, the ceiling covered with cobwebs and several places open to the sky’. Patients and the nurse would lie on dirty hay for their bedding, with one patient who was ‘under the necessity of tearing his shirt for bandages for his fractured thigh’ (Cassell 1997, p.5). Regardless, this should be read as a vast improvement over the previous absence of public medical facilities of any kind.

The situation improved significantly over time. Gradual increases in funding from the Grand Juries lead to an improvement in the quality of care and available facilities. By the 1840s, permanent, purpose-built premises and the availability of high-quality medical professionals made for an effective medical service. As well as immediate advantages to the beneficiaries of the medical system, the establishment of the infirmaries lead to the displacement of folk cures with scientific medicine (Cassell 1997, p.6). It was also closely involved with the professionalisation of the surgical profession in Ireland. After the 1765 act, elected surgeons would need to have their credentials validated by major Dublin hospitals. With the creation of the highly reputable Royal College of Surgeons in Dublin in 1784, it soon followed that infirmary surgeons were required to be members in 1796. This loose-knit, regionally autonomous set of medical facilities represented the emergence of public healthcare in Ireland. As I will explore, its existence was critical for the spread (and initial failure) of public vaccination in the country.

In recognition that only a fraction of patient demand was being met, a second-tier set of dispensaries were ?later established. These were chiefly intended as secondary structures offering simpler treatment to rural populations too far from the main country infirmaries. They received no central grants and their grand jury contributions were only equal to private donations. Despite having no real relationship, they still faced the administrative problem of their committees being required to report to the infirmary committee for public funds. The smaller dispensary committees were ‘composed of local people, sensitive to the needs of their communities, who owed nothing to the infirmaries and received nothing from them’ (Cassell 1997, p.8). This was amended in 1818, where legal reforms separated their committees from those of the infirmary to which they were initially attached, granting them financial autonomy. A further amendment in 1836 required (rather than permitted) the Grand Juries to match their contributions to private donations, increasing the funding available to the dispensaries. Cassell summarises the system and its impact:

> While most of the Irish poor lacked access to facilities as well-supplied and staffed as the well-run urban dispensaries, there seems to be no doubt that by the 1840s the dispensary system as a whole was providing a degree of professional medical care unprecedented in the Irish experience. Within a generation dispensaries had spread over the length and breadth of the country penetrating even the remote villages and valleys of the impoverished and over-populated west and south. While the treatments and medicines such facilities dispensed must have been inadequate by present day standards they must frequently have been an improvement on folk remedies. More importantly perhaps, they introduced into backward and primitive regions medical men who challenged traditional ideas, attitudes, techniques and procedures. The meagreness of the evidence makes it impossible to gauge the dimensions of their impact, but some measure of their importance can be gained from the recognition that once established, the dispensaries became indispensable and remained the basic form of public medical relief for the poor until well into the twentieth century (Cassell 1997, p.10).

It was the central infirmary and secondary dispensaries system that would provide the initial vehicle for distributing the new method of Jennerian vaccination. It is also notable that this distribution of medical professionals across the country served to transform public perceptions of medicine. Whilst Cassell does not go into detail on this point, it is worth considering that access to medical facilities transformed local understandings of health. Although purely speculative on my part, I wonder if this access may have also paved the way for the acceptance of vaccination.

Outside of the Dublin Cow Pock Institute, founded in 1804, smallpox vaccination for the poor was offered via the medical charities. The institute operated until 1889, being given a degree of stability through a central government grant. The institute was established by the work of John Creighton, who persuaded the governors of the Foundling Hospital where he worked as a physician[8] by commissioning experimental evidence of vaccine efficacy. At the time, whilst Labatt would write of the profound success of vaccination programmes, there were doubts over the duration of the immunity provided by the vaccine – echoing contemporary concerns over the efficacy of vaccines versus natural immunity. To allay these fears Creighton asked George Stewart, the Surgeon General of the Foundling Hospital, to inject nine children in the hospital with smallpox. He had previously vaccinated these children between 1800 and 1801. The attempt to infect them took place in 1804, when it was hypothesised that the effect of the inoculation would have waned. The experiment was repeated in 1809, with another ten children vaccinated between July 1801 and August 1802 – including two of his own children, John and Richard Creighton. The demand for vaccination grew sufficiently that the Dublin Cow Pock Institute was established in 1804, run by Creighton and later his eldest son, also named John. The institute inoculated 12,000 patients in its first five years of operation, receiving praise from Jenner himself for the

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[8] The Foundling Hospital at St James' was a place for unmarried women to leave children they were unable to care for. Iconic of the institution was a revolving plate with a hatch through which a baby could be passed. Foundling hospitals were a wider phenomenon in Europe, each of which typically had an appalling infant mortality rate.

‘uninterrupted success that has attended the practice, at one a proof zeal, industry and attention of the medical officers’ in a letter written in 1809 (Coakley and Coakley 2016, p.67).

These medical charities were the emergent public health infrastructure in Ireland, produced in response to the challenges of a poor, rural population. Yet despite their initial successes, they came under fire from the increasingly professionalised, politically active Irish medical profession. The need for reform became something of a lukewarm potato; it was agreed something should probably be done, but with little sense as to what this should be.

The purpose of this section has been to sketch how the medical charities came about, the role they played in Irish public healthcare and the concerns that eventually evolved around them. Put simply, ‘better than nothing’ was only good enough for so long. Yet despite their limitations, the infirmaries and dispensaries had access to otherwise hard-to-reach communities because they originated in rural localities. The way in which wider reforms of poor relief intersected with this infrastructure would have significant consequences for vaccination. In particular, what seemed a distinctly English set of interventions - the Poor Laws - would serve to alienate Irish bureaucrats.

2.4 The Poor Laws and the Vaccination Act

Measures for poor relief, modelled on the English system of workhouses paid for by a local property tax, would lead to the establishment of an Irish Poor Law in 1838. It is notable that St James’ Hospital became the site of the South Dublin (Poor Law) Union, having already been built as the site of a workhouse in 1704. The Poor Laws marked significant reform in Ireland. The infamous institution of the workhouses remained in place until the 1920s. Crossman identifies that ‘the workhouse system was an alien imposition unsuited to Irish society and culture’ (Crossman, p.2). The dislike of of a distinctly English system imposed on the Irish point to tensions between the two countries which affected the way vaccination policy was implemented. Despite this, Crossman cautions against reading the establishment of vaccination policy solely through the lenses of domination and ethnicity, reminding us that this policy was also caught up with wider questions of class and religion. For my purposes, what is key is the identification of the ways that vaccines became entangled in both the complex geopolitics and the local social mores of the time. Situating vaccination within this milieu can provide further insights into the dynamics of how it was accepted or rejected by various publics, expanding understandings beyond hesitancy or simplistic depictions of ‘anti-vax’ attitudes.

Key to the operation of Poor Relief was a distinction between poverty and pauperism. The former represented a somewhat inevitable aspect of civil society, whereas the latter ‘derived from the choices of individuals and represented a threat to society by disrupting social and economic relationships based on the free operation of the labour market’ (Crossman 2013, p.7). Respectability was linked with economic independence, but suffering sickness or disability would render somebody part of the deserving poor. The ‘non-respectable’ poor depended on begging, criminal activities or prostitution. The impact of poverty on Britain had led to an ‘influx of Irish migrants into British cities thought to be depressing wages and lowering the standard of living’ (ibid., p.8). As Brunton notes of the vaccination programme and Crossman does of the wider poor law, both were intended to be as close as possible in spirit to their English counterparts. Given the extent of poverty in Ireland, the workhouses had no provision for 'Outdoor relief' – that is, they only had a statutory duty to care for those that they admitted. Furthermore, there was no legal right to relief - the Guardians had no obligation to provide help if the workhouse was full (ibid., p.10).When it came to the provision of vaccination services that needed to extend to the non-resident population, this presented an additional degree of confusion.

The confusion and inflexibility can be linked to the English maintaining a high degree of authority over the nascent Irish Poor Law administration, reserving the right to dissolve boards of guardians if they were not fulfilling their statutory duties. The law was overseen largely by English commissioners with just one based in Ireland. This led to the Irish commission being interpreted as a 'Branch Office' of the English Poor Law in Dublin, reflecting wider hopes to reform the country. As Crossman notes, 'it was hoped, Ireland would become more like Britain: more industrious, more ordered, more responsible, more prosperous' (ibid., p.37). As such, the various motivations that ran through the Poor Law reform were multi-faceted: it was not just about provision for the poor, but also embodied hopes of how a subordinate partner within the Union might be reformed. These intentions would curtail the initial success of public vaccination in Ireland by tying it to other aspects of English subjugation of Irishness.

Thus whilst voluntary and charitable vaccination had been delivered in Ireland since the early 19th century, Lord Ellenborough passed a bill in 1840 to introduce Jennerian vaccination to Wales and England. With the newly implemented infrastructure of the Poor Law Unions, there was a clear vehicle for the delivery of vaccination services in the populations that required them. An 1841 bill passed the same laws for Ireland, proposing that the nascent Poor Law infrastructure be the method of delivery as it was in neighbouring countries. Owing to this urge for standardisation, the medical charities of Ireland were to be bypassed and largely ignored. English distaste for the nascent Irish public medical system can be felt as Brunton writes how they 'were a peculiarly Irish institution and not answerable to central government' (2006, p.109). Whilst the more standardised, centrally controlled method of administration via the Poor Law Institutions offered an attractive alternative to how vaccines may have been provided, it struggled because of lack of engagement with existing infrastructure. This in turn led to administrative confusion and an initial failure of the attempt to implement vaccination programmes.

An example of this confusion was that vaccination was not legally considered to be poor relief. As such, it was considered exempt from questions of who was entitled to claim entry to the workhouses. Given that the Irish Poor Law was implemented without a responsibility to provide 'Outdoor Relief' (that is, relief for anybody who lived in the wider area but hadn't been formally granted admission to the workhouse), the exception was likely doubly confusing, in that poor relief was only to be offered to workhouse residents, but vaccination was to be distributed regardless of residency. The network of workhouses thus represented technically conflicting purposes and policies, compounded by the existence of the dispensaries that already offered vaccination services. Alongside this, the vaccination contracts that the Poor Law

Boards of Guardians in Ireland were obligated to fill were protested by Irish medical practitioners owing to remarkably poor rates of pay compared to their English counterparts. Whilst some unions offered higher rates of pay to attract vaccinators, the central Poor Law Commission overruled them and enforced the recommended levels of payment. In these ways, the drive towards centralised, standardised services conflicted with the aim of vaccinating the Irish public. Thus the long-standing political relationship between England and Ireland intervened in the attempt to launch public immunisations. Vaccines are thus not immune to politics, but dependent on and intimately entwined with them. As Deborah Brunton writes:

> ‘Poor law vaccination collapsed for financial reasons: boards of guardians were unable or unwilling to provide the necessary funds for a service that did not fit with their other activities, while they were struggling to raise funds’ (p.117).

Given the Poor Law Unions were already financially pressured, the expectation they were to provide vaccination services already available from the medical charities seemed pointless. If the resources are barely available to provide core services, why spend non-extant money on something that already exists?

On top of this, the limited vaccination provision in Ireland was dealt a significant blow by the famine, which led to an additional burden on workhouses from displaced and impoverished populations. Of 163 Poor Law Unions, well under half were enacting the Vaccination Act in some of the area they served and almost half had no vaccination contracts at all. Smallpox deaths rose from 2,5000 per year to over 6,000 in 1849. Brunton summarises the situation:

> ‘Financial problems and the rather different role of the poor law derailed Irish vaccination… in an increasing number of Irish unions, guardians were reluctant to spend money on providing a service because they lacked resources, felt that the medical charities already provided vaccination, or did not see vaccination as an appropriate duty for a body otherwise concerned with supporting the poorest in workhouses’ (2008, p.121)

Between 1851 and 1879, vaccination in Ireland changed its shape. Rather than attempting to force Ireland’s model of vaccine delivery to conform to its English counterpart, pragmatic reforms came with the 1851 Vaccination Act, bringing them under the control of the Poor Law Authority. In contrast to the new system in England and Wales, no special or separate post was appointed for public vaccinators. Rather, they were administered via the physicians posted to the various dispensaries. Despite this, vaccination rates were lower than expected. The reckoned that the service should be dealing with 140,000 infants annually. However, in 1853, the first year where full statistics were available, there were 49,000 vaccinations. To address the shortfall the commissioners communicated with the dispensary committees and boards of guardians through circular letters, urging them to communicate the availability of vaccination services to parents wherever possible. Alongside this, other practices which might have reduced vaccination rates were removed - for example, the requirement of leaving a 6d deposit so that the parent could bring the child back to have the lesion (which acted as bodily proof of immunity) inspected. After the initial failure of attempting to work against existing infrastructure, moves were instead to make use of it.

At the same time, the commissioners launched a campaign against itinerant inoculators using the pre-Jennerian method of variolation, one of whom was reported to have inoculated 300 children. Whilst effective when it worked, it carried the risk of a smallpox outbreak. It was, however, remarkably difficult to prosecute inoculators - both owing to an unwillingness of parents who used their services to testify and to the systems that they had developed. Some worked through a third party who brokered the immunisation and brought the children into contact with the inoculator - allowing parents to truthfully testify that they had not seen who had undertaken it. ‘In one case, a woman denied employing an inoculator, but admitted to having left her four children in her kitchen with a stranger. When she returned, the man had gone and the children had been ‘cut for the smallpox’ (Brunton 2008, p.127). The pressure from the commissioners for guardians and dispensary committees led to a high number of convictions, with fifteen inoculators brought to court, of which thirteen were sent to jail. The practice declined into the 1860s, which led to a significant increase in vaccine uptake. However, reports from medical inspectors suggested that ‘a popular dislike of vaccination’ in many unions, with one reporting that ‘when a medical officer visited homes to offer vaccination, parents hid their offspring’ (ibid, p.127). These behaviours that avoided vaccination in favour of an established practice present an interesting lens on what ‘anti-vaccination’ sentiment has previously entailed. From Brunton’s account, it represented a reliance on existing networks and trusted professionals over and against new and prospectively dangerous medical interventions. What it means to resist vaccines is complicated by specific dynamics in particular places and times. It is also interesting to note that it was only during outbreaks of smallpox that parents flocked to vaccination services, with one union calling in the police to keep order amongst the two-hundred people clamouring to be vaccinated on a single day (ibid.).

The circulars by the commissioners issued in 1858 and 1859 were undertaken in line with the habits of the local populations, with vaccine stations being opened in spring and autumn. The 1858 act saw the number of vaccination stations rise from 1,000 to over 2,000. By 1860, this was 2,298 - through 1,011 dispensaries and 1,287 vaccination stations. Numbers of vaccinations rose from 56,000 in 1857 to almost 143,000 in 1859. Whilst an impressive leap, it was in part borne out through a smallpox outbreak - dropping to 107,000 and remaining steady at 90,000. One estimate identified this as being around 70% of births.

Calls for mandatory vaccination began in the late 1850s, alongside demands for Irish vaccinator rates to be increased to that paid to their English colleagues. Vaccination was made mandatory in an 1863 act passed by Robert Peel. Whilst it made no difference to the core infrastructure that delivered vaccination in Ireland, it did require that official records of the procedure be kept. The dispensary physician fulfilled the role of registrar, unlike in England and Wales. This was widely regarded as one of the successes of the Irish system, even though rates were only slightly higher in the country. Irish commissioners also encouraged revaccination in the wake of an epidemic from 1871-1873, encouraging the procedure ten years after the initial application. The commissioners assured dispensary officers that they would receive fees for revaccination, regardless of whether a mild, localised smallpox pustule was produced. Likewise, whilst John Simon had insisted on the ‘arm-in-arm’ vaccination mentioned in the introduction, the commissioners urged the use of capillary tubes - that is, lymph preserved in fluid in glass vials.

England and Wales - with a population four times greater than Ireland - suffered ten times the deaths. The Irish system was widely regarded as more effective than its counterparts in England and Wales, but nonetheless the 1870s saw more moves to bring it in line with the systems in England. A bill in 1879 made several amendments to vaccination policy in the country, finally equalising the rates of payment. It cut the time allowed for vaccination from six months to three, and raised the fine for non-compliance from 10s to 20s. Irish vaccinators would also be subject to supervision and inspection, with the possibility of receiving extra payment for good practice. Brunton proposes that these moves came from a desire to avoid acknowledging the success of the Irish administration, much less make any moves to adopt such practices in England.

This was the story that explained acts referenced on May’s father’s smallpox vaccine certificate from 1905. That Ireland existed in parentheses, a local modification to the bills afforded England and Wales. It is difficult to escape the sense of it being an afterthought. The sketch of the relationship between England and Ireland that I have given above shows how national interest and politics shaped the administration of the nascent vaccination practice. Whilst vaccines exist as a global imaginary and discourse, complexities arise when you begin to look at how they happen – at how the processes, institutions and priorities that move whatever a vaccine refers to from its resting state into a given body. Vaccines should not be held as separate from the contexts of their production and distribution. There is no neutral or 'a-political' vaccine, but only more-or-less dominant narratives that place them beyond the reach of scrutiny.

2.5 Vaccine Nationalism

I have told a story of what it took to initially establish vaccines in Ireland; the negotiation with local infrastructures, disquieted medical professionals, and the overriding English paternalism priorities that clashed with Irish identity. In this final section, I want to chart how what seemed to be momentary pockets of resistance escalated towards the struggle for Irish independence. It concerns the passage of a bill in England in 1898 that allowed for conscientious objection from smallpox vaccination. As was stated on the smallpox vaccine certificate, the person who failed to have their child vaccinated would be referred to as a vaccine 'defaulter'. They would be given the opportunity to convince two magistrates of their case for why they were not vaccinating their child. (Those who failed and continued to 'default' would have to pay a fine of 10 shillings or spend a brief term in jail.) Inevitably, the exemptions granted skewed towards those that were able to present a compelling argument; notably, towards those that had been afforded decent schooling. As had been the case with previous vaccine legislation, Ireland was not subject to this new clause. It was this legal distinction between England and Ireland that transformed vaccine resistance into a nationalist issue. The English were allowed to opt out, but the Irish weren't. As such, the issue became one example amongst many of misrule by the English. In 1905, the Irish Anti-Vaccination League was founded to protest the lack of right to conscientious objection, transforming this into a part of the Republican cause. If alliances can come together to strengthen vaccination, then the strangest of circumstances can also come together to oppose it.

A surprising number of prominent Irish Republican figures were involved in the movement resisting vaccination, amongst them the famous Eamon De Valera himself. De Valera would be a pivotal figure in shaping the country in the middle of the twentieth century, taking Ireland on a path towards being inward-looking, focused on rural life and Catholic[9]. One participant expressed surprise when I mentioned De Valera's position on vaccination, viewing him as an otherwise sensible 'man of science'. After the war of independence and the Irish Civil War that followed hot on its heels, a 1928 bill was brought to allow for conscientious objection to vaccination, of which De Valera was a defender (Dail Eireann 1928). He said in the Dail that:

> 'There are people whom you cannot compel to do things of that kind. It is an invasion of the most intimate of personal rights. I know of no invasion of a similar kind other than that of conscription in which you can compel a person to die for the sake of the community. I know of no other case where we go into the home and compel people to run risks to their health except in this case except in this case of vaccination.'

WT Cosgrave - the President of Ireland at the time- replied by noting that 'between 1876-1879 1,804 cases of smallpox were treated by Cork Street Fever Hospital. The mortality rate amongst the vaccinated was 11.6% and amongst

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[9] De Valera was not alone in this endeavour, acting in something of a partnership with the infamous Archbishop of Dublin, John Charles McQuaid (Cooney 2009).

the unvaccinated it was 63.6%'. Boland challenged the validity of the statistics presented by the president, asking if the mortality rates were 'all other things being equal'. He responded archly that:

> '... the Deputy can, if he so wishes, go to Cork Street hospital and correct these figures. It is not a question of a return from Sheffield or Chesterfield or some other place like that. We have the figures here and, as it has been stated, it is not a political matter. I hope it is not. I often hear it said that a matter is not political when we find members of the [the party of government, to which Cosgrave belonged] *Cumann na nGaedheal* Party divided, but I have not noticed any particular enthusiasm on the part of Deputies on the benches opposite to inform the House when they are divided that it is not a Party matter. The division is not so marked over there as would lead us to conclude that it is a non-political matter'.

The debate is lengthy and fascinating, with many beats echoing the conversations about vaccines today. Interestingly, Cosgrave highlights the division between members of the medical profession on vaccines, drawing the analogy that:

> 'We have members of the medical profession on both sides, and I am not going to join in the chorus of those who say that members of the medical profession are not agreed on the subject. I wonder if I were to pay a visit to the Stock Exchange with £1,000 and say, "I want to have it invested," how many members of the Stock Exchange would agree in recommendations as to how it should be invested.'

What I want to draw out here is the remarkable ways in which nationalism intersected with vaccination in England and Ireland, as well as the foreshadowing of debates that were to come. High rates of COVID vaccination in 2021 were a symbol of national pride, even under restrictive lockdowns and other public health measures. The complex entanglements between differing regimes of expertise, bodily autonomy and collective responsibility all surface in this debate in the young country’s history.

I return now to my central question: How did vaccination, as a culturally situated discourse, become what it is? How did vaccines become so strong as to be irresistible?

I have attempted to trace the alliances and conflicts that showed where vaccination came from; from the backstreets of Constantinople, to the spread of variolation, to the mystery of farmers’ and milkmaids’ immunity to the practice, to Jenner’s investigations and beyond. Vaccines are often referenced as a ‘natural’ fact; a given that has no history, no story, no help. Yet from the very beginning, they have always had their co-actors and their heroes – even when the fame of vaccines eclipses that of any one contributor. Jenner, Pasteur, Montagu, Pasteur, Koch, Salk, zur Hausen – all have been engulfed by the programme in itself. What it means to stabilise vaccines coheres with what Latour describes as ‘purification’, or in wider terms might be called naturalisation. Vaccines become objects whose story is unassailable, as so many scientific facts before them have done.

Even national heroes of Ireland have ended up using arguments that would echo ‘anti-vax’ sentiments. Whilst particular vaccines and their diseases have their own politics, socialities and meanings, vaccines as a wider discourse are also the product of specific historical circumstances**.** I have written about how ‘vaccination’ in a wider socio-material came to be, and of some of the frictions, problems and dramas that beset it in the process. Whilst there are certainly heroes, or ‘outsized actors’, that possess a certain exceptional power, they themselves have become secondary to the enterprise of vaccination in itself. Vaccination went from being a highly contested process into something that emerged alongside the institution of public health in Ireland. I have shown the place of class relations, infrastructure and disease itself in the process of both normalising vaccination and stabilising the object of the vaccine. In doing so I have set the stage for the awkward appearance of those whose views and experiences failed to fit with this consensus.

Paying attention to local relations at a small scale matters. As Deborah Brunton concludes her own work, it is the local activity of a myriad of professionals that leads to the embedding of vaccines in Ireland and elsewhere. As she writes:

> ‘At the local level, poor law officers, conscientious vaccinators, registrars, and vaccination officers ensured that large numbers of children were protected against smallpox. Contemporary commentators attributed the success of vaccination in Scotland and Ireland to local organization: where vaccinators were also registrars, they were able to follow up with unvaccinated children. This agrees with the findings of Peter Sköld, whose work in Sweden demonstrates that the successful implementation of compulsory vaccination owed much to the efforts of individual medical practitioners and clergymen who encouraged parents to make use of the

> procedure to protect their children. If this story has heroes, they are the ordinary practitioners, registrars, and administrators who did their best to promote vaccination' (Brunton 2006, p.168)

The small actors – human or otherwise – matter. More than that, the questions of who we pay attention to, of what counts and how, are key in these stories. Vaccines did not easily become the seemingly unassailable cultural institution that they are today. Exploring the grounds of this opposition becomes a little easier when there is an idea of where such strength comes from. Yet, as I explore in the next chapter, when such strength is produced as a matter of categorical imperative – that vaccines cannot be resisted because they are scientifically certain and outside of the social realm – then when resistance *does* occur it is all the more bewildering and inexplicable. It is this resistance to the 'real' that forces people outside of it, to the inner margins reserved for barbarians, heretics and outsiders. However the moment where resistance was put forward in the centre of parliament by one of the greatest politicians of the Irish Republic showed that such marginality was not always the case.

I return to Rialto in late 2021, on a warm day, in a small close near the canal. I finished a lengthy, fascinating and highly enjoyable conversation with Flora, Peter, May about their century-old smallpox vaccine certificate, their stories of growing up in Dublin, the changes in the social fabric of the neighbourhood and the enthusiasm for vaccines that grew out of their experience of disease. May had lost her father to Tuberculosis, Peter had seen first-hand the fragility of life in the King's Street tenement. How vaccines accumulated strength and manifested in social relations should be read as over a century of history, in which they became sedimented and so deeply embedded that it is easy to forget their journey.

Continuities arrive in the strangest and most surprising of places, but the old and yellowed piece of paper stuck in my mind when I went for a coffee later that afternoon and was asked to show my proof of COVID vaccination. Nobody would know that you were or weren’t vaccinated without help from these documents, digital or physical. To speak about vaccines as distributed, enmeshed with informational and social relations, residing in body and memory, points towards the nature of the relationships that they constitute and which ones are lost at points of rupture. In attending to the moment when their strength didn’t exist, the fact of their irresistibility can be brought to bear.

The presence or absence of vaccines, of the certificates and the willingness to show them or not, index the complex histories of race, class, nationalism, the development of medical science and much more besides. Even as specific countries and their institutions change, new vaccines are developed and deployed, the knowledge of what ‘vaccines’ are in this more general and discursive sense endures - protecting and protected.

The conversation today, however, is on different terrain. Rather than debate in the heart of parliaments, politics has been excised from the equation. The terrain of the conversation today has shifted to one of information and the authority, durability and correctness of facts. How is it that facts lend their strength to vaccines in the information age? And what happens when something as seemingly incontestable as facts, the very things that anchor and unveil a shared reality, are contested… and what strange hinterlands exist beyond them?

3. Get the Facts, Get the (HPV) Vaccine

‘Make an informed choice and don’t be swayed by rumours’

-’HPV Vaccine Facts’ (HSE 2019)

‘Thank you Laura, for championing the facts’

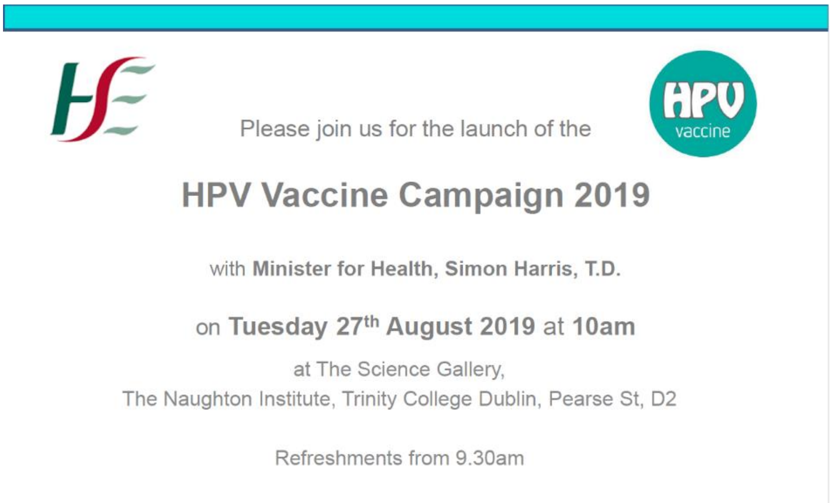
-A speaker at the gender neutral HPV vaccine launch event in 2019

‘…the solidity and permanence of matters of fact reside in the absence of human agency in their coming to be. Human agents make theories and interpretations, and human agents therefore may unmake them. But matters of fact are regarded as the very ‘mirror of nature’… What men make, men may unmake; but what nature makes no man may dispute’

-Shapin and Schafer, *the Leviathan and the Air Pump* (1985), p.23

3.1 A Person in Possession of Certain Facts…

In August of 2019, a few weeks after I’d entered the field, I was surprised to receive an invitation in my inbox. It was from Niamh, my main point of contact at the PHMT. It was to a launch event at the Trinity College Dublin, for the ‘HPV Vaccine Campaign’. Whilst the HPV vaccine had been in use in Ireland since 2010, it was only offered to girls aged 12 and 13 years old. Whilst catch-up campaigns exist for older girls and small groups of adults, the vaccine is most effective administered prior to exposure to HPV. Between the high cost of the vaccine and the fact that it offered significantly greater protective benefits to girls, boys were not included in the initial campaign. The event that Niamh had invited me to was to launch the inclusion of boys in the HPV vaccination campaign.



Please join us for the launch of the

HPV Vaccine Campaign 2019

with **Minister for Health, Simon Harris, T.D.**

on **Tuesday 27th August 2019** at **10am**

at The Science Gallery,
The Naughton Institute, Trinity College Dublin, Pearse St, D2

Refreshments from 9.30am

Figure 3.1 - Invite to the HPV launch event

In tandem with the launch event, the HSE had prepared a range of publicity materials that presented the benefits of the HPV vaccine, the dangers of cervical cancer alongside other key pieces of information. Amongst these is a short video simply titled ‘HPV Vaccine Facts’, posted to the HSE’s youtube channel (2019). It features three medical professionals; a senior oncologist, a GP and a public health specialist from the PHMT. Inspirational piano music plays in the background and the three experts each take it in turn to relate a short fact about the HPV vaccine, the diseases it prevents and the lives it might save. The script is short, so I replicate it below:

> Every single year in Ireland, about 280 women get cervical cancer and almost 90 women die from it.
>
> The HPV virus is known to cause cervical cancers, but what many people may not know is that HPV can cause other cancers and conditions that can also affect boys.
>
> The HPV virus is extremely common and the more young people that are simply protected from it, the easier it is to stop the spread of HPV.

> The World Health Organisation says the HPV vaccine is safe and effective.
>
> The HPV vaccine now protects against 9 out of 10 cervical cancers, and other HPV-related cancers in women and in men.
>
> From September 2019, boys will also be offered the HPV vaccine to protect them into the future.
>
> With a high uptake rate there's the potential to save 112 lives every year.
>
> Make an informed choice and don't be swayed by rumours.
>
> You can find everything you need to know about the vaccine at www.hpv.ie
>
> Get the facts.
>
> Get the vaccine.
>
> Protect our future.
>
> Protect our future
>
> Protect our future.

The facts in the video are simple ones[10]. They speak plainly, invoking authoritative institutions like the HSE and the WHO. They warn against the dangers of rumours, calling people to make an 'informed choice' through the facts presented. The doctors tell us that cervical cancer affects hundreds of Irish

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[10] The primary analytical focus of this thesis is information, I follow Luciano Floridi in his statement that facts are something of a 'capital island' in the archipelago.

women per year, nearly a hundred of whom die. Although not explicitly stated, the 'rumours' loosely stated refers to the once high-profile stories of the 'gardasil girls' and REGRET. At no point is the group or their stories mentioned in the materials I studied, although their memory is still strongly present - with much consternation - amid the staff at the PHMT. The message is that taking the HPV vaccine is a rational, reasonable choice as well as a responsible and an ethical one. The protection of the future does not just rest on people taking the HPV vaccine, but on the wider epistemic health of a population protecting themselves from misinformation, rumours and conspiracy theories. The move to immunise the population from rumours about vaccines is interwoven with the taking of the HPV vaccine itself.

The slogan 'get the facts, get the vaccine' is at the centre of this chapter. It invokes a directness that exposure to facts leads one to seek a vaccine as a matter of course. The cadence reminds me of the oft-quoted opening words to Jane Austen's Pride and Prejudice (1813). She wrote that 'it is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife'. The claims of universally acknowledged truths, that under certain conditions, one thing might be said to inevitably follow another. Of a man with a fortune and his want of a wife, Austin writes that 'this is a truth so well fixed in the minds of the surrounding families, that he is considered the rightful property of some one or other of their daughters' (ibid., p.2). This type of haughty, rigid norms of English high society frequently found themselves the subject of Austen's biting social commentary. And whilst more in-depth engagement with her witty social critique of Regency England is rather beyond the scope of this thesis, I join many in borrowing Austen's wit for my own purpose. Is it a truth universally acknowledged that an unvaccinated person, in possession of the facts, must be in want of a vaccine? And if so, what *are* facts, such that when they are possessed one becomes compelled to take a vaccine?

In the introduction and the previous chapter I set out how it is that vaccines became materially and discursively stabilised in Ireland (via England). That is, in examining how they came to exist as they still broadly do - not just as a material object but as the type of material-semiotic hybrid which emerged through a volatile, socially complex and often controversial set of processes. Facts, like vaccines, are a deeply naturalised actor within the Euro-American ways of viewing the world. And, like vaccines, facts participate in and profoundly shape the social world as actors rather than just being authoritative representations of it. Facts are used by people for particular purposes. Lorraine Daston captures this sense as she writes that ‘if modern facts have an incarnation, it is as rocks: hard, jagged, plain rocks - the kind you might hurl at a window or stub your toe against’ and that they ‘stalwartly resist any attempt at prettification’ (2012, p. 608). Mary Poovey goes on to describe them as an ‘epistemic unit’ playing a ‘peculiar role’ in Western epistemology since the seventeenth century. This is a tension between their interpretation as ‘particulars, isolated from their contexts and immune from assumptions (or biases)’ and on the other as related to ‘facts as evidence that has been gathered in the light of – and thus in some sense *for* – a theory or hypothesis’. As such, they are positioned ‘between the phenomenal world and systematic knowledge’ (1998, p.1-2).

Particular facts thus materialise and are embedded in various discursive and material forms, circulating and becoming distributed in particular places at particular times. In the type of YouTube video the HSE made, memes circulating on social media, leaflets, consent forms, conversations and images. All of these actors have facts embedded in them and mediate highly complex social relationships. Datson's metaphor of a stone or a pebble that can comfortably rest in the palm of your hand points to an enclosure and a solidity - discrete *things* that can be picked up and used. As Latour also writes of facts, 'they are much more interesting, variegated, uncertain, complicated, far reaching, heterogeneous, risky, historical, local, material and networky than the pathetic version offered for too long by philosophers'. That is, they do not sit there like a totally inert object. As he continues, 'rocks are not simply there to be kicked at, desks to be thumped at. "Facts are facts are facts"? Yes, but they are also a lot of other things in addition' (Latour 2012, p.21).

The desk being thumped or the rock being kicked is a reference to the classic picture of a bored empiricist talking to a radical constructivist. The constructivist insists that everything is made up and, ultimately, nothing matters or exists. The empiricist rolls their eyes and sharply raps his knuckles on the table between them - the solidity of the material world resisting the power of the constructivist's arguments. The empiricist then goes down the (very real, material) pub while the constructivist dissolves into an anxious, ultimately non-existent puddle. Latour's rhetorical depiction of facts as circularly defined is presented with the same self-evidence as the empiricist's table, with the same solidity in the face of deconstructionist endeavours. The material-semiotic approach I take here does not de-construct, but re-constructs through identifying the various relations that facts are involved with. This analysis is not dissimilar to how Walford's describes 'data aesthetics' - that is, a focus on what data *does* in social worlds as opposed to what they referentially mean (2020). Chief amongst these is their relation with the HPV vaccine in the context of the launch event, through an analytic of 'gathering' (Latour 2003, 2012). Who is in the room at the launch event? What mediations take place that can help us understand the work that facts do and the various alliances that form around them?

Yet as Bernice Hausman writes in her work on how debates around vaccines are framed, attention to a fact 'reveals a problem in the way that we understand evidence and its role in establishing our reality' highlighting why 'many of us are ambivalent about evidence-based medicine and its seeming disregard for the things that we observe in our own lives…. When the broad scope of statistical generalization does not cohere with what we experience as reality' (2020, p.121). Facts have a power to silently command by stating the way the world is. As Poovey calls them an 'epistemic unit', they might be thought of as an epistemic quantum - the smallest thing that cannot be gone beneath. Yet they do so without the exertion of authority like a human sovereign. Because their power is even greater - it is not that in an overwhelming tidal wave of force that one lacks the to resist. It is that resisting is not a possibility at all.

Facts contain an ambivalence between what I refer to as their imperiousness and their innocence. Their imperiousness is the force to establish reality - to say what the world or some particular thing *is* on the most fundamental of levels; that the sky is blue, that vaccines (HPV or otherwise) are safe and effective. Because how can an object *do* anything? This is what returns me to the discussion of objects in the introduction - where they are thought of in terms of the difference they make in the course of an action, or of how they lend a steeliness to different relations that unfold around vaccines (and otherwise).

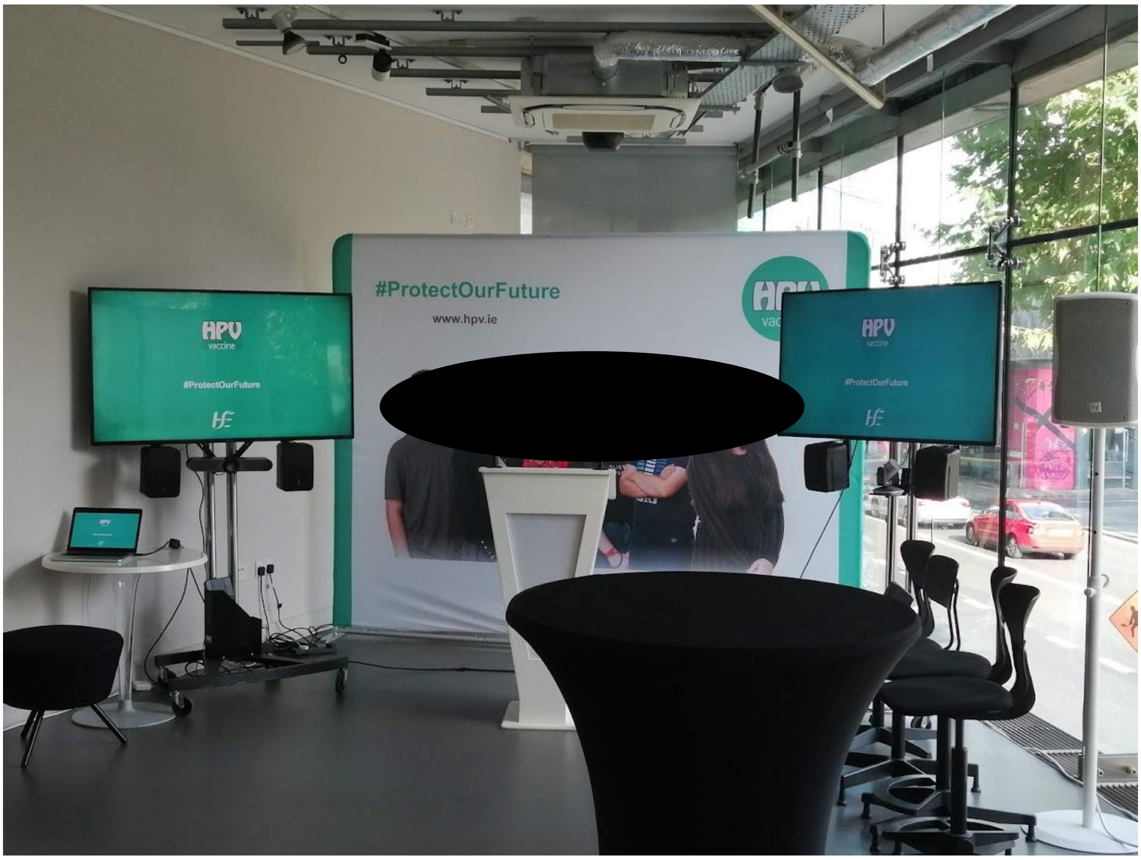
This chapter, then, works particularly to unpick the imperious power of facts, formulated in my questions above. To think about what facts are is to peer into their place in the social world, into how it is they are entangled with vaccines and the work they do to stabilise each-other. This chapter is an exploration of facts as they exist in and across particular spaces in my fieldsite - tracing the work they do, accounting for their power and exploring how it becomes visible at particular moments or in particular spaces. I begin with a description of the HPV vaccine launch event, situating how facts are released into the world through the witnessing of state officials, expert witnesses and even the architecture of the Science Gallery itself. I then explore the manner in which the story of Laura Brennan, the patient advocate for the HPV vaccine, is told alongside and runs through the speeches of the figures assembled in the room. I then examine how it is that REGRET presented their own case for the suspension of HPV vaccination to the Joint Committee on Health and Children in December of 2015, during the high point of the success of their campaign and the nadir of HPV vaccine confidence. Whilst they and other ‘anti-vax’ groups are cast as ‘science deniers’, the core of their objection rests on a lack of access to information and what they perceive as inadequacy within the facts presented through clinical safety trials. I then consider the way in which, across these perspectives, the power of facts are not enough - requiring the support of stories of suffering bodies. The images of the girls of REGRET and that of Laura Brennan highlight the allies that facts need when the edge of their epistemic territory is reached. However, the very existence of a limit - a place where the power that facts exerts breaks down - breaks the very essence of such sovereign power. This suggests that attending to the power of facts, as with the strength of vaccines, necessarily entails an examination of their limits, vulnerabilities and porous borders. By understanding this strength we can also appreciate the nature of the force that displaces those that resist vaccines to the margins.

3.2 The Launch Event- Arrival

As I look back through my field-notes on the event, I found this on my phone at the top of an old note on Google Keep:

> 9.26: I need to go upstairs and do some ethnography. My first bit of ‘proper’ or active fieldwork. I’m not sure who I’m asking, but wish me luck!

Active and proper fieldwork entailed the idea that the room I was going to was special. It was a place where vaccines explicitly *happened*. On the day of the launch event I left my new accommodation in Rialto to try and locate ‘the Naughton Institute’ at the Trinity College Science Gallery. After a journey across Dublin, I found myself wandering around the outside of Trinity College for a good twenty minutes. I eventually found the building. It stood out in the urban landscape - all modern glass and steel, it was taller than the squat rows of three-story Georgian houses and other buildings that faced it, as it jutted out of the north-east side of Trinity College. It had a sharp, triangular shape to it. The launch event was held in a room that was at the most angular point, lending the even a rather cramped feeling. Despite this, the space in general was open gantries and walk-ways with high ceilings, rooms for workshops and exhibits, with a cafe and gift shop at its base. Whilst the Science Gallery was beset by funding difficulties in the wake of the pandemic and is closed at the time I write this, the centre itself was part of an international programme of science outreach activities. Science Galleries of this sort were built to host events, temporary exhibitions and collaborations between arts and science. The aim was to promote public (and particularly youth) engagement with science. That the science gallery was selected as a place for this event is important to contextualise the type of relations that occur around how facts, vaccines and other stories are presented in tandem.



[redacted]

Figure 3.2 - The Naughton Room in the Trinity College Science Gallery, set up for the HPV launch event

Museums mobilise institutional and scientific power, rendering them accessible to their publics. The display of facts, HPV vaccines and other actors in this legitimating context is key. Michael Giebelhausen traces the genesis of museums to the display and collection of artefacts, not necessarily requiring specifically defined structures; noting that in antiquity the collection of objects in sacred spaces not only served religious purposes, but also ‘emphasized the worldly powers of sovereign, city or state’ (p.224). Whilst imperial and royal collections from the eighteenth century were becoming more publicly accessible, the emergence of institutions like the Musee Francais ‘created the notion of a general public synonymous with the republic’s citizenry’ and participated in creating concretizing the ‘abstract idea of a civic populace’ in architectural form (ibid., p.225). As such, museums initially worked as a monument and an instrument of sovereign power, celebrating the expanse of imperial achievement. The power to put the world on display marked the extent to which one was felt to possess it. The development of grand but temporary World Fairs transformed the temporal dimension of these displays. As Le Corbusier writes, this ‘extended the notion of museums as time’s arrow, an instrument designed to show the cumulative progress of humanity’s achievements and nature’s transmutations’ (p.232). This movement to more flexible structures, encompassing and instrumentalising museums - exemplified in the Museum of Modern Art and the Centre Pompidou - creates a space where culture is democratised, with the boundaries between high and popular culture becoming broken down.

Science Galleries follow in this trajectory, as does the idea of the ‘postmodern museum’ - something which participates in wider projects of urban regeneration and renewal. Rather than being static monuments people come to, they instead integrate into, reconfigure and regenerate the local environment whilst also making cities into places of international interest. Architectural choices - both aesthetically and in the configuration of the internal space of the museum - index wider civic purposes, participating in the construction of national identities and the subjectivities of those that inhabit them. In the context of Science Museums in particular, this movement towards ‘postmodernity’ is one where ‘museums still speak to most people with voices of authority and legitimacy’ and that ‘trading on that legitimacy to make us all more literate scientific citizens might well be the greatest function science museums could serve’ (Conn 2006, p.507). As such, science museums and galleries serve as a quasi-participatory space where institutional power and epistemic authority are materialised through exhibits, displays and events. As Conn writes, ‘science museums… present the world [as] understood, organised, and managed, and in so doing reinforce the very idea of the power of science’ (ibid., p.496). Thus spaces like the Science Gallery index not just particular scientific discoveries, but contribute to the reinforcement and formulation of ‘Science’ as a popular imaginary. It shows that the world *can* be structured, mastered, ordered and known in a space of civic participation. As such, hosting the HPV launch event here continues the trajectory of making a public health programme that explicitly requires national participation accessible through the choice of venue in itself.

However, the launch event was not a public one, even though families that had participated in the campaign had been invited. Their inclusion in the publicity materials depicted receiving and advocating for the HPV vaccine - including the boys that the campaign targeted - reinforcing the ecumenicalism and civic engagement that vaccination entails and reinforces. In representing these things as public, both state institutions and authoritative scientific knowledge are made visible and accessible. The veil between the worlds of institutional power and the publics they serve becomes thin, allowing for the diffusion of authoritative knowledge and the HPV vaccines that follow in its wake. The space described, I return to my description of the event itself.

The launch event itself started at 9:30 - I arrived at around 9:20, a strong coffee in hand from a Starbucks I'd been to en route. The Naughton room was up a few flights of stairs; signposts gradually led me to the event and I eventually encountered flimsy-looking wooden tripods that reminded me of easels, lined up by the edge of an open walkway above the Science Gallery's gift shop. Resting on them were glossy pictures that advertised the HPV vaccination campaign; pictures of smiling children and families on a white background, the HSE logo in one corner, the HPV in the other and a hashtag #ProtectOurFuture.

Figure 3.3 - Inside the Science Gallery, images of publicity materials on the walkway leading to the Naughton Room where the HPV Launch Event was held

I was adrift in the room – despite it being, theoretically, a room full of people that I should have been eager to talk to. Despite my initial optimism, I had found the diversity of groups and individuals was overwhelming – that question of what it meant to explore the HPV vaccine ethnographically suddenly seemed intractably large and complex. I found myself standing at a table, rapidly beginning to overheat in the narrow, triangular space. The extra coffee had probably been a bad idea. The tiny pastries that were provided were flaky and prone to sticking to my hands as I checked emails and texts from home. It was warm, and I'm prone to overheating - wiping sweat from my forehead, my initial confidence turned to an embarrassed anxiety. I was hugely relieved to find a friendly face in the PHMT's communications team, Niamh, a short time before the event was due to start. She introduced me to a counterpart of hers from elsewhere in the organisation, discussing the social media sentiment around different vaccination campaigns and the uptake statistics that were trickling in.

I spoke to a few people in a slightly awkward half-hour before the event itself started at 10. I chatted with a senior doctor at the Marie Keating Foundation, who told me the organisation's story; it had been founded in memory of Marie Keating, the mother of Westlife's Ronan Keating who died of Cervical Cancer. The foundation had, alongside a wide range of other organisations advocated for the HPV vaccine during the crisis of previous years as part of the HPV Alliance. The world of Irish pop-stars or their immediate family intersecting with HPV vaccination was small - I would eventually come across Jim Corr on Twitter; the brother of the family pop-group the Corrs who was an outspoken critic of the HPV vaccine. A few weeks after the launch, he made a public Facebook post linking reports of infertility associated with the vaccine with a depopulation agenda pinned to Bill Gates.

The doctor from the Marie Keating foundation politely declined my request for an interview citing a particularly busy schedule, but she directed me towards the general mailbox of the society. Several other people in the room seemed interested in my project, but the breadth of people, organisations and interests involved was overwhelming. This is one difficulty of an approach that sees HPV vaccination as a distributed phenomena - that any number of these people could have provided a potential avenue of inquiry or a direction for the project. Even if I chose to 'cut the network', seeing the number of individuals assembled here all explicitly oriented around making the HPV vaccine 'happen' was a potent reminder as to the immense complexity of the endeavour and interests that are coordinated through it. Vaccines are much more than a material object, enrolling a wide range of alliances in their defence. As Latour wrote about the spread of Louis Pasteur's contribution to hygiene, it took a similarly immense number of alliances taken to stabilise the endeavour. As he writes: 'the surgeons, the midwives, the prefects, the mayors, the disinfection services, the teachers, the army doctors'. The room here contained representatives of the ordinary public, clinical experts, communications professionals, a complex matrix of digital communications technologies and even a senior government minister. And once joined together, 'they became indisputable. No negotiation. No distortion' (1990, p.140). Captured in the rubric of the 'HPV Vaccine Alliance', it represents a mobilisation of civil society, third sector organisations, public institutions and private enterprise. The scale of this defence shows the extent of the powers allied, gathered in this room.

After my early conversations, the angular room gradually began to fill up as the scheduled start time of the event approached; I had a second coffee of the morning from the large urns at the back of the room. It was black, bitter and strong. I recognised some of the children and their families from the videos and campaign materials, chatting with different public health professionals. At ten o'clock a smartly-dressed blonde woman with black-rimmed glasses mounted the small stage and gave the first of several short talks. Her delivery was clipped and precise. As soon as she started talking, two-dozen smartphones raised up as the attendees began to take pictures - presumably for rapid tweeting out across the campaign's hashtags or other diffusion across social media. The speaker gave thanks to the health minister Simon Harris, clinical professionals and the family of Laura Brennan. Behind the speaker, two large TV screens flicked between images of the HPV logo with the day's hashtags (#ThankYouLaura, #ProtectOurFuture) followed by pictures of smiling families. She also thanked the media and the collective effort to challenge misinformation and Laura's family for 'championing the facts'. The language of alliances follows both Latour and the framing within the speeches themselves. Many of the speeches that followed this one rested on a knowledge of who Laura Brennan was and her story. This was not one that I knew in detail at the time, but it's one that should be told to make sense of the rest of the event. Who *was* Laura, and what does it mean to champion facts? And what does attending to her championing (and that of her family) tell us about both the power facts claim and the threats the gathering alliance felt they had faced?

3.3 Laura, 'The picture of an unvaccinated girl'

Laura Brennan is a young woman who passed away just a few days before I came to Ireland for the first time, in March of 2019. She was diagnosed with cervical cancer in 2015. After what appeared to have been a successful round of treatment that pushed the cancer into remission, the disease came back in 2016. This time, she was told it was terminal and that she had between two and five years to live. She asked the doctor who gave her the diagnosis ‘is there any chance it isn’t cancer?’ and, after a pause, they simply told her ‘No’. After Laura received the news she contacted the HSE and offered to advocate for the then-embattled HPV vaccine. REGRET had begun to lose ground to the concerted efforts of senior figures in the PHMT, but Laura became a figurehead that captured public attention. In the many months that followed, she made the story of how her cancer gradually spread through her body uncompromisingly public with a brave face. With the support of the HSE, Irish national media and even the World Health Organisation, she told her story. This material and that which follows is summarised from an RTE documentary of her life titled ‘This Is Me’, interspersed with ethnographic material from members of the PHMT that knew her and worked with her, alongside comments from some of my other participants that remembered her presence in the news.

I mentioned Laura briefly in the introduction as I recounted my conversation with Ryan, a doctor at the PHMT who’d moved our meeting to attend her funeral. He and his colleagues at the PHMT had known Laura well and been moved by her advocacy for the HPV vaccine. Sara, who worked in the media team, said that Laura was just ‘electric’ with energy. Sara’s two colleagues that were present at our interview nodded enthusiastically, saying how she’d handled some of the country’s biggest talk-shows with a charm and style that even seasoned public figures struggled to match. Whilst she’d spoken on smaller radio shows local to County Clare, she’d appeared on the high-profile Late Late Show. The LLS is a national fixture - a finger on the pulse of the Irish current events, where public discussions of the major issues of the day were aired. When the show had featured Rialto-born Gay Byrne in the 70s and 80s, questions of contraception and abortion had at once incensed and fascinated the nation. Whilst many of my participants rather disliked Ryan Turbidy, the show nonetheless featured significant public interest stories, hosted famous musical acts and high-profile public figures. During the pandemic, it acted as a place for public science communicator and immunologist Luke o'Neill to reinforce the importance of social distancing and basic hygiene measures. Laura Brennan's inclusion should be read as one of national significance.

In discussing the making of *This Is Me*, Sara told me that it had originally been planned as a multiple-episode series. However, the rapid deterioration of Laura's health in early 2019 left them with only enough footage for the single hour-long documentary. Despite this, the film toured internationally and won multiple awards. The speakers at the launch event in August 2019 knew her story, the choice that she'd taken to make it public and the sacrifice that entailed.

This Is Me is challenging to watch. It opens with an image of Laura's body lying in an open casket at her funeral. Clips of her childhood and adolescence are woven through different parts of her story, on grainy handheld camcorder footage. A voiceover opens over the image of Laura lying in repose, where she says 'I am the picture of an unvaccinated girl'. Her speaking over what she knew would be her own eventual death is a chilling and slightly surreal experience. Throughout the entire documentary, she is her own narrator - save for a few plain text slides. The documentary tells about the embodied reality of the disease that the HPV most effectively protects against. As Laura tells the camera about how her cancer spread through her body at different interviews, the simultaneous challenges and benefits of palliative treatments grounds the otherwise abstract-feeling stories of the facts about the HPV vaccine. Julie Livingstone writes in broader terms of seeing cancer first-hand in her ethnography of working on a cancer ward and in community-based care in Botswana. As she states:

> In September of that year, for the first time in my life, I saw untreated, advanced cancer—that is, cancer without oncology. It was a horrible epiphany. I was in Botswana, visiting patients with a home-based care team, when I encountered a massive, florid growth that was killing a boy who slowly, silently writhed in agony. I stood stunned by the spectacle, unsure what I was seeing. My friend and co-worker, Dikeledi, whispered the word cancer in my ear, with a familiar gravity. I eventually saw many such scenes, and in the process came to understand that while cancer with oncology was awful, cancer without oncology could be obscene. (2012, p.xi).

Whilst Laura had access to the high-quality medical care generally available in Ireland, it drives home the significance of the ways in which the success of vaccines erodes the social memory of the diseases they prevent. The documentary framing Laura as the ‘unvaccinated girl’, in her own words, aligns the bodily realities of terminal cervical cancer with the absence of the HPV vaccine. Whilst the slogan encourages the ‘getting of the facts’ - the information that the vaccine is safe and effective, numbers about the millions of doses given worldwide, numbers of cancer rates and mortality statistics - *This Is Me* tells a different story. The power of facts struggles to galvanise the human world from which they are separated but speak into. What Laura’s story

The documentary also takes pains to establish the circumstances under which Laura became the ‘picture of an unvaccinated girl’ - that it was by chance rather than choice. Born in 1992, Laura would be too old to be targeted by the HPV vaccination programme offered in schools which started in 2010. Offered to girls of 12 or 13, Laura would have been 18 at the time it started. Her best friend Veronica received the vaccine, but Laura’s mother hadn’t heard of it at the time. A conversation between the two friends occurs mid-way through the documentary, as Laura lay in her hospital bed and Veronica sits besides her in a chair:

> Veronica: ‘I remember being like, ‘oh. Shit, that actually is the vaccine my mam made me get when I was 16. At the time I remember being like ‘oh, this is so annoying I have to get a needle in my arm’
>
> *Laughter*
>
> Laura: ‘Auld jab in the arm!’
>
> Veronica: ‘Yeah. And then just seeing the… I don’t know…just like the results of not getting it for some people.
>
> Laura: Yeah, it’s mad isn’t it? Like,obviously it was there if you knew about it, but we didn’t know.

Having access to the appropriate information has a significant difference on the moral dimension of vaccination status. Not having heard of the vaccine, Laura’s unvaccinated status is not a question of refusal or hesitancy, but rather poor luck. Within this contex, the importance of getting facts is silently restated just as the cruelty of fate is sharply underlined. Similar stories follow in grainy black-and-white photographs of children crippled by Polio, scarring left by Smallpox or the violent, speckled rashes of Measles. The message is clear: Get vaccinated, or this could be you. In a conversation that occurred towards the end of Laura’s life in early 2019, she spoke with her mother about how strange it was that they hadn’t been aware of a vaccine that could have prevented her mother’s suffering:

> Laura: ‘It’s mad that there is a vaccine now that could have prevented all of that pain and heartache you went through.
>
> Laura’s mum: I actually never heard of the HP vaccine until you started promoting it. Then you said to me that Veronica got it, then I felt so, so bad that, ‘why didn’t I hear about it?!’.
>
> Laura: No, never, never feel bad please.
>
> Laura’s mum: If people only look at you and see if Laura had the vaccine, Laura wouldn’t be lying in this hospital bed now.
>
> Laura: Crazy.

The focus on her mother’s pain rather than Laura’s in this exchange makes clear the social importance of vaccination in its most intimate dimension - the experience of those left behind. The documentary shows Laura’s happy family life as she grew up, with her stating the gratitude that she has for closeness with her brothers and parents, as well as the close circle of friends she has. The message is that vaccines protect more than the body of one particular individual, but the relationships within which a person is enmeshed.

The conversation between Laura and her mother goes on to a frank discussion of how the cancer had progressed further. Whilst in dire straits, a round of palliative radiotherapy was able to shrink an aggressive tumour on her neck. Images of Laura lying in a dark room in a tight-fitting, metal mask made of a yellow mesh. A video of her playing as a child is projected over the top of it, as Laura describes the experience of it being too tight for her to open her eyes.

Towards the end of her life, in early 2019, there is footage of a doctor mentioning that Laura was in to receive a planned immunotherapy treatment. Whilst it only had a 13% chance of shrinking her tumour and extending her life, the doctor tells her that her blood-test had her 'liver levels' were a little too high. Laura starts talking to the camera and says 'turn it off, this is too hard'. The camera focus blurs, the lens drops and somebody says 'turn it off'.

Other social realities of HPV arise with Laura recounting the abuse she received for contracting it. She notes that because HPV is sexually transmitted, she received comments publicly shaming her for catching it. Whilst cervical cancer typically impacts older women with families, being a younger woman with cervical cancer marked her as sexually promiscuous and more generally careless for not having gotten smear tests. One online commentator told her 'You should be ashamed of yourself. You got what you deserved. God's judgment is JUST [Halo emoji]'.The camera pans to Laura scrolling on her phone, reading out several comments:

> 'This girl doesn't have a clue what she's supporting.
>
> Unfortunately it's so easy for the system to brainwash people.
>
> What would she know, LOL?
>
> How could she be so stupid to not go and get a smear?

Laura responds that 80% of people will contract HPV in their lifetime, insisting that people who spend their time thinking about her life should instead focus on their own. Laura responded:

> If you're passing comments like that you're ignorant to what's going on and you don't understand what's going on. 'I have friends who received death threats. Death threats!. To any haters who want to continue to hate on me, think about your life. Don't think about mine.

Julia, an osteopath I interviewed, remarked that she felt Laura had been exploited by the HSE. I responded that, by the accounts I'd been given, that she'd been proactive in contacting them. Questions of what people did or didn't know, of what was real or wasn't, quietly ran underneath conversations like this. There was no denying that Laura's death was tragic - the question became what was made of it. Julia felt that it was inappropriate that she had been given what amounted to a state funeral.

The final major event of the documentary focuses on Laura being awarded the Country Clare Person of the Year 2019. It's jarring to see that the awards ceremony seems to have taken place in the Red Cow Hotel in Dublin - forcing Laura to travel across the country from the hospital in Limerick where she was receiving treatment. She was allowed out of the hospital for twenty four hours, as she told the camera 'I've never been in so much pain!', but refusing the offer of a wheelchair for the ceremony itself. She insisted instead 'while I have my two legs I'll use them'.

The award ceremony was held in an elegant hotel conference room, full of smartly dressed figures sat around circular tables covered in white tablecloths.

In a brief clip, Laura’s father commented that when she’d last been particularly unwell she’d been given between two and six weeks left to live. As fate conspired, the award ceremony was the end of that maximal six-week period. Her father said that ‘every day is an extra day’.

At the awards ceremony Laura was no longer wearing what I took to be a signature wig of long, brown hair that she’d worn through the documentary and in many photos. Instead, she had her own hair that was just long enough to be braided at the back. She stood at a podium and gave her speech:

> ‘When I was born back in September 1992, I was born with a voice. Now I use it to speak out for what I believe is right. Mam and Dad, I don’t know what I’d do without you. I will never be able to find the words to thank you for the support, love and kindness. Not only over the last few years, but over the last 26 years. You have taught me strength, courage, and love. Just to names few things. To my brothers, Colin, Fergal, and Kevin, thank you for not only being the best brothers, but for being my best friends. I’m so lucky to have you as my brothers. I often lie in bed at night, and wonder how I got so lucky to have such amazing people in my life. Thank you for supporting me through highs and lows. For making me laugh ‘til I cry, and bringing me so much happiness to my life. The HPV vaccine can and will save lives. Save people from being in my position. So if I have to scream and shout about it ‘til the day I -*she stumbles over her words very briefly* - die, I will continue to do that.
>
> *Somebody from the audience shouts* We love you Laura!

> So now I want everyone to raise a glass. To living the best possible life you can!

The speech is cut together with images of Laura playing as a child - her father pushing her on a zip-line at the playground, of her going down a water-slide as an adolescent. Despite everything, she looked well and spoke with conviction. She made it back to the hospital in Limerick and was released to normal life after four days. The footage of the awards ceremony ends and cuts to a plain white background. Blue text appears over it, reading that ‘On the 19th of March, Laura was admitted to hospital again, with very low oxygen levels…’. After a brief pause, a second sentence appears beneath, reading ‘...and never came home’. The documentary fades to black and shifts to a flurry of media announcements of her death.

It was national news. The text recounts that a book of condolences was opened at Dublin Castle, with Taioseach Leo Varadkar himself paying tribute to Laura - he said that he ‘believed her actions will save the lives of many people’. The end of the documentary returns to the views it opened with - of her open casket at her funeral, then to her coffin being carried by her family. They had grim and pained expressions on their faces. The older men were resolute in the face of pain they held back, whereas her brothers’ faces were contorted with grief. Laura’s voice comes back once again, as she says:

> ‘I am the reality of an unvaccinated girl. What kills me though, is that all of this could have been prevented’.

A shot of her, pictured through the lens of a camera on which she was recorded giving a short speech about the HPV vaccine when she was healthy, sits for a second. Earlier in the documentary, the same shot had been given from the perspective of the camera itself - just a white background as she looked into it. It presented the fact of her being alive, blinking and looking into the camera, but saying nothing. Now the camera itself is shown in the frame for a few lingering seconds, before the image itself is turned off, leaving just dark screen in its wake. The extent to which her final months were captured for the sake of the documentary is nodded to; her death means the end of the show. After the short credits roll, the impact of Laura's story is given - people understanding the importance of the HPV vaccine. What would become a hashtag - #ThankYouLaura - is stated again and again by families and public figures.

One is a middle-aged woman with her two children, saying thank you to Laura for making her change her mind about the vaccine. Others are individuals simply saying the words 'thank you, Laura'. Amongst them are the Late Late Show's Ryan Turbidy and the health minister Simon Harris. The latter echoes Taoiseach Leo Varadkar, as he says 'her efforts will save the lives of so many other girls and women in our country'. Laura's championing of the facts meant making her death, what it meant to be 'the unvaccinated girl', into an act that the public was called to witness. I turn to Julie Livingstone to sum up some of the visceral realities of suffering and death that occur with and beyond cancer. She writes:

> '...pain, death, illness, disfigurement, and care… are basic human ones. But like all such experiences, they unfold on the ground in particular ways. Nor should cancer lend itself easily to the tales of redemption via biomedicine that make up the fantasies of global health. Thankfully, some cancers can be cured. Most, however, cannot. Oncology, like all

> domains of medicine, offers more than cure—it can help to extend the lives of patients, and it can palliate the afflicted, easing pain and discomfort. But these rewards are hard won if they come at all, gained through costly practices of poisoning, cutting, and burning. Any close look at oncology, as so many readers already know, necessarily means contemplating the deep ambiguities of biomedicine and our uncomfortable relationship with technological longing' (2012, p.x)

Cancer runs through my fieldwork and the experiences of my loved ones. Watching this documentary and writing this section has not been easy for me. In the interview with Sara that I mention above, I told them that Laura reminded me of a friend of mine named Gill, who'd passed away from bowel cancer in 2016. Like Laura, she was too young - but there had been no vaccine that might have saved her. The year before, I'd been in the midst of my career in corporate data analytics and miserable for it. Gill pointed me towards a Masters degree in Digital Anthropology at UCL, telling me to 'you're miserable dicking around with spreadsheets! Come over here and study this!'.

The images of Laura's body drew me back to the experience of seeing Gill's body. She wasn't at peace like Laura - laid out in a coffin, eyes closed and elegantly made up as though she were just asleep. Gill's face was contorted in pain as she stared at the ceiling in University College Hospital. I remember the way she'd gasped with glee at the gin and the capri sun her friends had smuggled in for her in her final days. When you're dying, a lot of the normal rules of a hospital don't apply in the same way. I'd straddled the worlds of her life at UCL and her wider friendship group, as we'd met at university some eight years prior. Those same spreadsheets I'd left behind co-ordinated her end-of-life care during chemotherapy. After she'd died, we sat in the head of department's office at UCL's anthropology building, toasting her life numb to the shock of her loss. We ordered pizza from Domino's. Other friends of mine have suffered from cancer, others have died and some have survived. I write this, because if there had been a vaccine that might have saved her, I wish she'd have taken it. I'd find it hard not to be angry at people that I might see as putting others at risk to what she went through. Gill's story is a reference point for my making sense of Laura's story.

Laura and Gill were both special. Here the line between observation and witnessing becomes hopelessly blurred. Whilst it was not profound political injustices that took the lives of these young women, it demands a specific kind of response when considered through an ethnographic lens. Here it relates here to the myriad of ways in which a body might fail. Gill and Laura are both irreplaceable to the people that loved them, and are dearly missed. For the sake of this chapter, it suffices to say that I understand a little of what cancer is and means. In the belief that a vaccine might have presented it, I do not engage in analytically-minded discussion of REGRET and their experiences flippantly or with a naive orientation. I write this to affirm, as best I can, that I do so in good faith and in recognition of the realities of cancer and the possibility that some of them might be prevented.

I want to close this section by jumping to the PHMT offices, on one of the days I was sat next to Niamh. She'd just received a text from Sara's media team - of a new video from a new potential patient advocate. He was a pleasant enough man - a father of three, walking out in the Irish countryside. The lingering shots of his family, of the swans and ducks that swam in whatever river it was he was by, showed another good life. He told the story of how he had throat cancer and that the HPV vaccine could prevent it. Niamh wryly told me that the strain he was infected with wasn't something that Gardasil protected against and that, inevitably, REGRET would pick up on that if the video was ever posted publicly. As we discussed our thoughts on the video, she pursed her lips and thought. After a pause she simply shook her head and said three words:

> He's not Laura.

Laura made suffering I'd seen and knew as well as an bystander could into a public display. It was a story of what might happen if you don't take the vaccine, as 'the unvaccinated girl' showed us. It might be easy to think of the video as emotionally manipulative, ham-fisted. What did Laura know about the HPV vaccine?

The facts make the matter plain, but Laura's story made it real.

3.4 The Launch Event - Speeches


[redacted]

Figure 3.4 - Simon Harris speaking at the HPV launch event

So, six months after Laura's death I was standing in the Science Gallery's Naughton Room at Trinity College Dublin. Simon Harris, the health secretary, was speaking in front of me. He was a figure that had attracted no small share of criticism in his tenure - with the overspend on the new children's hospital, a complex public health scandal around the mishandling of HPV smear test results contributed to a broader 'the bonfire of publicity' around HPV.

Harris spoke with the confidence and skill one might expect of a government minister; polished, measured and clear. He was tall, confident and a little gaunt of face and dressed in a pale blue shirt with a bright red tie, setting out the vision eliminating cervical cancer and the other HPV-related cancers. He too paid thanks to Laura Brennan, referring to her as a ‘guiding light’ for the campaign. He also thanked the ongoing work done by her brother Kevin to promote HPV vaccination through his work with the Gaelic Athletic Association (GAA). He thanked the cross-sector HPV Alliance - many of whose representatives were present in the room - which he said came together to ‘get rid of disinformation and promote facts’. Alongside this commentary, he provided a range of statistics and information about the HPV vaccine and cancer rates in Ireland; the 90 women per year who die of cervical cancer, the 60 men and women who contracted mouth and throat cancer. He likewise highlighted the rarer but still significant amount of penile, anal, and vaginal cancers that occur from other high risk strains of HPV. Alongside this, he noted the success of the twenty other countries that ran a ‘gender neutral campaign’ - Scotland with their 90% rate and the UK soon introducing HPV vaccination for boys.

He exhorted parents to ‘get information to make the right decision’ to ‘not take advice from somebody who isn’t a doctor’, to stay ‘away from pseudoscience and the [tweet machine?]’. He harshly condemned those who ‘spread lies about this life-saving vaccine’. He noted that 270 million HPV vaccines have been administered world-wide, supported by the European Medical Association. He also noted that the WHO had endorsed the HSE’s website on HPV. Harris further ‘called on all parents to get the facts and get the vaccine’. He then set out a brief timeline of steps he was taking to further the campaign; the administration of the vaccine in schools from Monday, the movement to the global vaccination summit in Brussels in mid-September, a cross party vote on childhood immunisation programmes and the Research Board to look at global lessons learned on pushing up vaccine uptake. Simon's speech followed the cadences of the wider HSE advertising campaign, reinforcing the facts about the rates of cancer, the safety and efficacy of the vaccine and the role of the Brennan family in others in underlining its importance.

Kevin Brennan next stood up to speak - Laura's brother. He told stories about her; how she was the youngest of four, fiercely argumentative and a passionate person. He referred to her as becoming a 'cheerleader for human rights' and remembered her saying 'the vaccine saves lives, it could've saved mine, it will save yours' after she was diagnosed with cervical cancer. He recounted that on the 13th September 2017 she messaged the HSE (over Facebook, my notes have a question mark against this) to explain her situation and volunteered to stand up and speak. He mentioned her subsequent appearances on national television; the news and talk-shows. He reflected on 'a picture of her that was 18 months ago'. I wasn't sure which image he was specifically referring to, but there were contrasting pictures of her looking 'normal' as opposed to her appearing sick and gaunt as she had at moments in the *This Is Me* documentary.

Kevin was delighted that 'Laura continued to play a part' even after her death. His voice cracked as he spoke at that point - as he mentioned that over four-hundred diagnoses of cervical cancer are made a year in Ireland. Controlling himself, he remembered her saying of the importance of the HPV vaccine that 'If I have to scream and shout about this message until the day I die I will'. He remarked with bleak pride that she *did* scream and shout the message until she died. He introduced one of the promotional videos that would be used to promote the vaccine. It was a series of families commenting on the safety of the vaccine - who got the information from an HPV pamphlet or online. The video followed the script to the video that I introduced this chapter with, the same litany following - although it was families rather than experts speaking. ‘If you have questions, ask a trusted source’, ‘112 lives per year have been saved’, ‘Get the facts, don’t be swayed by rumours’. It was followed by a chorus of calls to ‘get the facts’.

A senior doctor from the PHMT next took to the stage for the last talk of the event. Her message was simple - again mentioning the gender neutral vaccination programme, the risk of genital warts and that ‘we have a safe and effective vaccine’. She thanked the ‘trusted healthcare practitioners in school health teams, GPs and Pharmacies’. She made a final call for ‘evidence based information’, for ‘healthcare practitioners sharing information with friends and family’, for ‘reputable sources’, ‘correcting the narrative’ and ‘working together to share the facts’. The event wound down and I returned to the north of the river, where I got the LUAS back home to type up my fieldnotes.

Facts, then, are to be championed, shared and protected; an unvaccinated person in possession of the facts *should* be in want of a vaccine, under the appropriate conditions. Laura’s tragedy was not just the absence of the vaccine, but of not being aware of it. Facts are signposts on the road to the HPV vaccine - with clear warnings not to stray off the path or speak to strangers. Whilst there was a lingering nostalgia for unopposed facts, noted in the mourning of their passing, the fundamental order of the fact-vaccine alliance remains the same. The speeches themselves mentioned the risk of rumours or unsubstantiated information - suggesting that not all information is created equal and that where there are facts there is also a risk of pseudo-facts competing for attention.

3.5 Alternative Facts?

What of the ‘rumours’ that the Irish public had been told to avoid? Whilst I described REGREt’s story and its wider context in the introduction, I want to move to a specific event which contrasts the Launch Event and Laura’s story: an exchange between the members of REGRET and the Irish government Joint Committee on Health and Children on December 3rd 2015, just under four years prior to the HPV launch event that I recounted above.

The hearing came before the review of HPV vaccine side effects by the European Medical Association (EMA) - sparked over reported concerns in Denmark. A meta-analysis of the safety data undertaken by the highly regarded Cochrane Institute would also be released, re-confirming the findings. And more recently, longer-term studies show the population-level efficacy of the HPV vaccine through plummeting rates of cervical cancer in [x countries].

The terrain was not one of spreading rumours, but one over the contestation of what was factual or not. The choice of language is an epistemic label that can be read in sharp contrast to what I have described so far in this chapter.

Whilst the groups like REGRET continue their campaigns in spite of the scientific consensus facing hem, the meeting with the Irish government was at the height of public sympathy for their cause and a low of HPV vaccine uptake - HSE figures indicating a drop from around 90% nationally to as low as 40% in some areas of the country (NIO 2019). The theme of whether information was available or not returns here, but from a very different perspective: the divergence between what is present in the Patient Information Leaflet (PIL) and the materials published by the HSE themselves. The PIL in theory represents everything that a person wishing to make an informed choice whether or not to vaccinate might want to know.

What follows is drawn from the official transcript of the event, charting a conversation between a number of elected officials, medical and public health experts and the representatives of REGRET - Anna Cannon, Kiva Murphy, Karen Smythe and Tom Reddy. The parents noted that some side effects that were present in the PIL were not included in the materials that were sent home from school with the consent form. In the PIL itself, side effects that were identified within the scope of the clinical trials are listed separately from those that occurred during post-marketing exposure. Anna Cannon, in her opening statements to the committee stated that:

> ‘The PIL is the folded leaflet everyone gets included in the medication package when they go to the pharmacy to collect medication. We were not given this information when signing the consent form for our daughters to get vaccinated with the Gardasil HPV vaccine in my first year of secondary school. Instead, parents are given a marketing leaflet outlining five mild side effects. Nowhere are we told about the daily severe headache our girls struggled with for years, the nausea and the stomach pains, the debilitating fatigue, the fainting and seizures and onset of autoimmune disorders… We were not told about the impact of these illnesses on our daughters’ ability to continue education and the resulting psychological impact of having this basic human right taken

> away… While some doctors admit that they think it is connected with the Gardasil HPV vaccination, most medical professionals in GP clinics, accident and emergency departments and hospitals throughout Ireland will not acknowledge any connection with this vaccine. Maybe if we as parents had been given the PIL we could have pointed out the list of possible side effects to these doctors. Instead we struggled, sometimes for years, to understand our previously healthy daughters' range of health issues before making the connection' (Dail Eireann 2015, p.3).

The quantifiable side effects that were identified in the manufacturer's clinical trials are listed as 'common', 'uncommon', 'rare' and 'very rare' and were included in the HSE handout. The PIL itself contains them simply under the heading 'The following side effects have been reported with GARDASIL or SILGARD and may also be seen after getting GARDASIL 9'. It isn't until the full summary of product characteristics - an intimidating, highly technical 54-page document - that it is clearly stated that the full table of side effects, which reads:

> '...also includes additional adverse events which have been spontaneously reported during the post-marketing use of Gardasil worldwide. Because these events are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to vaccine exposure. Consequently, the frequency of these adverse events is qualified as "not known"' (2015, p.6)

I reproduce the table in full, adding which side effects were included in the HSE materials and which were in turn present in the PIL or full summary of product characteristics. The PIL, taken alone, has no comment on the frequency with which the post-marketing exposure side-effects occur - nor is it clear why they are listed separately from those that were observed during the vaccine's clinical trials.

System Organ Class	**Frequency**	**Adverse Events**	**PIL / Summary of Product Characteristics**	**HSE Materials**
Infections and infestations	Not known	Injection-site cellulitis	**Y**	
Blood and lymphatic system disorders	Not known	Idiopathic thrombocytopenic purpura*,	**Y**	
	Not known	lymphadenopathy*	**Y**	
Immune system disorders	Not known	Hypersensitivity reactions including anaphylactic/anaphylactoid reactions*	**Y**	
Nervous system disorders	Very common	Headache	**Y**	**Y**
	Not known	Acute disseminated encephalomyelitis*	**Y**	
	Not known	Dizziness*	**Y**	
	Not known	Guillain-Barré syndrome*	**Y**	

	Not known	syncope sometimes accompanied by tonic clonic movements*	**Y**	
Gastrointestinal disorders	Common	Nausea	**Y**	**Y**
	Not known	Vomiting	**Y**	
Musculoskeletal and Connective Tissue Disorders	Common	Pain in extremity	**Y**	**Y**
	Not known	Arthralgia*	**Y**	
	Not known	Myalgia*	**Y**	
General disorders and administration site conditions	Very common	At the injection site: erythema, pain, swelling	**Y**	**Y**
	Common	Pyrexia	**Y**	**Y**
	Common	At the injection site: hematoma, pruritus	**Y**	**Y**
	Not known	Asthenia*	**Y**	
	Not known	Chills*	**Y**	
	Not known	Fatigue*	**Y**	
	Not known	Malaise*	**Y**	

Figure 3.5 – Table of HPV vaccine side-effects between the Patient Information Leaflet / Summary of Product Characteristics and the HSE materials

It is notable that many of the ‘not known’ side effects are more serious or parsed in harder-to-understand scientific language. Whilst the SoPC is not intended for public consumption, the PIL clearly is - with the first sentence below the title reading ‘Read all of this leaflet carefully before you or your child are vaccinated because it contains important information for you or your child.’ (EMA 2015, p.1). A senior doctor in the HSE stated that:

> ‘The HSE is committed to providing accurate information for parents about all the diseases, the vaccines to prevent them and side effects from those vaccines to allow them to choose whether to give consent to vaccination. All the information provided to parents about vaccination is prepared from the available licensed documentation for each vaccine - the summary of product characteristics and patient information leaflet. The information is presented in clear simple language and approved by the National Adult Literacy Agency so that it can be understood by all. The language is in line with the HIQA guidance entitled ‘Communicating in Plain English’, published in July of this year”. (ibid., p.10-11).

There is a strange irony that in the midst of the transcript Dr Kevin Connolly is asked to conclude as he has allotted his given time. He responds ‘I am very sorry. I did not know’, to which the chair informs him that ‘we normally give six minutes to each person’. He further responds ‘I am sorry. I was not informed about that’. Dr Kelleher replies:

> We spent a significant amount of time discussing what information would be provided. It was based on what we had been doing historically in all our vaccine programmes but also, more particularly, because of the nature of this programme, on the extensive consultation that we carried out in 2010. We have engaged in further extensive consultation since. We have repeatedly spoken to people in this and other countries about

> what would be an appropriate way to go about it. That is why we are where we are. We have repeatedly thought about whether the patient information leaflet, PIL, should be given out. The reason we do not give it out is the complexity of the document compared to what people require. We have made every effort in our documentation to cover what is included in the document but in much simpler language. We heard somebody try to describe what was in the PIL and how complex it was. We have put great effort into trying to ensure the document covers exactly what is in the PIL but in a much simpler way to ensure people understand the problems and it gets out. We will continue to do so. While we will reconsider what happens as a consequence of today's discussion, we must take account of all aspects of it to ensure it is understandable. A very important issue is that the language used in most PILs on most drugs is not easily understandable. Every one of them is very difficult to read, even for medical practitioners, let alone the public. (ibid., p.26)

The Patient Information Leaflet is six pages long, outlining the core information about the HPV vaccine. It represents the formal statement of everything that a patient or guardian might want to know about The tension is over the capacity of people to appropriately understand and interpret the information available. Anna Cannon said that:

> How is it that I, as a parent, cannot understand the following paragraph in the patient information leaflet?

> As with other vaccines, side effects that have been reported during general use include: swollen glands (neck, armpit, or groyne); muscle weakness, abnormal sensations, tingling in the arms, legs and upper body, or confusion (Guillain-Barré Syndrome, Acute disseminated encephalomyelitis) [I do not understand that part]; dizziness, vomiting, joint pain, aching muscles, unusual tiredness or weakness, chills, generally feeling unwell, bleeding or bruising more easily than normal [etc.]...
>
> It is clear and simple what are the side-effects. I do not see why we, as parents, do not have the basic human right to understand the full risks of this vaccine before signing the consent form for twelve year old kids.

There are a variety of interventions and questions from various representatives. The members of the committee are sympathetic to the experience of the families, but repeatedly point out the lack of any causal link between the vaccine and these reported side-effects. It may be that Dr Kevin Kelleher referred to the SoPC as opposed to the PIL in his statement about unintelligibility. Yet the parents of REGRET felt that post-exposure side-effects had been hidden from them; I think perhaps there is an irony that the PIL itself tacitly overstates the risk attached to them. Regardless, Anna, Kiva and Karen felt information had been withheld from them. The representatives of the HSE made the argument that the PIL itself was too complex for members of the public. It is debatable as to whether the post-marketing side-effects can be considered ‘facts’ at this time. I would argue that their inclusion in an official document, one explicitly intended to inform members of the public about the vaccine, presents them in a way where they are not differentiated from the more robustly evidenced side-effects present in clinical trials.

The way in which facts are presented and materialised through specific documents, discourses and institutions works to reinforce their credibility. In this particular instance, the EMA-mandated PIL sits at odds with the clarity of communication that the HSE representatives were pursuing. Some senators and TDs questioned whether this was a cover-up.

There are two key points that I want to draw attention to: The first is that, despite the campaign materials in 2019 referencing the ‘rumours’, the public meeting suggests that the parents of REGRET were referencing authoritatively produced materials where it is reasonable to assume the information presented was factual. The second, perhaps more important point, is the attempt to render the experiences of their daughters as legible within the framing of these institutional discourses. REGRET note the submission of nearly a hundred cases to the EMA’s review, hoping to contribute to the epidemiological investigation based in Denmark. This event represents a gathering of a separate sort - not of a defensive alliance like that of the HPV Launch Event four years later, but one to settle a state of controversial affairs. REGRET can initially be seen not as spreading rumours or misinformation, but participating in an epidemiological process with specific expectations. As they present their own stories,

3.6 Conclusion- Competing Vulnerabilities

This chapter opened with a question: Is it a truth universally acknowledged that an unvaccinated person, in possession of the facts, must be in want of a vaccine? And if so, what *are* facts, such that when they are possessed one becomes compelled to take a vaccine?

In this chapter, I have presented facts through the lens of a *gathering* that Bruno Latour refers to as a 'thing'. Insofar as facts and vaccines are both read as objects, outside participation in the social world, it is easy to miss the dynamics that explain why people behave the way they do. Insofar as the strength of vaccines rests on the admixture of their imperiousness and innocence - that they settle reality. A fact acts as an anchor to a given state of affairs, stabilising it. As Shapin and Schaffer summarise:

> 'In the conventions of the intellectual world we now inhabit there is no item of knowledge so solid as a matter of fact… when we reject a matter of fact, we take away its entitlement to the designation: it was never a matter of fact at all…
>
> …the solidity and permanence of matters of fact reside in the absence of human agency in their coming to be. Human agents make theories and interpretations, and human agents therefore may unmake them. But matters of fact are regarded as the very 'mirror of nature'… What men make, men may unmake; but what nature makes no man may dispute. To identify the role of human agency in the making of an item of knowledge is to identify the possibility of its being otherwise. To shift the agency onto natural reality is to stipulate the grounds for universal and irrevocable assent' (1985, p.23)

The moment at which facts are unable to command others to take the vaccine show a moment when its persuasive power or imperiousness can be said to fail and need a champion. The competing vulnerabilities of the Gardasil Girls and Laura gather very different allies to them, with vastly different effects. When a fact is established, it displaces the versions of the world that do not match its account. Why was it that the parents of REGRET persisted in the face of insurmountable scientific evidence? To resist factual, authoritative information, is to rupture with the sovereignty possessed in silent ‘universal and irrevocable consent’. When we position facts as a particularly important type of information alongside vaccines, it becomes clear that what is rejected – the force that is being resisted renders the deniers as insensible. The evidence that seems so wildly obvious to the wider public make them seem irrational, deluded and even dangerous.

Yet that the facts needed to be championed at all suggests that their power waxes and wanes at certain moments. As with many crises and controversies, such disruptions create new vantage points to see what has been settled for centuries, the process of which we saw in the last chapter. The next chapter moves on to examine this embedding of vaccines in the everyday at an even sharper moment of rupture with the arrival of the pandemic. Rather than attending to the sharper edges of margins or the power of facts, I tell the story of a world that for a long, painful moment longer for a vaccine that didn’t yet exist.

4. Normals Old and New

How does everyday life feel to you? Do the habits and routines of the day-to-day press down on you like a dull weight? Do they comfort you with their worn and tender familiarity, or do they pull irritably at you, rubbing your face in their lack of spontaneity and event?'

Benjamin Highmore, *Ordinary Lives*, 2010, p.1

Do I have to tell everybody? Should I wear a little sign saying 'I'm delicate?'. Do I have to tell – it's usually men – do I have to tell men why I'm asking them to try and keep their distance or to put a mask on? In a Chemist's [shop]! You know, should I be in that position?

Flora, telling me about her experience of cancer in March 2021

… In short, life is a normative activity

Georges Canguilhem, *The Normal and the Pathological*, 1968, p.126

4.1 The Normal and the Everyday

On one evening before the pandemic I was down the Bird Flanagan with a group of participants. We were sat towards the front of the place; all dark wood and plush (if faded) upholstery. I had my by-then customary pint of Smithwicks, an unfashionable Irish red ale I'd learned to love, and we were chatting about the controversies of the

HPV vaccine. At least, I'd tried to do that. It was one of those early forays into me trying to gauge just how significant a memory it was for people that weren't close to the controversy. The answer was that, for most of them, it wasn't particularly important at all.

Rather, the group was simply bewildered that there was anything to discuss. One participant captured the sense of it, as she remarked that 'there used to be an old clinic on Cork Street there, where you'd just turn up and 'Bam!''. Holding her arm out, she made a fist with her other hand and mimed stabbing it with a needle. You turn up, you get vaccinated. There was no hesitation, no discussion, no deliberation. The action put me in mind less of a careful injection than of a robotic arm in a factory, marking whatever inert entity rolled underneath it on a conveyor belt. If we think about why people do what they do, it's nice to interpret choices to vaccinate as lovely, prosocial and for all the 'right reasons'. But not all actions consist of volitive, careful and rationally considered action.

A new member of the PHMT, one of Niamh's eagerly anticipated colleagues, provided an interesting example. Ursula had joined the team after working as a campaigner for a variety of women's rights and progressive groups. After a sustained period of professional campaigning, she'd wanted to 'do some good' in the wider public sphere. One might think that vaccines were something she was well-informed and full of opinions about – yet she told me that at a certain point in time they simply weren't something that she thought about them at all. As she explained the continuity between her campaigning and the PHMT to her sense of wanting to do good and benefit wider society, she explained how she'd come to think more seriously about vaccines:

> ‘Well, and this is, this is when I say appeals to my values. I didn't really have a view on vaccines until I was getting offered a free flu vaccine and work. Maybe about 10 years ago, when I said to the public health nurse, “oh, no, I'm fine. I you know, like, you know, I’ll wait ‘til later, when I need one, you know, in the years to come”. And she just said to me, um, “what if you get the flu and you pass it on? On the bus, what if you’re sitting next to somebody who's elderly or a baby, and they get really sick?” and I went, ‘Oh’. I just hadn't considered that that was something that I could do. So I said, “right, give me the jab”. And I've got the flu vaccine, since I hadn't considered it.
>
> So and I. you know, you were speaking about the kind of the whole Gardasil and REGRET phase on Facebook many years ago, and I just remember seeing that kick off and just thinking, “wow, that's wild and seeing people getting involved in it”’.

For Katy, not taking it wasn’t a considered matter but just something that she hadn’t done previously. She was likewise surprised at how friends she described as ‘otherwise rational, sensible people’ were becoming pulled into controversial conversations. It echoes a sentiment Niamh expressed about the HPV vaccine, where she felt ‘blindsided’ and ambushed by the sudden shift in public attitudes. What was interesting, was that in a later interview the experience had prepared them for vocal public scepticism around COVID vaccination.

A patina of rationality is often implicit in the call to get the facts and access the ‘right’ information even if, in practice, this isn’t how most people behave most of the time. Whilst I’ve talked about the exceptional character of vaccines through their entanglement with modernity and scientific rationalities, they also exist in the register of routine, the ordinary, everyday and the normal. As they become the subject of public scrutiny, scepticism or controversy matters-of-fact become marshalled in a type of informational warfare where the shells fly over the head of the terrain where the real battle takes palace. This existence of vaccines in the everyday is one of the hardest to access for reasons that I charted in the introduction; their ‘thin’ distribution (widespread but experientially fleeting for most people) and their general invisibility at the level of everyday life after their administration. Certainly epidemiologists can tell you that cervical cancer has reduced inordinately, but for most of us what is there to say about *not* getting sick?

A case that I want to make is that this ordinariness is a remarkably important feature of vaccines, and indeed one of the greatest contribution to their endurance. They’re simply part of the fabric of everyday life; both sustaining and being sustained by it. In an orthodox sense, the absence of diseases like tuberculosis, smallpox and polio (and many more besides) allows for much more pleasant conditions of existence – at least at the level of not suffering from those diseases. What does it mean to say that vaccines are normal, or that it’s normal to be vaccinated or that it’s generally an everyday or unremarkable occurrence? COVID provides an opportunity to garner a perspective on some of these otherwise hard-to-parse questions. Through attention to the discourses of the ‘new normal’ that emerged in the pandemic and the disruption to the everyday lives of my participants it opens a window onto some of the wider complexities that surface when vaccines are studied.

This remarkability, ordinariness, normality or everyday quality is the focus of this chapter. Often normality eludes close attention, being ‘so thoroughly ingrained in our thinking that we have difficulty paying analytical attention to it’ (Cryle & Stephens 2019, p.1). A close concept that I draw on alongside this is that of the everyday. On the one hand, it consists of ‘those most repeated actions, those most travelled journeys, those most inhabited spaces that make up, literally, the day to day’ (Highmore 2001, p.1). The everyday is an open field which contain countless potential ambivalences. It can be comforting, predictable and reassuring; a morning ritual of making a cup of coffee in a comfy dressing gown and slippers, a morning walk to work that threads through picturesque green space or a favourite spot on the sofa. It can also be repressive, banal or disquieting; the tension of getting on the LUAS at night as it passes through Heuston and you see a group of drunk lads get on, the crushing weight of knowing *another* week is rolling around on a Sunday night. Alongside these lurking ambivalences, there are other tensions – as the cultural theorist Benjamin Highmore comments, ‘the everyday offers itself up as a problem, a contradiction, a paradox: both ordinary and extraordinary, self-evident and opaque, known and unknown, obvious and enigmatic’ (2001, p.16). It’s a known and familiar quantity until you actually attempt to describe it; a residual category of what’s left after analytic description has done its work. As such, it resists neat schematisation.

This chaotic openness is captured in another depiction of the ordinary, described by Kathleen Stewart as ‘a shifting assemblage of practices and practical knowledges, a sense of both liveness and exhaustion, a dream of escape or of the simple life’ (2007, p.1). In her articulation of it, the instability of the ordinary resides in ‘everyday affects’ which ‘give circuits and flows the forms of a life’, which ‘persist in the realm of possibility and fluidity’ (p.2) as a ‘tangle of possible connections’ (p.4). In essence, there is a tension between the world as it may seem and its immanent unfolding into a bewildering variety of things that may be. The ability to exist or dwell within this world is the essence of the ordinary or the normal, but it only intrudes into immediate awareness at specific, unprecedented or unexpected moments.

If we look at vaccines as constituent part of the weave of the 'everyday', it might seem that it's surprising that there's anything for most people to say about them at all. Highfield's analysis of the relationship between modernity and the everyday is a way into the wider discussions that I've raised thus far. Insofar as vaccines are part of the expansion of a knowable, controllable world under rational-scientific domination, they also displace other ways of life. As he writes:

> This ambivalence vividly registers the effects of modernity. If the everyday is that which is most familiar and most recognizable, then what happens when that world is disturbed and disrupted by the unfamiliar? If the 'shock of the new' sends tremors to the core of the everyday, then what happens to the sense of the everyday as familiar and recognizable? In modernity the everyday becomes the setting for a dynamic process: for making the unfamiliar familiar; for getting accustomed to the disruption of custom; for struggling to incorporate the new; for adjusting to different ways of living. The everyday marks the success and failure of this process. It witnesses the absorption of the most revolutionary of inventions into the landscape of the mundane. Radical transformations in all walks of life become 'second nature'. The new becomes traditional and the residues of the past become outmoded and available for fashionable renewal. But signs of failure can be noticed everywhere: the language of the everyday is not an upbeat endorsement of the new; it echoes with frustrations, with the disappointment of broken promises.

Modernity here is positioned by Highfield as the normalisation of an unfolding, disruptive and endless process of unsettling established ways of life. My intent is to attend to my participants' experiences of what is 'normal', as the world exists between their expectations of it and what they experience it to be, as well as the messiness of its contradictions. COVID was, in public health terms, largely precipitated by the absence of available vaccines. If the everyday consists of the fluid ambiguities and contradictions of life lived, how does it relate to the hope for conformity to expectations that marks normality?

A helpful sense of what 'normal' constitutes can be found via the classic work of Georges Canguilhem, who traces the origins of normality to a carpenters' square – a device used to measure right angles in wood-work. It is a neat physicalisation of the concept - of what is normal, what should be the case. As Canguilhem writes, 'normal is that which bends neither to the left or the right, hence that remains a happy medium' (1968, p.125). It is perfectly present in the tool's physicality and encapsulated wordlessly in its form. When placed against a join in woodwork, or whatever is to be measured, any deviance is immediately apparent and allows for corrective action applied. Put another way, normal sits precisely at the intersection of 'is' and 'ought'. At the moment when a COVID vaccine cert is inspected before entry to a pub or café, there's a standard and a judgment (if not, theoretically at least, a moral one). This logic, decomposed, allows that things that *should* exist and in fact *do* are normal and to be left alone. Somebody that should be vaccinated and is? Come and have a lovely pint or a cappuccino. Those that aren't vaccinated are turned away, maybe with a grimace or a funny look, with an understanding that if they *do* want to come in they should present the appropriate evidence of their vaccination status. Contrariwise, things that *do* exist but *shouldn't* is a cause for alarm; people who shouldn't be vaccinated but have been, owing to a status that makes a vaccine prospectively risky to their health. And those that have been granted an exemption, the category of things that correctly don't and shouldn't be the case are accepted.

This may be all well and good where there are sets of stable or semi-stable expectations against which things can be measured. But what does this mean for the much-discussed ‘new' normal or the ambivalent potentialities of the ‘everyday'?

There's an example I want to draw on from Niamh's experiences, both before and after the pandemic. The Public Health Mobilisation Team tripled in size during COVID. That's to say, it grew from one person to three. A stalwart who ‘just got on with things', Niamh been a member of the wider communications in the HSE for over a decade. We caught up over Zoom in late 2021, shortly after I'd made my way back to Dublin after a long lockdown. She was used to things not quite being the way that she felt they should in her work, living with a certain ambivalence and a never-ending cascade of things that needed attending to. As well as her 'team' being too small, her commute was the best part of two hours each way from the small town of Carlow where she lived. As well as COVID pressing on, other vaccination campaigns that she was responsible for managing communications for still persisted. As Niamh told me during a remote interview in 2021:

> Niamh: Yeah, I'm like, it's all been ‘COVID, COVID, COVID' for the last 18 months and like for the last month or two I've been trying to get my head around ‘OK: we have flu and we have schools and we have baby vaccines and we also have COVID', so it's just… It's trying to juggle all the balls as well and now I've been given a staff member and I have another staff member to join me which is really exciting!

> Dan: Yeah
>
> Niamh: And look, the staff member that's with me at the minute, she has a masters in digital marketing so like I can kind of go 'Talk at me, tell me what we should be doing! Let's see what's possible and do some of that. Because it's just hard to keep everything going, that's all'.
>
> Dan: Yeah, for sure. So what's increased the budget? Was it the pandemic? Or has it just been in the pipeline for a while?
>
> Niamh: It's been in the pipeline for a good while and like there should always have been three of us, but I suppose I always managed, so it was like 'She's fine, she's keeping on going'. But in fairness with the pandemic and just with everything changing every five minutes, it just wasn't possible. So, like, I'm glad to have the help, and I'm hoping that the third person when they come, like, it'll just make us better at our jobs and hopefully more efficient. And not that we'd be all doing 50 hours a week. Like, you know, try and come back to some sort of normality.
>
> Dan: Yeah?
>
> Niamh: Try and leave the house in the evening! You know, some of those normal things.

Prior to the pandemic she'd managed to negotiate working from home a couple of days a week, but up until to point she'd been asking herself if it was viable to continue a job she otherwise loved. The irony that the pandemic granted her wish was very much a 'cursed monkey paw' type situation; a wish granted, but not in the way that the asker would have envisioned. As she wryly remarked ‘well, I wish I hadn’t needed a pandemic to make it happen!’.

Whilst her work kept her busy, she described an odd sense of timelessness and formlessness in her workdays during COVID. She’d sometimes just get up and walk downstairs ‘just for something to do, to be somewhere different’. Highmore and others have remarked on the impact of modernity on the experience of time; that of its rigidification, standardisation and institutionalisation. The rhythms of the everyday become inscribed into a nine-to-five workday, broadcast by mass-produced clocks and micro-temporalities marked by the drumbeat of an inexhaustible assembly line. Highmore describes this as the ‘emptying’ of time, creating space for a distinctly modern kind of boredom to emerge. As time and the shape of the day is regulated by factors beyond our control (Highmore 2002, p.4).

The demands of the pandemic were relentless, with her entire day potentially swallowed entirely by work as she told me that ‘I’m doing stupid hours every day and I’m going “Oh, I’ll just do one more thing because I’m working from home and it’s fine anyway”’. She described the semi-reliable occurrences that did punctuate time, not aligned with wider institutional rhythms that mark ‘modern time’, but localised idiosyncrasies. She noted that her husband came home for lunch each day and she’d ‘take twenty minutes’ with him. Quite endearingly, she also noted that ‘the dog seems to know and she comes and gets me at about half 10, so I make a cup of tea’. What, exactly, the dog knew or Niamh thought she knew isn’t something that I have access to. It seems he knew that she was in need of someone to come and fetch her to get her away from her desk and another ‘just a bit more work’. During this period, she described her ambivalent relationship with the phrase ‘the new normal’:

> Niamh: The world has changed - forever, to be honest. And we just need to find a new normal, whatever the hell that is.
>
> She laughs
>
> So, yeah, yeah, that’s what it is. I find myself saying like, 25 times a day, and I annoy myself by saying that, but yeah, [that’s what] it is.
>
> Me: Because it can’t bloody well be anything else, can it?
>
> Niamh: Yeah, there’s no point thinking about it too much, if we can avoid it!

There’s a tension and something of an implicit contradiction in the phrase itself. Normality, at least to a certain extent, implies a degree of stability and fixity. In a wider sense, what could be considered ‘normal’ for Niamh was something that was still not what it ‘ought to’ have been in terms. Amongst the sinewy contortions of the pandemic, the word normal – old or new – acquires particularly complex meanings.

Writing in the first few months of the pandemic in Russia, Kumosov and Varfolomeela (2020) write about their experience of having COVID in a Siberian hospital, querying what the increasingly ubiquitous term might come to mean. They ask whether ‘new normal’ might be able to challenge or destabilise an established status quo and give voice to those that are otherwise marginalised. They note that normality and normalisation can be viewed as repressive forces that belong to the biopolitical and disciplinary powers of the state. They speak instead of the likelihood of a ‘not-so-new-normal’ where ‘the existing power relations between the state and its subjects are reinforced’ in their home country of Russia (ibid., p.28). They reflect on the selective enforcement of often-undisclosed, unclear rules for how the pandemic was to be managed, couched in ambiguous language by the authorities. Within the confines of the Siberian hospital itself, little information was given to them about the nature or purposes of the treatment they received, just that the medication they received was essential for them to ‘feel better’ and that any tests were undertaken to ensure they were ‘not contagious’ (ibid., p.30).

Whilst they argue that disruption potentially opens space for new ways of life through exposing the limits of human knowledge, the ambiguity rather marks a disorienting space within which power nevertheless reasserts itself, even become strengthened repressive practices which they identify with the governmental style of the Russian state (ibid., p.31). The layers of strict federal control wrap around the regime of medical supervision, creating ‘multi-level governance [that] strengthened the general state of ambiguity while at the same time embedding us in the established practices of state control’ (ibid.). What Kumosov and Varfolomeela highlight is the ‘new normal’ existing as a potential opportunity to reconfigure understandings of the world as old ones are unsettled, but that power re-asserts itself all the more stiflingly *through* an uncontestable ambiguity rather than in spite of it. Insofar as they note certain repressive dynamics of the Russian state, it injects a question of both what can be considered actually new and or actually normal in the context of COVID. For Niamh, having a remarkably large amount of work to do was neither new nor normal. Having new colleagues to undertake the work with was unexpected, as was her liberation from a painfully long commute. COVID should not be read as marking a total rupture or collapse of the everyday, but a shift in the framing of activities.

If the ‘new normal’ is neither particularly new, nor particularly normal, what can be said of normal more broadly and why is it of relevance for an anthropological understanding of vaccination?

Kumosov and Varfolomeela present a critical context that feels far removed from the surreal banality of a dog coming to fetch *you* to make a cup of tea. But the surreal inversion captures an ambivalence that sits at the heart of a category adject to normality, that of the ‘everyday’ (Highmore 2001, 2011). It carries marked similarities with wider analyses of the ordinary and the affective and the potential where anything *could* happen, but we suspect that it probably won’t.

The tension between the exceptional and mundane or everyday aspect of vaccines all-at-once traces back to their wider framings. The imbrication of vaccines *with* normality became pronounced precisely at the moment of their absence during the pandemic.

In the next chapter I chart the disintegration of the ‘everyday’ through the last day that I and a friend had in Ireland before the pandemic. COVID’s disruption of the simple rhythms of everyday life, the public health measures that established new norms became part of the restructuring and dissolution of familiar time. Yet the ‘new normal’ did not represent a total rupture, but surreal continuities of things that are similar and yet utterly different. The ultimate point is that the involvement of vaccines with ‘the ‘everyday’ can be highlighted through the investigation of my participants’ experiences of living through COVID by attending to a world where they were momentarily absent, but lacked none of their normative force or the strength that I’ve charted in previous chapters. To highlight this, I explore the experience of one participant with a weakened immune system to mask wearing towards the end of the pandemic in tension with the story of a pub landlord who was incensed at the lockdowns. I position neither as right or wrong, but seek to highlight the different sense of the everyday and COVID-era norms within it materialises in particular circumstances. As a way of better understanding how vaccines underpin normality, and what happens when they are not there.

4.2 Dissolution

On a surprisingly warm, sunny day in February 2020 - what would be the last 'pre-COVID' day of my fieldwork - I'd gone for a long walk on Dublin's South Wall with a good friend named Rachel. She's a smart, professional woman in her forties – tall with sandy-blonde hair and a near-permanent, mischievous smile on her face. We'd met, as I did with many friends, through the dense, honeycombed structure of online meet-up groups.

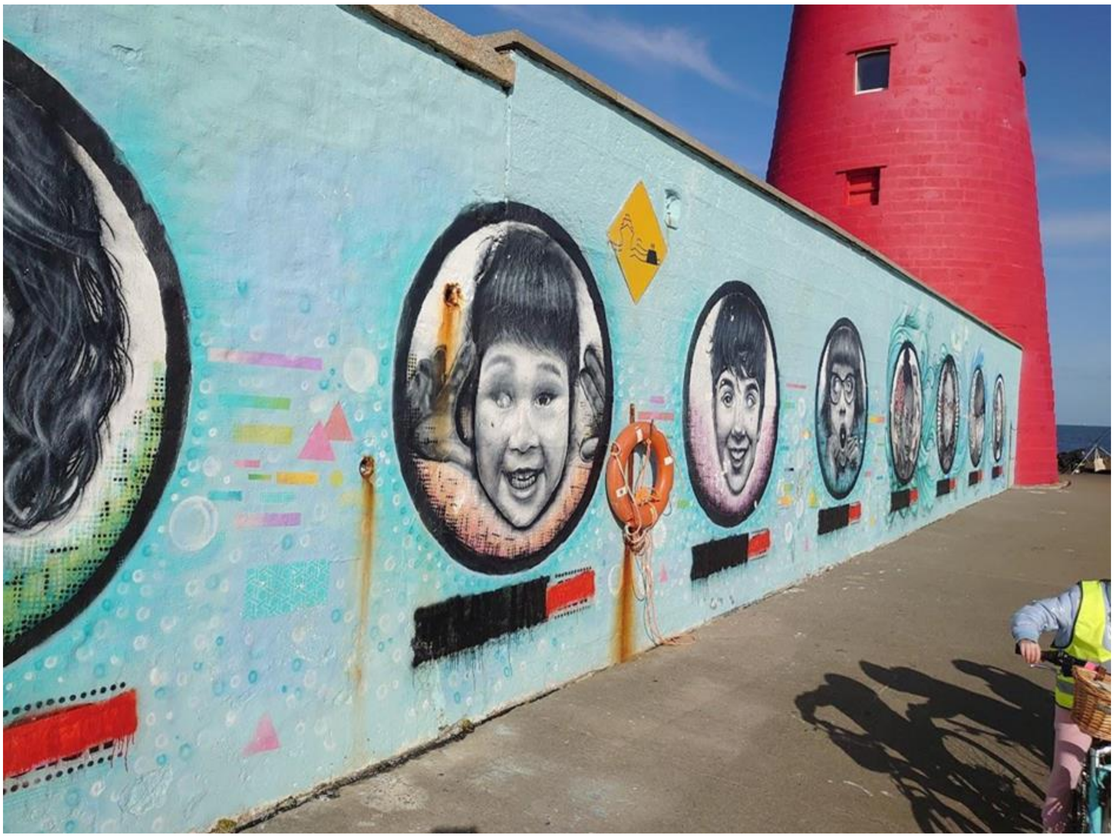
Early that morning Rachel had driven across to Rialto, texting to ask me to pick her up a coffee for the walk. I went to a small, local café called *La Boulangerie* just on the roundabout. On most mornings that I walked past at around 8am it would be inhabited by builders sat around little metal tables outside, wearing high-vis jackets and hard-hats. They'd have a hot, satiating greasy full Irish breakfast with a mug of steaming coffee before they went to work for the day at the not-yet-new children's hospital. When there was a lull in the noise of the heavy traffic you could hear the wobbling of the tables on the uneven pavement as they sawed sausage, toast, white pudding (I believe it is this, as opposed to black pudding, that makes a full Irish a full Irish as opposed to a full English) into pieces of edible size. Inside the café sat a few more tables - a corkboard covered in advertisements and notices. A glass counter full of savoury food separated the customers from the staff. It housed bacon, sausages, hash browns and sandwich fillings – the stuff of breakfast and lunch. Next to it sat a slightly tarnished glass cabinet full of dainty French patisserie and cakes, from which the place derived its name. The food and coffee was served up by a Polish barista with her hair dyed red and the chatty Portuguese manager. The relaxed yet haphazardly international character of the café was something that struck me as one of the few ‘distinctly Irish’ things that I’d be willing to venture as a generalisation; an unpretentious, genial ecumenicalism that had little mind for where someone was from or who they were.

I grabbed two cappuccinos in their disposable paper cups with slightly ill-fitting plastic lids and walked to meet Rachel, who’d just parked her car outside Centra, the local supermarket and a common chain across Ireland.

Whilst official guidelines weren’t yet announced, we nonetheless opted to minimise the time we spent indoors. Once I’d clambered into the car, and only spilled a minimal amount of coffee in the process, she drove us across the south of the city, parking near the beach with a view out over the sea. The Great South Wall is a long strip of stone that runs a full four kilometres into Dublin Bay, built in 1732. At the time of its construction, it was the longest dyke in Europe – sitting opposite the Bull Wall, both working to protect the flow of sea traffic from the accumulation of silt. At its end is the squat Poolbeg Lighthouse, built in its current form in 1820. Painted bright red, it indicates the port side of the bay which guides ships into the harbour. At its base a gentleman sold barista coffee, as well as soft drinks and snacks from the boot of his car. He was there both on that day and on a subsequent visit, some two years later after my return to Dublin. Half-way along, there were rough stone buildings that served as changing rooms for an outdoor swimming and water polo club which braved the freezing, deep water of the bay. By Poolbeg Lighthouse there were more structures, including a wall with painted murals. Living deeper into the West of the city as I did, with a view out onto the Dublin Mountains, it became easy to forget that Ireland’s capital city is also a bustling commercial port. To its south, there are stunning beaches backing onto heavy industrial areas that somehow makes the areas more beautiful in the stark contrast between them. Heavy iron fences and chimneys versus sand-dunes, scrubby green grass and a perfect, pale-blue sky.

Figure 4.1 – Dublin Harbour from the South Wall

4.2 – Art on the walls near Poolbeg Lighthouse, South Wall, Dublin



4.3 – More art on the walls near Poolbeg Lighthouse, South Wall, Dublin

What normal is, or might mean for anywhere, can seem deceptively simple –perhaps that's part of its appeal. It speaks of familiarity, comfort or the claim to a place. The trip with Rachel was normality in the face of impending crisis – a quiet moment of calm before the storm. It was my last normal day in Ireland, my last normal day in the field.

If modernity endlessly expands to encapsulate everything within its logics and mechanisms, COVID might be said to have momentarily constrained it – just as vaccines promised a means to return to it. If the everyday is regimented and industrialised through mechanised time, the institutional regularities of the working day. The pandemic *twists* these relations and lays bare so many of the forces that bounded and made space for modern life. Looking back, the simple things that would no longer be possible drop into particularly stark relief – a trip to the Lighthouse, a pint down the pub or even a trip to see friends on the other side of Dublin. At the most intense level of lockdown in Ireland - Level 5 - it would be illegal to go more than five kilometres beyond your house, strict limits on congregating indoors or mixing with other people from outside your own home. The idea of faces free from the damp-yet-protective confines of disposable masks and hands not dried out and stinging from alcohol-gel rubbed across their surface, finding its way into every tiny cut.

The rhythms of life and routine were disrupted. Taken as an absence rather than a presence, repeated twenty-five times a day as a mantra, marked through lunch and visits with her dog, the ‘new normal’ is something I interpret as an attempt to make sense of and navigate the world as it has fallen away.

Rachel and I walked the length of the South Wall and back with our cappuccinos, chatting about the surreal situation as it unfolded. The narrow walkway was packed with countless young families walking up and down. Our discussion meandered through life, our relationships, families and other bits of small talk. After the couple of hours it took us to walk the length of the lighthouse and back, we got back into her car and drove to the smart area of town that she lived in in search of a pub. Most of the ones she usually frequented were closed in anticipation of the pandemic, but we found one a little further afield.

Rules around social distancing hadn’t yet been established – even though the pub wasn’t particularly full, groups of people still sat together in close proximity. An older man in a black fleece and jeans sat at the bar heard us talking about the pandemic and my work. He said he was a worker at a beer warehouse, launching into a story about the working conditions. He told us that management had just told the staff to get on with their jobs, offering no additional protective equipment or consideration for the mounting risks of the virus, just insisting that 'they just get on with it'. We continued chatting for a few minutes, after which Rachel and I continued with our wider conversation. Staff were wiping down tables and card machines with disinfectant spray after each guest used them – signs were up insisting that they were taking measures to protect their clientele despite the emerging threat of the virus. There was almost an optimism to their activity as the barmaids ran through industrial-sized blue rolls of disposable kitchen towel, scrubbing every surface with each guest that left.

Rachel and I shifted to discussing the question of what I was going to do with the inevitable-seeming arrival of COVID-19. On that day, the prospect of being in situ during a global pandemic when I was studying vaccines and hesitancy felt like a dizzying opportunity. Whilst my project had initially been about the drop and recovery of HPV vaccine uptake and the stories that unfolded around it, I awkwardly said that I'm sure I'd find a way to 'fit COVID in' without losing my original focus.

I think I, and perhaps some of the others sat in the bar that afternoon, clung to the idea that a recognisable world persisted underneath the pandemic and could be held at bay with disinfectant and optimism. For me, a space where COVID operated, yes, but the relationships that I'd built, the observations that I'd made, the stories I'd gathered still existed. It was a type of ethnographic masochism, drawn out of the idea that the field *should* entail some degree of suffering, trauma or sacrifice as part of anthropological rites of passage. A trope of fieldwork is that those negative experiences and emotions never make it through into the writing; it becomes indulgent auto-ethnography or an overcommitment to reflexivity bordering on navel-gazing. In this section, I resolve to be as clear possible about the impact of the pandemic on my fieldwork.

Normal for me up until that day was a loose, but solidifying network of friends and informants, a sense of the place I lived and the things going on there. I knew the city and was looking forward to St Patrick's day, seeing the city in the spring and watching it come back to life out of the unforgiving cold and grey of winter. It was the first sense I had of not *wanting* to leave the field, as the place had increasingly felt like home – doors opened up the longer I spent there. I was primed to do work essentially as a pro bono data analyst at the PHMT, understanding how vaccination was materialised through data-flows. I sat next to Niamh when she was in the office, gradually introducing myself to other members of staff in the office. I was volunteering at local community centres and gradually building up networks, getting a sense of the histories, rhythms of life and local priority. Questions of health and wellbeing were central to a community that had been blighted by problems with heroin that had 'wiped out a generation', as one put it. Outreach services, community therapy, drama and healthy cooking classes all ran for local residents. I was beginning to interview members of different natural living groups that had reservations about, or were openly critical of, the HPV vaccine. Many of them knew the women of REGRET – one had offered to vouch for me and try and persuade the others of my good intentions.

It was not to be.

I remember the rising pressure that I would need to make a decision on whether to go back to London or to stay in Dublin and make what I could of the situation. I looked for advice from friends and colleagues, finding nobody able to tell me what to do. Ironically, some guidance - some norm - was precisely what I lacked in that moment. Helen, my wife, had been staying with me, just the week before - the virus hadn't hit Ireland yet, but at the time its arrival seemed inevitable. As she stepped onto the airport bus at Heuston station, she pressed a disposable N95 mask into my hand, in case I had to travel home in the coming weeks. The question of what I'd do hung open between us - she stoically asserted that 'she'd be okay' and that I should do 'whatever I had to do'. The 'new normal' is felt not just as the lack of clarity over what is happening in the world, but also the lack of clarity in what *should* be done. The ordinary hangs precariously, the normative sits, unable to assert itself. It took another colleague being rather more direct to tell me rather bluntly telling me to 'come the fuck home, man' to bring me to my senses. I booked a flight home and threw things into a suitcase.

The sense of collapse, of rupture, is something that I find in-part captured in my fieldnotes:

> I remember booking my flight for late that evening. Getting the bus, like I was fleeing an invisible tidal wave. I remember turning the oven on to make a pizza in the freezer at 11am, because otherwise it'd go to waste. I stopped and turned the oven off shortly afterwards. I didn't want pizza at 11am; it suddenly seemed obscene. I had a frantic quality about me; I remember the pained and uncertain expressions on Joe and Nicola's faces. I cleaned out the freezer and ditched the perishable things in my cupboard. I stuffed books – mostly books that I'd never read (and am now trying to) – into a suitcase.
>
> I remember being fraught, being charged. I remember giving Joe a hug on the way out and not giving Nicola one. I remember the makeshift implementations

of those public health measures, seeing the tape go down on the floor in Centra to separate people in the queue.

Figure 4.4 – The door to the Centra in Rialto in March 2020

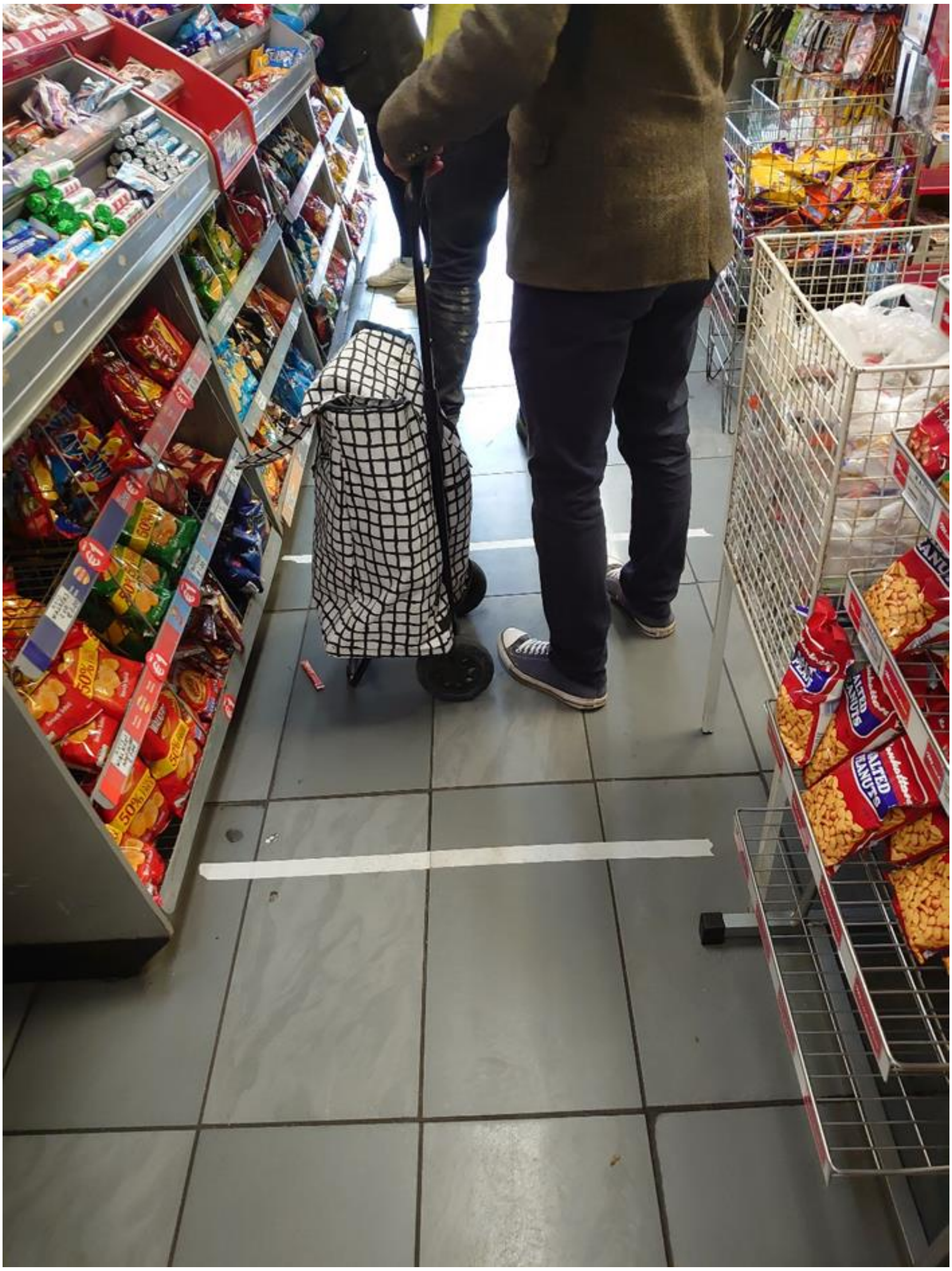


Figure 4.5 – The floor in Rialto's centra, marked with white tape to mark socially distanced queuing for the checkout

I left a good six hours before my flight; I wanted to get to the airport, even though my flight was late in the evening. I just to get out. To get away. To flee.

To run. I missed home, but I also somehow I didn't want to go back. The first cold, dark months I'd spent in Dublin had been hard - finding the shape of my fieldsite, overcoming the anxiety of reaching out to people and building relationships with participants had. Friends from home had visited visited in those first months of 2020- people who I'd been able to show a city I was starting to be able to call home. To leave all of it, just as spring was arriving and the light was coming back, felt difficult.

I got on the bus at Heuston, I think?

I've just looked at Google Timeline. It's integrated my GPS data with the photos I've taken. It's… creepy, but useful to mark my passage.

I tend to spend time in this bar [at the airport] before flying back to London. A pint of Smithwicks and a packet of crisps, over the way from the Ryanair gates. Standing up, either writing fieldnotes on my laptop or moving about. They weren't able to sell me a beer without food. I remember staring at ham and cheese toasties for a while and not being sure what I wanted. I asked if a pack of Tayto would justify me buying a beer. The barman said it would. I ate and drank in quasi-silence.

The gate was down an escalator, in a large polyhedral room. Vending machines, near-deserted seats. A huddle of people, murmuring anxiously. I was one of the few people wearing a mask; the one that Helen had gotten for me. She'd told me to wear it in case I had to travel, just as she'd left. I was one of the only people wearing it on the flight.

I remember her being worried about my beard being too long and thick to have the thing cover my face properly. She told me to make sure that I moulded it to my face, pinching the flexible plastic-and-wire across my nose to seal off my face and nostrils. My breathing in it was heavy and uncomfortable; like a lot of physical sensations, you forget after a while.

Figure 4.6 – Dublin Airport in March 2020, the public seating areas cordoned off and covered in black binliners

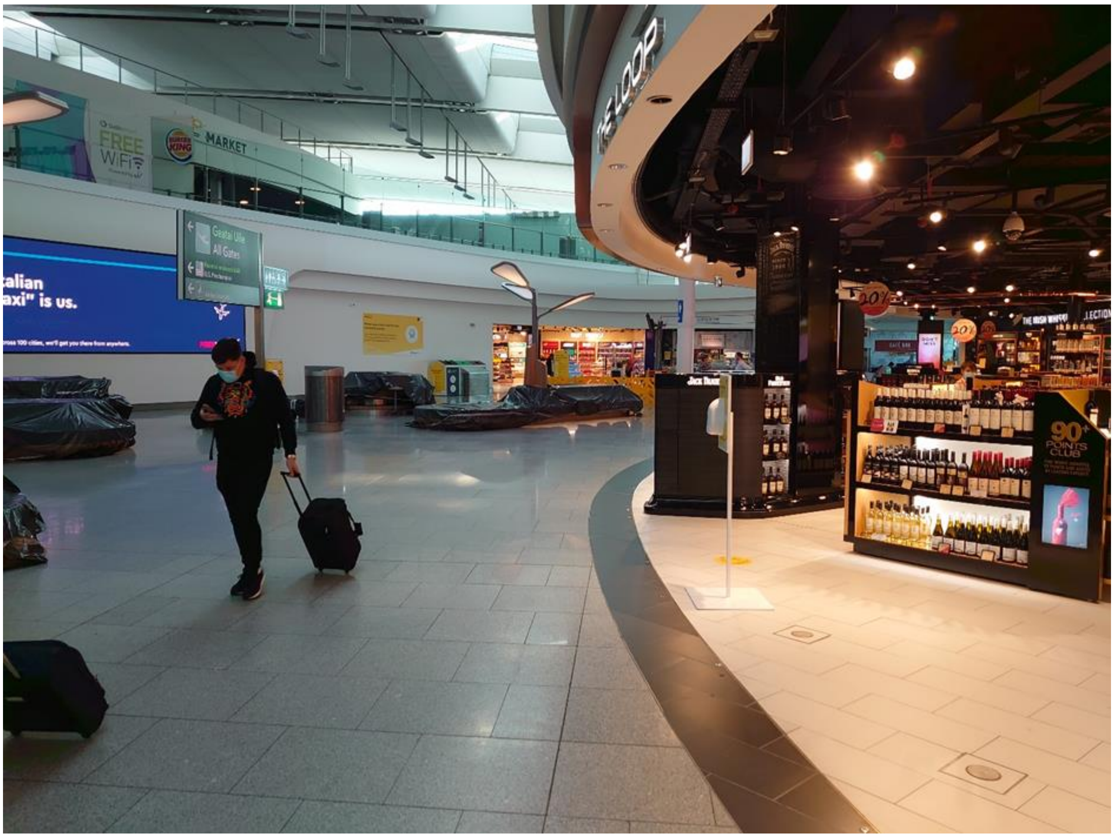


Figure 4.7 - Dublin Airport, nearly deserted save for one man in a disposable facemask in March 2020

Crises like COVID change and reconfigure the worlds that they encounter. It's easy to see them as a single moment, exploding from 'outside' as something to be endured, contained, managed and ultimately accounted for; to say that locking down sooner, grounding flights or having had better stocks of PPE might have saved lives and so on. I follow Janet Roitman in considering crisis as a sustained condition as opposed to a single moment, not just bound up with expert commentary but protracted collective experience of decline or destabilisation across multiple areas of life. It occurs as a 'non-locus' or a 'blind spot'; significant not just in itself, but in the gap that opens up between the world and knowledge of it. Like a great serpent shedding its skin, a paper-thin, almost phantom record is left behind as the beast itself slithers ahead. She writes that crisis is 'a discrepancy between the world and knowledge of the world' (ibid., p.39) and that ‘crisis moments are defined as instances where normativity is laid bare, such as when the contingent or partial quality of knowledge claims – principles, suppositions, criteria, and logical or causal relations – are disputed, critiqued, challenged, or disclosed’ (2013, p.3-4).

4.3 Climate Change Not Cancer!

On March 27th of 2020, the then-outgoing Taoiseach Leo Varadkar announced the first of many restrictions in response to the rapidly unfolding pandemic, saying that Ireland would be on the road to a ‘new normal’ until at least May. Speaking from a light green podium, a background of the same colour behind him and the twin flags of the European Union and Irish tricolour to his right, he read the printed speech in front of him with a dour expression on his face. It made for grim listening as he announced that ‘everybody must stay home in all circumstances’ with the exception of essential work, shopping for household goods or food, medical appointments, vital family reasons (such as care for children and vulnerable people) and ‘brief physical exercise within 2 kilometres of your own home, which may include children from your own household, as long as you adhere to 2 metres of physical distancing’. He further noted that ‘all public and private gatherings of any number of people outside a single household, or living unit, are prohibited. The virus might be in your household already, so please don’t spread it to somebody else’s’. Whilst these measures were meant to last for two weeks, some form of restrictions would remain in place for two years - evolving, escalating and de-escalating with the cadence of infections, hospitalisations, mutations and vaccinations. An end was announced to them on February 28th of 2022 by the then-Taoiseach, Fianna Fail’s Michael Martin.

Figure 4.8 – Taoiseach Leo Varadkar announcing lockdown measures in Ireland

As I move from a wider framing of how the normal and the everyday were reconfigured through COVID, I want to turn to my attention to another norm – mask-wearing and its meanings for one particular participant. Insofar as COVID propagated new norms as well as new normals, wearing masks was one of them. Masks became an ambivalent symbol of groups divided in their approach to COVID as vaccines. In lieu of a COVID vaccine, masks were a way of protecting others whilst still engaging in limited participation in public life. My participant John remarked at the frustration he and his young colleagues shared in looking after vaccinated middle-aged customers at Daddy's, as the gradual vaccine roll-out – prioritised by age – left servers without immunisations.

Masks were a barrier between Flora (my participant, friend and fellow inhabitant of Rialto) and COVID, to which she was particularly susceptible during her chemotherapy. Demands that were seemingly abstract for some people she encountered were concretised. What the ‘everyday’ constituted for Flora within those months of immunosuppressed chemotherapy was one of vulnerability; practices that constituted caution, mistrust and a weary scepticism.

She had developed cancer in October of 2021 - luckily the hospital had caught it early and she’d been scheduled for rapid treatment. We spoke quite a few times over the coming months - her experience of the vulnerability that her illness had caused her during her rounds of chemotherapy. She was a keen conservationist with a diverse front garden - a story that always stuck out to me was a little, potted Amalfi lemon tree that she’d smuggled back in her boots. An interview I want to recall took place in March of 2022. The ‘little birdies’ were noisily chittering away all around - she commented that she’d just refilled their birdseed, Apparently an app told her that there were six species in the bush nearby; the ones she remembered at the time were sparrows, blue-tits, starlings and wood Pigeons. Apparently when they were all feeding in her garden, she felt like something of an ‘anti-Cinderella’, as they scattered when she’d open her front door. Sitting with friends who had cancer was not a new experience for me - fighting the awkward paralysis, I quipped that they probably said between themselves, ‘Fuck, she’s coming! Hide!’ and she laughed, replying ‘Pretty much’. She told me that she’d instead purchased a little pair of binoculars that she’d taken to bird-watching from her front window. I laughed and she told me that it beat daytime TV.

The day that I came to speak with her was fairly typical for early spring in Dublin; grey and cold with a threat of rain. It transpired that it was her birthday, but because of her situation she hadn’t been able to see anybody else. Talking with a friendly anthropologist about life was what she slightly sarcastically described as her ‘wild party’ for the day – ‘no pressure!’ I replied. As we spoke, it was the day before her last round of chemo-therapy - the twelfth and final cycle. She told me how, what she described as ‘having no immune system’, had made in the chaos and complexity of COVID, as well as the difficulties of much of the world slowly returning to normal. In particular, a lot of people had been careless about their wearing masks. She told me:

> ‘So now I have to treat everyone as being infected. Like, I know, logically, that 93% have been vaccinated. I know. There's enough people who are arseholes, who I was talking to someone and her mother, essentially, she sort of went into a depressive episode, the whole lockdown thing and Christmas and all that. And she took her bed and she's had a bit of a cough, and she diarrhoea and she did a bit of this and that and her daughter was like, Mam, did you get tested? Now? Why not? was last week. So this woman had every symptom of COVID and didn't get tested at all. And her husband drove my dad to his weekly rowing thing. And then my dad went home to my mom who's got a serious heart problem. And it's like some people like if so switched off from it or weren’t switched on to it in the first place. They don't realise that they could be posing a risk.
>
> So I now have to treat everyone as potentially a risk to me, which is a bit weird! And like, we're outside the butcher shop one day and there was a small queue. And this fella just came charging by, straight in and I said ‘Excuse me, there’s a queue!’. [And he says back] ‘Ah, relax love, what’s wrong with you?
>
> Or I was in the chemist’s and they [has a sign up which] says ‘you must wear masks, two people allowed in at a time’ - and like I said, I only go

> shopping on Tuesday mornings now - this woman comes charging in, no mask [and says] ‘Hi, forgot me mask!’. And the woman behind the counter practically *threw* one at her. And she says ‘Oh, yeah, have you got the Panadol for me mam? She’s got a cough and that and…’ I’m like ‘Oh, Sweet, Divine Christ!’ Like, part of me, like, wants to *punch her*. It’s like, you’ve come into a chemist. Without a mask. Describing symptoms of COVID for a person you’ve just been with. It just doesn’t occur to you that there could be a problem or not. So there’s enough people like that around, it might just be one in a hundred, but I’m just noticing [She laughs].
>
> And again, I was in the chemist. Now again, the other chemists have offered to deliver stuff to me. But this guy came in with no mask at all. And I just sort of barked at him like he was a dog, ‘Stay!’. *She laughed*.
>
> But some fellas are just like… Why? You know, it’s sort of like… I’m put in a position then. Do I have to tell *everybody*? Should I wear a little sign saying ‘I’m delicate?’. Do I have to tell - it’s usually men - do I have to tell men why I'm asking them to try and keep their distance or to put a mask on? In a Chemist’s! You know, should I be in that position? It's just really often so I did. So I didn't want to put myself in that position…

As the world gradually returned to ‘normal’, it wasn’t quite the same form Flora. As her chemotherapy treatment lingered, she found herself still waiting for an ‘all-clear’ from her doctors. As she told me:

> So yeah, life is gonna be weird for a bit because everyone else is going to be out getting on with it. Like my brother works for a large company that organises

concerts and that, and there’s a few big ones up at the Point like all the concerts that had been put back and postponed and all that they're now gonna start ramping up. Yeah. So he was just saying, like, ‘this year is gonna be nuts’. Because anybody who hasn't been able to party for the last few years, they're gonna party this year. Okay. I'm part of me. It's like ‘Yay!’ but… I just can’t, because I don't know what my immune system is doing! So until I get some sort of blood test to say ‘you’re grand!’ … And right now… I'm not grand.

Dan: No, Alas. But you will be, I’m sure.

Flora: Well, I’m doing everything they’re telling me to!

Dan: Which is all you can do, really, I suppose.

Flora: Yeah. Jab me with drugs! Tell me what I can eat! The rest - sleep, eat, exercise and stay away from stress. So I'm looking at YouTube and various other things; but I'm not googling cancer.

Dan: Yeah, okay. Climate change but not cancer!

Flora: Yeah! Climate change, I can *do* something. I can plant a tree.

Flora was a committed environmentalist - something that could be identified by both the garden I’ve described and some of the community volunteering initiatives that she ran. Despite her anger during that vulnerable period, I remembered at a later stage once her immune system had recovered a little, we’d gone into Daddy’s for breakfast. We both met outside, wearing masks, came in to show our vaccine certs and were shown to a table by a then-familiar waiter. We sat down and removed our masks and there was a pause. The interaction took place before I’d recorded the interview-slash-breakfast, but there was a moment of wondering why it is that we'd worn the masks for a less than ten-metre walk indoors. When we sat down we didn't wear masks. But when one of us stood up to walk to the bathroom, we'd make a slightly puzzled expression for a second and put the mask back on. Bodily experience - and the experience of seemingly rigid norms changes with experiences of boldly vulnerability. We found ourselves laughing at the moment of absurdity of that short walk, in spite of Flora's earlier experiences. The experiences of REGRET and others who believed that they had been injured by vaccines balk in the face of this established normality – one that protects the vulnerable like Flora, but they perceive as having injured themselves. In understanding the strength the normalities with which vaccines protect, sustain and are sustained by, the force of what it means to be outside of normal becomes more apparent. To be pathological, to be an immunitary threat cuts across multiple domains that helps to make the strength of social adverse reactions tom vaccines clear, as I will explore in the chapters that follow.

However, I want to close this chapter with an encounter that focuses on ambivalence and quiet resistance as opposed to being directly outside what is considered normal. It concerns an interview that I had with a pub landlord who ran a hotel in 2020 during which I quarantined off the temple bar. He was just as bodily vulnerable as Flora in many ways, but had a far different attitude to the restrictions.

4.4 Different Dublins, Different Norms

Six months after the departure from Dublin that I recounted above, in September of 2020, I underwent a state-mandated two-week quarantine at the Shamrock hotel, just off of Dublin's famous Temple Bar. The heart of the city's tourist industry, the area was often derided by locals as overpriced, manufactured and perhaps just a little bit tacky. There’s a proud griminess to the ‘real’ Dublin; not too sanitised, not too safe, not too predictable. The Irish writer and cultural critic Tom Corkery provides a witty caricature of the squat metropolis in the 1970s, of an Ireland that had yet to feel the rapid modernisation and cosmopolitanism as it became integrated into Europe and its Union (e.g. Hastings 2003). It is a Dublin that sits alongside yet peripheral to the smart, corporatised, international, liberal Dublin of chain coffee shops, artisanal coffee chains and student flats. Alongside my own evenings out in the city, an especially clear articulation of this sense was something I found in discussion one of the owners and managers of the Shamrock - Mick. Mick had belonged to this world – expressing his thoughts about lockdown, doctors and public health officials in a few conversations and an interview over a cigarette in an alleyway by the Shamrock. Corkery captures a sense of this Dublin especially powerfully as he writes of crowds gathered around the iron railings and gates which border the city’s famous civic institutions - a semi-continuous, amorphous social mass who are positioned ‘from the outside looking in’. These people are:

> ‘We who hang around the railings and main gates of Dublin Castle and Iveagh House and the Pro-Cathedral, attending the great occasions of State and Church and Social Life from the outside looking in, are, as a class, pretty well bad news with everybody. The Gardai itch to move us along; the organisers of things view us with concern… “You will always know us when you see us. We are like well-bred pointers on the game, nose forward, limbs frozen into immobility. For we know that the best of things is the outside view. We can look in at them and reflect; they can only look at one another and compare. They may have to drink sweet and tiny liqueurs for which nature never designed their

> palates. We can go back to the pub and drink great flowing pints.' (Corkery 1983, p.87-89)'

There is a sense of resistance to well-heeled, smart and over-sanitised – drawn out in the tension between 'thick, flowing pints' and 'sweet and tiny liqueurs' of the city's wealthy residents. The 'outside' and the 'inside' coalesce and press up against the railings – sometimes a physical barrier, but one more widely compositely woven through social, economic, political and spatial divides. Normal is not only fragile and contested, but it is bounded – anchored and grounded – and different across these boundaries. The logic of immunity discussed in the first chapter rears its head - the iron railings figuring a space where different collectivities sit alongside each-other. Rather than representing an impenetrable or absolute border between incommensurable worlds, it is one across which traffic of various kinds can flow. The gaze of 'the crowd', as opposed to their being governed from the seat of civic power. I will now turn to what exists on the crowd's side of the railings.

Mick is the embodiment of the pragmatic, libertarian publican – tall, broad-shouldered with a ruddy face, jowls and a neat moustache. He was one of the brothers that managed the Shamrock, although from what I could glean they were beholden to investors from Hong-Kong. Discussing my own experience of lockdown and work with public health, we talked about his life and experiences. He told me that he'd been a policeman until 1994, after which he'd gone into business with his brothers. He had four children, now between the ages of thirty and thirty-four; he told me that one had moved down south to Wicklow, where the rents were cheaper. The other lived in Blackrock, a wealthy suburb south along the Dart. Mick didn't mention much about his career or life. We spoke at more length about another son of his who owned an up-market coffee shop in the City of London, with *Sir* Alan Sugar (he emphasised the word; whether incredulous or sarcastic I couldn't quite tell) as his landlord. Despite an extensive two-year renovation, the shop was struggling with the reduced footfall – only thirteen percent of the workforce were back in person, he said – the new place was struggling. Apparently the famous magnate was difficult to deal with, offering little direct support and only expecting money. The notion that anybody could pick up the lease and somehow do better under the circumstances seemed absurd to him. During the course of one brief conversation before the interview proper, he mentioned several times that he'd be going to London to visit his family, alluding to the fact that he, himself, wouldn't be locking down. After, I paused and asked him more directly 'so, will you be locking down, then?'.

He simply shook his head and walked away.

After several brief exchanges that occurred whilst I haunted the empty bar, he agreed to a full interview. We spoke in an alleyway to the side of the venue. He said that I had ten minutes of his time, which spilled over into closer to an hour. Asking if I needed to record or type anything, I said I'd write it down. We headed to a pair of thick double doors that had been barred and propped shut with a bar-stool topped with scuffed red leather, wedged against it. I didn't know if this was how they were normally managed or if it was just the way they'd kept the place secure in the lockdown. He asked if I smoked and I often said if someone offered. He wordlessly extended the packet and I took one, lighting up and taking a drag.

Life had taught me that the most interesting conversations usually happen outside in the smoking areas outside pubs, clubs or bars – snippets of one-on-one moments or chance encounters with strangers. He spoke with a thick Dublin accent at a fierce pace – I awkwardly balanced my pen, notebook and cigarette, managing to scribble down the beats of the conversation, key quotes whilst nodding and asking follow up questions. Mick had little love for the creeping corporatisation of the large suppliers he worked with – a sense that ‘they’ve no interest in helping the small Irish man, we’re barely a blip on the map to them!’. He referred to his insurers as ‘bloody crooks!’, who he claimed ‘would never cough up a payment’ if he had to submit a claim. Large businesses and organisations had no compassion – gone were the days when you could call Diageo or Heineken and ask for a £20-30k loan to be repaid back over 3-5 years with no cost, to help with things as small as re-topping bar stools. He gestured down to the scuffed stool that had propped open the door as a case-in-point. Like a lot of Irish people I’d spoken with, there was little tolerance for larger powers throwing their weight around. He raised the issue of Brexit, of which he said ‘at least you’re all standing up for yourselves!’, while in broader terms he said ‘You do the right thing and get kicked in the bollocks!’.

Mick mourned a world he felt had gone by; one that had left its mark in his health. He told me that, by all accounts, he’d lived a good life – ‘the need to party, get a ride and have a bit of craic’. He was in his early sixties, was on ‘ten pills a day, a few injections’, had survived cancer of the eye and had his heart ‘jump-started three times’. Asked if he had any regrets, he seemed adamant that he didn’t: ‘If I die, I die’. He spoke to me about when he had his eye cancer diagnosed – the memory of someone looking down a ‘sniper scope’ and confirming ‘yup, that’s cancer!’ – the ‘magic word’ he mentioned had scared him at the time. He told me the story of how, still in his hospital gown, he was back in his jeep and lit up two cigarettes as soon as he was discharged. Speaking now, he seemed to have no regret or fear – he valued the choices he’d made and almost had a fierce pride in them (although he did say that the hip replacement was significantly worse than the cancer). He lamented – and whether this was as more as a publican missing their business or a human, I couldn’t say – that young people were losing the ‘best years of their lives’, exercising their rights as he’d done. Our conversation skirted around Dr Martin Feeley, a senior doctor at Dublin Midlands hospital who challenged Ireland’s ‘COVID Consensus’, insisting the virus wasn’t as big a deal as was being asserted. We also touched on the ‘Swedish model’ of low intervention, letting the population build up natural immunity whilst also allowing people to carry on with their everyday lives.

Mick almost stood as a monument to a different kind of Dublin and a different kind of world. It was hard not to like him; so much of what he valued, swallowed up by the pandemic that was so hard to talk about. This was in the days well before the vaccine rollout had started – when it was just oppressive isolation and uncertainty. I’d be curious to know what he made of vaccine passports. His thoughts on the HSE and staff that ruined the inalienable right to ‘have the craic’ or ‘look for a ride’ were colourfully put. Of the constitution of doctors, he said ‘they go to Africa; they don’t go out on the piss a lot. They’ve got no idea what it’s like running a business, riding hookers!’. As he reflected on his past experiences, we discussed what a ‘good life’ meant for the doctors he criticised; he responded ‘eat rice, don’t eat anything fried, go mass twice on a Sunday! Be good that way!’.

The self-conscious pursuit of ‘being good’ sat at the centre of a world that he had little truck with – one on the other side of the railings. The ‘fucking schoolteachers’ were separated from what he considered the ‘real world’. Mick was a man who’d seen his share of ‘great, flowing pints’ and shared them out gleefully amongst his clientele. For Mick, there was a sense of moral fastidiousness that clung to the ‘fucking school teachers' who were afraid to 'get their hands dirty' with the business of having fun and living live until death. I wondered how this perspective sat alongside his 'ten pills a day', his cancer treatment and the three times he'd had his heart jump-started. Normal, the way that the world was meant to be, was blocked off by the clammy-handed intervention of people that didn't understand – arms stretched through the iron railings to coddle, interfere and fuss. This didn't represent my interaction with doctors, public health workers and the other members of the PHMT. Like many people, Mick was a bundle of contradictions – but this point of friction between clinicians and members of the public is not unique.

Mick had different ideas about what a good life – and unimportant death – looked like. Whilst he resented the truncation of the everyday for himself and his clients, whose risks were their own to take, it sat in tension with the experiences and expectations of others. My intent here is not to press that there is a right or wrong way to have responded to lockdowns, or to presume the expertise necessary to pass a judgment. Rather, these experiences co-exist, but also remain disparate and unlinked, reminding us that normality is not singular but multiply produced by different social arrangements.

It would be remiss of me to imply that COVID represents a world without vaccines. Their absence in the context of the pandemic is transient, but points rather to the contradictory and ambivalent experiences of everyday life between very different people. Insofar as I have reflected on the conceptual limitations of 'hesitancy' to describe particular behaviours and attitudes as they relate to vaccines, an upended status quo that is *discursively* linked to their absence opens space for reflections on the work they do socially. Vaccination is a matter of habit, of collective remembering, forgetting and social reproduction. Interventions that over-focus on deficit-model rationalism overlook the importance of the culture that they hope to defend. It also brings into focus the margins that such interventions create.

In tracing some of the dynamics that shifted and evolved in the lives of some of my participants, I have hoped to highlight what and how different people have responded to the complex pressures that COVID-19 put on them; unexpected vulnerabilities, frustrating restrictions and even an orientation towards purposeful activity as the normal routines of life had fallen away. Vaccines contain their ambivalences in this polymorphous, ontologically heterogeneous terrain that they participate in and shape as a fundamentally active participant.

The stories that people tell each-other and the information that they share participate in the weaving of these different overlapping normalities. Yet they also become ways by which people recover from normality's disruption and subsequent re-establishment as (more or less) new. If the sharp edges of factual information push away the social and political, fuelling the engine that displaces everything before it, what different ways of thinking about information as a constitutive part of the social world? How can we avoid the distinction between information and sociality bringing us back to the same problems?

5. Misinformation Practices

5.1 Everyday Misinformation

Dublin's Real-time Passenger Information System (RPTI) is one of those things that sits in plain sight but isn't often paid much mind. It can be found at many of the busier bus stops within north and south circular roads that surround Ireland's squat capital city. The electronic timetable is presented either on a free-standing, silvery pole or sometimes at a separate display attached to the underside of a bus shelter. Square letters comprised of little orange-yellow dots give a route's terminus, number and the estimated minutes until a bus's arrival. In most circumstances, the count slowly ticks down until the yellow-and-blue double decker arrives. Yet other times, the count sticks on a single minute that lasts five. They stutter forward a minute, jump back several more, flicking coyly-cum-bewilderedly onto *due* (and perhaps back again) and eventually vanish. Reports on the unreliability of buses and the RPTI system are semi-frequent fixture in national and local newspapers; an Irish Times article in late 2022 describes the frustration with some routes having 1 in 3 buses being 'ghost' or 'phantom', sowing disruption and chaos for commuters and schoolchildren alike (Burns 2022). For myself and my participants heading across town, it often meant the choice of whether to stand or walk in the rain. But this isn't strictly about buses or public transport. Rather, I'm interested in asking if in those moments when a bus doesn't arrive, when the timetable is wrong in one way or another, might be called misinformation, and how this is similar or different to the issue of misinformation which courses through vaccine talk.

Strictly speaking, it could be. Misinformation can be defined simply as information which is untrue, shared without any intent to deceive. There are nuances to this, as well as closely related terms and various problems which will be discussed below. What I want to begin this chapter with is not the idea that there are unlabelled phenomena in the world called misinformation, some of which are explicitly called such and others aren’t. Rather, I want to argue that the label itself has a specific power, mobilizing specific politics, meanings and discourses as well as (and sometimes not) denoting particular pieces of information. And in all the conversations that I had in Dublin about it, the RPTI was never called misinformation. Neither was a text that a friend sent saying that drinks were at the Nassau Street Porterhouse at 6pm, when they intended it to be 7pm. Despite the latter correction, there was a moment when something untrue had been said without the intent to deceive. These moments, and others, are what might be referred to as ‘everyday misinformation’, or even simply ‘wrong information’. This is less of a substantive analytic term; more intended to highlight that specific claims in certain topics – vaccines, climate change, politics - tend to be talked about as misinformation, whereas others don’t. These particular topics, belonging to the domain of ‘exceptional’ misinformation, belonging to domains of public importance within which the label misinformation itself circulates.

The RPTI is a useful example of everyday misinformation for another reason, as it situates information explicitly within social milieux, surfaced by a tangible socio-technical system. Whilst a lot has been said on the anthropology of infrastructure, some of its properties are helpful for the consideration of information (as well as information infrastructures). The moments when the

RPTI fails have real-world consequences, whilst its successes go largely unnoticed; nobody especially comments when a vaccine works as we're told or the bus turns up, but people certainly do when things turn out otherwise. Infrastructures. As Larkin writes of them, they 'comprise the architecture for circulation, literally providing the undergirding of modern societies' (p.327, 2013). Of particular note is the manner in which they 'sink into the background…[are] just there, ready-to-hand, completely transparent' (Star and Ruhleder 1996, p.112). Whilst public transport systems and vaccine research, manufacture, distribution, administration (and so on) are a mixture of physical and information infrastructure, my interest is in (mis)information itself as mediating, near-ubitquitous infrastructure intimately shaped-with and shaped-by other actors in day-to-day worlds. This is useful for my purposes as it firstly situates (mis)information within ethnographically accessible social worlds. Secondly it opens a way to approach (mis)information beyond questions of truth or falsity (a topic that will be explored below). And thirdly, it begins to highlight the overlapping social effects that information and misinformation have. The questions of what is and isn't called misinformation, by who, where and when are key to exploring these issues and anthropologically exploring the relationship between vaccines and what is often called the 'problem of misinformation' (Osman, Adams & Zeder 2023).

In the context of vaccines and misinformation, I am chiefly interested in the ways that the power of information to shape the social world manifests or breaks down at specific moments. This may be when facts are challenged, threatened through an 'alternative fact' or are just flatly rejected. The possibilities of a knowable, manageable and settled world are shaken up and unsettled within these moments when common sense or certain knowledge are cast into doubt. A ‘stable’ object like a vaccine directly and indirectly undergirds a variety of social relations as its own kind of infrastructure, as does reliable, accurate information.

The core argument of this chapter is relatively simple: The term ‘misinformation problem’ focuses on information and its truth or falsity itself at the expense of people. Within the former framing, information can be considered as a type of socio-epistemic virus – spreading dissent, lowering vaccine uptake and damaging the fabric of public life. This notion of information as pathogenic runs through many discourses within which information is discussed. For example, the language of infodemics (WHO 2020; Rothkopf 2003), infodemiology (Eysenbach 2009), information hygiene (Caulfield 2018) and information environments (Caulfield 2019; Royal Society 2022), psychological ‘inoculation theory’ (McGuire 1963; Compton et al. 2021) and even the now-classic metaphor of information ‘going viral’. In each of these contexts, human beings exposed to information carry the risk of a type of social, cognitive or behavioural sickness.

As well as the misinformation problem, the terms ‘information crisis’ or ‘information disorder’ are used to describe more systemic and societal-level problems that run beyond vaccine or public health misinformation. The longer-standing languages of conspiracy theory (Marcus 1999; Drazkiewicz 2020; Harambam 2018), post-truth (Mair 2018’), ‘fake news’ or the more general terms of lies, gossip or rumour (Larson 2022) are also common. To a greater or lesser extent, each of these terms reflect anxiety over incorrect information and its potential consequences for public life. I move that within these framings information is foregrounded while the actors which produce, circulate and consume it are often secondary. By drawing attention to specific, everyday contexts where the term misinformation is or isn't used, how and by whom, I hope to provide an articulation of the problem that positions information/misinformation firmly within the socio-material milieu. Key to this is a careful examination not just of misinformation, but of information itself more broadly.

As Walford says of data and their aesthetics (2020), a focus on what information *does* as opposed to what it *means* (or represents) is a potent opening for anthropological. Thus far, I have attempted to show how what is *not* said is often as important as what is said and by whom. In particular, as I shall argue, the 'problem of misinformation' is not that misinformation is untrue, but that characterisations of information as principally true or false in domains of key importance often neglect these more potent social dynamics. Information, at the point of encounter, mediates connections.

I move that the response to misinformation thus reconceived, can neither be a call for the public to 'trust the science', nor doctrinaire relativism where all truths are equal or irrelevant, nor an uncritical championing of 'free speech' where whatever prevails is true. These types of stories are compelling and deeply embedded in the fabric of conversation. Rather, I hope to show that the focus on truth and intent implicit in the formal definitions of misinformation produces a narrow, paranoid and menacingly speculative environment. What follows is an outline of the 'problem of misinformation' as regards vaccines and a fuller accounting of some of the properties of information. I then move to explore some brief ethnographic examples of how misinformation is utilised strategically by anti-lockdown protestors, highlighting not a specific claim but as a term of resistance in milieux of competing national identities. I then examine two vignettes in which questions regarding vaccines or alternative treatments for COVID-19 produce hostile social reactions, drawing out some of the social effects of the ‘baggage’ that information carries. Threaded through this is a theorisation of information and misinformation, followed by a closing discussion of how the problem might be thought about in a way that brings people into the picture in an anthropological way – rather than Latour’s old reinsertion of non-human actors into the ‘parliament of things’ (2003), this is the return of people, their frailties, emotions and mutual bonds into conversations about truth.

5.2 The Problem of (Mis)information and Vaccine Hesitancy

In the post-lockdown part of my fieldwork, I interviewed members of staff at the Health Serve Executive’s Public Health Mobilisation Team (PHMT). They’d been kind enough to let me spend time in their offices before the pandemic and speak with their staff. Amongst them was Dr Jones, a woman in her 40s who’d had a particular hand in thinking through the communications for the COVID-19 vaccine campaign. We spoke for a little under an hour over Microsoft Teams, with me sat in my bedroom and her in the offices. The once-lively offices were largely deserted despite a team that had grown through the pandemic, with many staff working from home. As a result, my interviews shifted to being remote - as one non-clinical member of the communications team told me, ‘we’d better practice what we preach!’. My conversation with Dr Jones explored vaccine hesitancy through the pandemic, her team's response and her experiences of working during the acute public health crisis. It was a mixed bag of extremely stressful conditions, but also affirmed her confidence in the Irish public in pulling together to make it through the difficult months and the high vaccine uptake. Towards the end of the conversation, I asked a question that had been percolating since the beginning of my fieldwork - "Do you think it's possible for someone with all the information to choose not to take the COVID vaccine?". She paused for a second, replying that 'well, we just hope we'd have to persuade them'.

People have reasons for taking or refusing vaccines that go far beyond the information that they're provided with. As Heidi Larson summarises in her work on vaccine rumours, 'vaccine reluctance and refusal are not issues that can be addressed by merely changing the message or giving "more" or "better" information. Debunking rumours, one rumour at a time, will not fix the questioning and convictions" (2020, p.xxviii). In a similar vein, Bernice Hausman notes the 'pernicious forms of argument' used for and against vaccines, including 'the image of the gullible, misinformed parent [which] circulates in pro-vaccine portrayals' (2019, p.13). The image of non-vaccinated parents as selfish, gullible or unwilling to accept something as seemingly obvious as a vaccine in a pandemic substantiates the image of people that, for many, deserve to be in the margins to which they are exiled.

Writing in the wake of the UK MMR controversies in the early 2000s, Fairhead and Leach summarise and critique the 'deficit model' understanding predicated on 'default… ignorance or misunderstanding' on the part of a general public (p.23). Simply put, the idea is that members of the public only distrust vaccines owing to a lack (or deficit) of information. The belief is, therefore, that providing the correct information will banish any doubts. At the moment of encounter with information, it is far from self-evident what is true or not. Fairhead and Leach go on to write that these same publics are ‘often alert to the particular social and political commitments that underpin what may be presented as objective, neutral and authoritative science’ (ibid.).

My argument here is that the problem of ‘vaccine misinformation’ is neither purely social or informational, but rests in part on the dualities that I have attempted to trace thus far - an underpinning conceptual separation of information (manifest in things like facts and science) and society. The critiques given above point towards a tacit understanding of information as the chief domain wherein the problem rests. If more and better information is the solution, then the problem lies in the quality and quantity of information. People are, strangely enough, only a secondary and subordinate consideration.

The movement away from a ‘truth-centred’ approach to vaccine hesitancy and the ‘problem of misinformation’ in part also rests on this distinction. For many people, questions of ‘accuracy’ do not reflect the way that they mobilise understadnings of the world but are a call to invest in and align with certain discourse or institutons. Yet a simple reversal of the problem – rendering information solely in terms of its effects - is also unhelpful. Emily Yates-Doerr, writing in a similar theoretical framework on the social determinants of health, writes that the concept of ‘the social’ deployed within public health frameworks risks being ‘reified as a pre-established and fixed set of attributes' (Yates-Doerr 2019, p.382). The reification of the social and the liquidation of the informational is unhelpful, yet inevitable so long as there is a sharp ontological division between domains. However what happens if we rethink information as resulting from specific information production practices that are materially situated engagements in the world which generate various socio-material affects *as well as* authoritative representations.

For example, Ela Drazkiewicz writes on the 'intimacy' of relationships with epidemiological and statistical information throughout the pandemic, following her pre-COVID fieldwork at the Irish Health Protection Surveillance Centre (HPSC). As she puts it, numbers were 'no longer simple cognitive tools but instead important tenets of social, moral and political lives' (2021, p.71). Epidemiological, medical and statistical data gave people a sense of what was going on, creating national solidarities and 'they built our relationship with the pandemic… they turned a medical issue into a national pursuit' (ibid., p.75). As many of my own participants informed me, the high COVID vaccine uptake was a symbol of national pride – Dr Jones remarked she'd heard of teenagers getting the vaccine to protect the vulnerable members of Irish society. The number was representative of a strong moral and cultural fabric of solidarity. Numbers, taken as a specific type of information, in this instance, can be seen to have powerful social effects that span beyond their representational capabilities.

There are two key points to draw out of this. In the first instance, it is that mundane encounters with information are potentially describable as encounters with misinformation, but likely won't be. When and where this isn't the case can help to delineate the boundaries of how and when something *is* considered misinformation. This slippage between what is called or labelled misinformation in a variety of public and private discourses is quite different to what might be definable as misinformation in terms of people's everyday lives. As Foucault (1978) observed, we might differentiate between a discourse of misinformation and things that might, analytically, be labelled as such - the difference between an inaccurate bus timetable and a claim about the potential harms of a vaccine. The second point - which will be returned to - is that the consideration of whether something is misinformation entails a degree of continuity and entanglement between the sender and the information. Yet the 'problem of misinformation' is often focused on fact checking and the removal and moderation of incorrect contents. As has been said of conspiracy theories, it is not their existence that is of significance but the conditions that allow for their success and production, as well as what they can tell us about the world (Fassin 2014). As I will argue, many ‘fact-checking’ or truth-centred proposals in dealing with ‘the misinformation problem’ struggle to propose interventions beyond removing negative content, improving ‘information discernment’ and looking at issues of trust.

5.3 Truth-First problems

A particularly salient concept can be found in the notion of an ‘infodemic’, which the WHO describes as ‘an overabundance of information - some accurate and some not - that occurs during an epidemic. An infodemic spreads between humans in a similar manner to an epidemic, via digital and physical information systems. It makes it hard for people to find trustworthy sources and reliable guidance when they need it' (2020, p.1). The concept itself was coined by David Rothkopf in 2003 - a simple portmanteau of 'information' and 'epidemic' - writing in response to the bird flu epidemic. He wrote of 'a few facts, mixed with fear, speculation and rumour, amplified and relayed swiftly by modern information technologies'. Alongside this, he commented on the potential political pitfalls, with the potential for 'the irresponsibility and for demagogues to practice new forms of social disruption, and a set of serious new problems for policymakers dealing with challenges from public health to international affairs' (2003). In his call for an anthropology of misinformation, Maxime Polleri notes in similar terms that misinformation 'which refers to false or scientifically discredited claims, has always existed' but has - as both the WHO and Rothkopf suggest - 'become significantly exacerbated due to the influence of digital platforms, which enable users to post any kind of information with minimal filters' (2022, p.17). The notion of the 'infodemic', then, is characteristic not just of misinformation 'itself', but of the dynamics of wider contemporary information ecosystems that it is a part of (Kata 2012).

The ramifications of 'the infodemic' or 'the misinformation problem' are far reaching and complex. At a level of principle, the Irish Council for Civil Liberties (ICCL) saliently highlights that the issue fundamentally evokes concerns about human rights and freedom of speech. They note cries of 'fake news' taken up in bad faith can be used to undermine journalism critical of creeping populist regimes (precisely as Rothkopf warned), just as much as misinformation can be spread through well-regarded media outlets themselves. As they summarize 'Words matter, and it's important not to empower anti-democratic actors and rights abusers in co-opting and weaponizing this delicate and at times confusing terminology’. The risks of COVID-19 misinformation in particular can spill over into risks, that ‘can lead to panic buying, social unrest, and can undermine confidence in official and verified information coming from experts’ (Shattock 2021). Meanwhile, Ciaran O’Connor wrote for the Institute for Strategic Development (ISD) on the ‘misinformation situation’ in Ireland in January of 2021:

> ‘…the process of vaccine rollout may be undermined by misinformation as online conspiracy communities speculate, share and spread unsubstantiated claims. Tackling COVID-19 vaccine misinformation is an essential step in boosting public confidence in vaccines. The responses of social media platforms, governments and health institutions to this misinformation will be a crucial component in allowing societies to emerge as quickly as possible from the pandemic.’

In wider terms, the report covers the persistence of old theories as much as the emergence of new ones. Anxieties over the new mRNA vaccine technologies, surveilling or discriminating against unvaccinated individuals and downplaying the dangers the virus represents are given as common misinformation. More well-established narratives also re-surfaced, according to O’Connor’s analysis – the ‘Great Reset’ that linked mass-covid vaccination with depopulation plans (a not uncommon anxiety about vaccines in various parts of the world, see Jegede (2007) on the Nigerian polio boycott), along with fundamental mistrust of the pharmaceutical industry. The analysis by the ISD points to potential consequences that directly impact vaccination campaigns.

Wider framings link misinformation beyond vaccination; the LSE in 2018 warned of an ‘information crisis’ underpinned by the five ‘great evils’ of ‘confusion, cynicism, fragmentation, irresponsibility and apathy’ (author 2018, p.2). Meanwhile The US-based Aspen institute writes of ‘information disorder’, warning that ‘It slows down our response time on climate change. It undermines democracy. It creates a culture in which racist, ethnic, and gender attacks are seen as solutions, not problems’ having become a ‘force multiplier’ for the worst problems of our society (2021, p.1). They also note that the issue is rooted in wider social milieux beyond the information ecosystem, writing that:

> ‘it is rooted in broader challenges facing the nation—from increasing income inequality, to decreasing levels of public trust in institutions, to the constant churning cycle of news and information, to the splintering of media writ large, to the explosion of social media. Combined, these enormous changes are fertile ground for the seeds of information disorder’ (ibid, p.8).

Broadly speaking, there is wide recognition of social shifts that accompany or contextualise the problem. For all this recognition, front-and-centre is still information; crisis, disorder info-demic. The wider milieux that this forms a part of - ‘fake news’, ‘post-truth’ - have a variety of elements in common. What I have termed the ‘misinformation problem’ may well be a symptom of wider ‘social and epistemological crises’ (2022, p.18), but the framing almost inevitably returns to the stubborn, outlandish and persistent claims which have been ‘discredited by science’ (ibid., p.17). This discreditation - or failure to successfully discredit - is a key component of the issue that returns us to the question of information’s social efficacy or aesthetics. What may be apparent now is that information is very readily entangled within complex social webs of meaning, intention and circulation. Indeed, it is impossible to formally identify misinformation *without* knowing the mind of the sender or having properly verified information through a laborious process of fact-checking and referencing. There is a ‘persuasiveness of form’ (Strathern in Walford 2020; cf. Riles 2000), aesthetic or social efficacy to data as a wider discourse. That is, things that claim to be data or information (the two are not strictly the same, but can be elided for the sake of this argument) have a specific ‘charisma, how they capture attention’ as well as their capacity to objectively or accurately depict the world (author 2018, p.206). It is this affordance to depict and encapsulate the real that is, ironically, separable from the question of truth or falsity of any given piece of information in and of itself. A naturalised set of beliefs about what information is, does and means - something not entirely dissimilar to what Webb Keane refers to as a semiotic ideology (2018) - underpins this social efficacy and is, to a certain extent, equivalent to it. I would articulate the ‘misinformation problem’ as a crisis of scientific hegemony where the sovereignty of information to produce a stable, knowable world is, itself, being both contested and challenged. Having sketched some of the underpinning ideas about information and how these cascade into thinking through the problem of misinformation, I now want to set out some ethnographic situations to explore the concepts raised in more detail.

5.4 The Pattern that Disconnects

Throughout the COVID-19 lockdowns, there were a wide variety of protests that took place across Ireland's major cities. Some were public demonstrations, others the quieter opening of shops that refused to check the 'vaccine cert' or enforce mask mandates. The most common site for the protests (and rallies of any sort) was outside the General Post Office or GPO on O'Connell Street. This particular rally, on a sunny day in late autumn, railed against lockdown and what participants perceived as abuses of power by the Irish government - from deprivation of personal liberty, to shock that the public were doing nothing to protect their own rights as free citizens.

I rolled off an (on-time) intercity coach from Galway where I'd been visiting friends the previous day, inhaled a burrito and hurried my way up O'Connell Street to Parnell Square where the march began. As I walked up the broad street, I passed a stout black maquis erected outside Dublin's General Post Office (or GPO) which caught my attention. In a little over an hour, the march would ultimately end there in a rally after it snaked its way down across the Liffey at O'Connell bridge. The site is near-sacred in the Irish national story, being the place where the Easter Rising of 1916 started and Podraic Pearse read the Proclamation of the Irish Republic, or the *Forógra na Poblachta*. Both poet and revolutionary, Pearse was slated to be the first president of the new nation. Sadly, it was not to be. For his part in the Rising he was executed at Kilmainham Gaol alongside over a dozen other leaders - the once-grim site now a national museum. Lingering signs of revolution, oppression and struggle for freedom are part of the city. The GPO itself doubles as an active post-office and a museum that commemorates the events of the Rising; a surreal thought, as it was the easiest place for me to take my boxes of belongings to be shipped home to London. So, when a schoolteacher from the outlying suburb of Tallaght read the verses of Pearse's famous poem The Rebel (he sheepishly apologised for using the same reading at the second rally I saw him speak at), the political imaginaries evoked were starkly chosen. With the closing lines of the poem, he condemned 'We will try it out with you, ye that have harried and held, ye that have bullied and bribed, tyrants, hypocrites, liars!'. Another activist denounced the failure of the government and recounted being told to 'move on' from speaking with a neighbour by the Gardai. He railed against the excesses of a financial system that had failed to serve the interests of 'the people' since the 2008 financial crash, occasionally lapsing into Gaelic in his thick, lilting Cork accent.

A range of speakers rotated at the rallies; some told personal stories of their experiences of lockdown, medical professionals and educators, whilst others were concerned parents or more longstanding activists. There would be between four and six talks at each rally, with lone or small groups of speakers standing on the small stage (perhaps 4 feet off the ground) within the black maquis I passed earlier. The stage was framed by a range of banners and signs, advertising various social media groups and causes. Amongst the various slogans, the largest and most prominent was at the back of the stage - the word 'TRUTH', in blood red capital letters on a stark white background.

A stone's throw up the street were another, much smaller group of protestors - a few-dozen to the FAN's several-thousand - a group of Ethiopians living in Ireland. They were protesting the Irish government's stance on a brutal civil conflict in Ethiopia between Abiy Ahmed's government and the Tigrean Liberation Front, who had formerly governed the country for twenty years. I stood and watched them for a few minutes, they chanted 'the Irish Times lies!' and 'no more misinformation!', alongside critiques of the then Foreign Secretary Steven Donnelly. Who it was that they were in favour of wasn't immediately apparent from watching, nor what it was that Ireland had done or what they wanted. There were no facts to be checked in that moment - or if there were, they weren't front stage.

Back at the FAN rally, specific claims were given throughout the course of the speeches - about the 'experimental' nature of the vaccine (they objected to the Moderna and Pfizer mRNA even being called a vaccine - preferring the term 'gene therapy' in addition to 'experimental'), the exaggerated dangers of COVID, the mental health and economic effects of a disproportionate lockdown, the dangers of masks for the social development of children and the unjust nature of 'vaccine passports' leading to what they described provocatively as a 'medical apartheid'. The same sentiments were echoed across colourful banners and signs, each having a mixture of statistics and slogans. One showed a graph of suicide rates with the slogan 'what about flattening this curve?', whilst another protestor held up a plastic skeleton lashed to a pole, a sign hung around its neck reading 'I trusted Tony Holohan' (the Chief Medical Officer at the time). In this space 'information' is thick, textured and social - resonant in the air with poetry, protest music, the giggling of children, the quiet chatter of friends and families and the yawns of bored Gardai escorting them.

The term misinformation, particularly once detached from a specifically digital milieu becomes very rapidly slippery on two levels. In the first instance, encountering misinformation in particular contexts where it is ‘just’ information, at the level of a single claim which can be disputed, is remarkably rare. Consider a claim made at the rally - say that masks are damaging to the social development of children, or are more widely harmful owing to restricting oxygen. If there were some impartial fact-checker present who would press a buzzer every time something ‘incorrect’ was said…? Although important, this is not wholly the point. To return to Larson on rumours; ‘rather than focusing on de-bunking, we should look at rumours as an ecosystem’, acknowledging that rumours ‘are important to reinforce social networks, share sentiments, and make sense of unknowns’ (2020, p. xviii). Whilst rumours are analytically distinct from misinformation (albeit with some similar overlaps), the wider social importance of information is key. Nothing is said from nowhere. As a way to parse the wider social effects - and affects - of information, it is helpful to consider what Kathleen Stuart calls ordinary affects. That is, it is not what things ‘mean in an order of representation, or whether they are good or bad in some overarching scheme of things, but where they might go and what potential modes of knowing, relating, and attending to things are already somehow present in them in a state of potentiality and resonance’ (2007, p.3). It is these possibilities that are afforded information in its everyday, mundane moments of encounter - where its aesthetics are met not as part of a rational, deliberative process but in the thickness of embedded, everyday life. These connective, relational capacities of information sit within the concept itself.

5.5 Contextualising Information

Information is a remarkably complex and messy term with limited consensus on its meanings and usages (Mingers & Standing 2018). Reflecting this diversity of definitions, Rob Kitchin writes that, for some, ‘information is an accumulation of associated data, for others it is data plus meaning, or the signal in the noise of data, or a multifaceted construct, or tertiary data wherein primary data has been reworked into analytical form’ (2017, p.38). As a result, the following discussion should be considered a pragmatic but particular path charted for a specifically anthropological argument. For the purposes of this argument, I find the term ‘data plus meaning’ the most accessible and simple for anthropological analysis - especially in its situation as a middle term between data and knowledge. If we follow Kitchin’s analysis further, data is ‘raw material produced by abstracting the world into categories, measures and other representational forms… that constitute the building blocks from which information and knowledge are created’ (ibid., p.28). Following Douglas-Jones, Walford and Seaver, anthropological attention to data critiques an implicitly ‘universalising epistemology’. Instead, it aims to chart a path between new technological and economic imaginaries of ‘big data’ and the subtler continuities with pre-existing forms of measuring, documenting and ordering the world in more fragmentary and localised contexts (2021). Information and misinformation differ in their discourses, with the latter being more uniquely charged, but, I would argue, misinformation is inextricably entangled with the former.

Taking the formulation of ‘data plus meaning’, a similar pair of definitions can be found in the work of Gregory Bateson. For Bateson, information is ‘the difference that makes a difference’ and, as regards its aesthetic properties, attention to ‘the pattern that connects’ (Bateson 1989; p.8 in Riles 2000, p.185). Data is produced through measuring something in the world and becomes information as it is patterned, interpreted and contextualised. It then can be said to become knowledge when integrated and operationalised within a given individual or collective context. To recapitulate some key points - there are things that might be recognised as information or misinformation where some formal, analytic definition may apply (when considering truthfulness and intent of the actor communicating). Within the context of vaccination and wider ‘social and epistemic crises’ which Polleri claims ‘misinformation’ points towards (2022) the term has acquired particular meanings and aesthetics as both the concept and particular things that could be called misinformation have travelled. That specific meanings - or the capacity *for* meaning - are definitional within data, a consideration of how data might be said to acquire meaning and its connective capacities helps orient us in developing an anthropological definition of *misinformation*.

By carefully situating these meanings and connections within social milieux like the protest, the ‘problem of misinformation’ becomes remarkably easier to interpret, making questions of truth and false or right and wrong more than a zero-sum game and more than a cynical brokerage of power. Meaning in particular is a closely considered topic in anthropology, often associated with the classic Geertzian definition of culture - as ‘webs of significance’ that the analyst explores. Taking the difference between a wink and an involuntary twitch, he writes ‘a speck of behaviour, a fleck of culture and - *voila* - a gesture!’ (1973, p.6). Be it a gesture, a piece of information or a complex biomedical artefact, meanings imputed to them reside not in the abstract but arise in these ‘webs of meaning’. The character of these webs is more provisional, contested and at larger scale than classic anthropological usages - the flows of global capital, labour and information across digital and other networks transform the classic, bounded paradigm. Yet spaces where ‘cultures’ are more-or-less stable, even if in momentary events, can be helpfully traced. As well as data travelling, the meanings, potential meanings and fragments of systems of meanings travel as well. These webs of meaning, connecting patterns and processes of semiosis are multiple, situated, rapidly evolving and highly unpredictable. If, as Bateson would have it, information is the ‘pattern that connects’, misinformation is the pattern that variously disconnects and reconnects, sometimes in destructive and highly contentious ways. Encapsulated within this is not just specific pieces of information, but the very ‘semiotic ideology’ which governs these disconnections and reconnections.

A common trope across my fieldwork was the notion that people lost loved ones not just to COVID, but to misinformation. These ‘patterns that disconnect’ - be they partial disconnections or seemingly total ruptures - are met with a force that speaks to what might in other contexts be cast as a ‘simple difference of opinion’. A friend discussed someone called Christoph that had gradually been chased out of his extended friendship group. Christoph had joined the group chat following a night out in Galway - whilst a generally pleasant individual, he would occasionally chip into the relatively frequent conversations about vaccines with advice about a drug by the name of Ivermectin, encouraging people to speak with their doctors about it if they were anxious about COVID. During the early stages of the rollout when the vaccine was not to be available to young people, it may have seemed to be a relatively benignly intentioned proposal. Furlan outlines desperation early in the pandemic that led to the ‘repositioning’ of existing drugs on the market as potential treatments, politicised by controversial leaders such as Trump and Bolsonero (2021). Christoph, despite multiple requests to stop promoting the drug, persisted and was met with increasingly intense hostility. After a particularly heated and lengthy back-and-forth discussion, he left with the comment that ‘You guys just hate me because I’m offering an alternative opinion!’.

A good friend from county Kerry sent me a story over WhatsApp in the middle of the strange interlude of lockdowns. A mother of two, Clara had described herself as vigorously ‘pro-science’ - an attitude she tried to instil in her children, participating in a particularly active ‘pro-science parents’ group’ on Facebook. Of her two children, one was prone to illness - as flu season approached, the HSE were keen to offer a flu vaccine as a nasal spray for children where they could. Using an attenuated form of the virus, they were contraindicated for children with weaker immune systems. Her GP had recommended that the nasal vaccine could potentially be dangerous to the child, ensuring that they would be given the injection instead. Owing to a mix up in communication, the wrong vaccine was administered and her son was put at risk. Whilst he ultimately suffered no complications, Clara went to post on the group about her experience, Looking for support for her frustration with the nurse and her anxieties about her son. She was rapidly labelled an ‘anti-vaxxer’ and run out of the group with a vitriol that surprised her.

What was it that people were responding to in these moments of disconnection and rupture? Clara’s anecdote was, by all accounts, true. Christoph had - although modestly and non-confrontationally - been recommending a drug whose efficacy was in dispute and tangled up with highly divisive political figures. The affective resonances, more explicit meanings and connections present in either depicting a vaccine in a specific instance as potentially harmful or recommending an alternative treatment go beyond the propositional content of any of the given statements in themselves. The issue isn’t that a nurse made a mistake or that Ivermectin is ineffective in the treatment of COVID and it was implied otherwise. Nor was the rejection on the basis of a systematic consideration or investigation of either piece of information. Christoph’s usage of the word ‘alternative’, I think, is telling in this instance. If information is connective patterns and shared meanings which data part-generates and part allows to unfold the disconnective/reconnecting patternings are a threat to social fabric. ‘Alternative’ as a word resonates with and is parallel to articulations of difference, yet in this instance it points not to a broadly commensurable alternative within the same potential registers of meanings - say swapping red for blue, Pfizer for Moderna, but it points towards different and alien systems in their entirety. I would suggest that it is these patterns of disconnection which are at the core of the ‘loss’ - actual, potential or imagined - of loved ones.

Anthropology has tracked in alternatives, alterity and difference through most of its history. Whilst the initial urge was to assimilate difference and incorporate it within the explanatory systems of modernity, contemporary anthropology rather looks to actively promote, learn from and incorporate a variety of marginal ‘Othered’ groups. Which differences are articulated, the difference they make, then the meanings and connections they enable and create are the social story of information. As the strange becomes more familiar, the continuities become more apparent and the differences less so; those things customary at ‘home’ become blurrier and less certain. As misinformation arises, that which is familiar and safe becomes strange, alien and even monstrous.

I should hasten to add that for all of this, the patterns of disconnection are by no means absolute. Christoph did not know that group of friends particularly well. Clara, although an active participant in her group online, possessed weaker connections when compared with those of her close friends or immediate families. What might be called partial disconnections can be repaired. To take one example, a young man named Alex who worked at a local cafe I frequented told several stories, including an instance where his mother, as he put it, ‘did the whole ‘I don’t know what’s in it thing’’ at family dinner one evening. Despite protestations from his sister to not spoil the evening, Alex bluntly put it to her:

> ‘Whatever one you get, you take. Oh, and if you don’t get it, I’m not going to visit you. This isn’t actually a time for this. It’s safe. Trust me on it - I’ve looked it up! And then I was like but I’m not going to sit here and argue numbers with someone who’s usually very… holistic… you know, that kind of approach to things? You know, she’d taken medicine, but would usually be more, like… natural? Yeah, but doesn’t *completely* abandon it, once she’s convinced of the need for it. But I was like ‘fuck

> this, here's an easy one! If you have an option to get a vaccine, and you don't take it, I'm not going to visit you. I am not going to continue to isolate my life to protect your health if you're not willing to get a vaccine, but I'm not willing to risk your health. So I just won't see you until I'm vaccinated, and then it's over, or you're vaccinated'. Right? And then the conversation lasted five minutes and it was like 'okay, I'll get it'.

The strength of familial connection, of shared experiences and meanings that had accrued over time and in the intimacy of family life, put Alex in a position where the collective strength of these ties could resist the competing pull of his mother's anxiety about the contents of the vaccine, buttressed by her ambivalence towards biomedicine. It is easy to read this as the social facilitating the scientific; of returning somebody to 'good sense'. Alex laughed that he knew that it had been coercive - that he knew that the way he'd pressured his mother would have been inadmissible were he a medical professional. This wasn't intended as callous or cruel - for him, it had been obviously for her benefit. Whether or not one thinks that this may be justified ethically is a complex question - that of ends justifying means, of what is acceptable for children to do on behalf of and for their parents and so on. In multiple senses, taking a vaccine is a mark of participation in wider social, moral and epistemic order - just as rejecting them is a mark of stigma.

In these moments, what is exposed is wider than a disagreement over a single action. It is not a disagreement over the efficacy of a vaccine, the unsuitability of a treatment but the associations that a particular idea or piece of behaviour carries. Information is never encountered in a vacuum, but is always-already mediated and mediating with a range of co-actors. However, in its representational power, the ‘persuasiveness of form’ or ‘aesthetic’, the social collapses and is rendered subordinate, along with reality being defined and shaped by information. The recognition that ‘more and better information’ is not enough points to fissures and cracks opening up in the ground. In what might be described as encounters with misinformation, social actors of various sorts mark the moments of connection or disconnection that occur across variously overlapping and conflicting milieux. I have attempted to situate information within the social milieux by adopting his term of ‘the pattern that connects’. Information situating shared belief, agreement and community.

However, these connections are not stationary or anchored to any one set of affinities. Whilst in Bateson’s *Mind and Nature* he is thinking within a more biologically and evolutionarily informed framework, he is clear that patternings and relations are ‘a dance of interacting parts’ (1988, p.15) rather than static inevitabilities. Things are transformed as they enter into relation with each-other; a statement about vaccine safety when spoken by a son rather than a doctor, or a person when they make claims about a controversial anti-COVID treatment. Connections are made and re-made within what Bateson refers to as ‘ecologies of thought’ as part of an overarching ‘sacred unity’ of mind (1991). Whilst this has a mystical-sounding bent, he does not refer to ‘thought’ in terms of symbol-processing or cognitive capacity in some kind of animism. As Hannah Knox explains in her work *Thinking Like a Climate*, a Batesonian perspective here marks the co-existence and co-action of interpretations, ideas, people and other non-human actors on the same plane. Mind is neither material nor ideational, but immanent and traceable through the sum of effects. As she summarises of Bateson and related anthropologists these ecologies are ‘the stabilized effects of interactions among entities that communicate with one another through their significatory capacities, and that these stabilizations matter’ (2020, p.7). Connective patternings are stabilized in an ecology of more-than-human actors, including ideas, data, facts and even vaccines themselves. These objects are not alone, but are intimately entangled with affective and social responses – not some passive after-effect as information somehow slides across the ontological barrier between itself and the social, but co-productive of the same ecologies. Authoritative, scientific information is not above or laid on top of the world, a view from nowhere, but intimately participant alongside other actors they infinitely separated from.

Whether true or not, information has effects. Discovering something is true or false is, itself, a reconfiguration of connections. It is not an unmediated interaction or a lone actor changing their behaviour. Within this framework, I might suggest that misinformation is not a particularly helpful term – rather that there are more or less desirable patternings and connections depending on one’s position within a given set of ecologies. Information is deeply entwined with social cohesion in the context of everyday interactions, ready-to-hand and mediating the real.

Compton et al. propose that counterarguments as ‘mental antibodies’ can be created through a gradual public exposure to science misinformation in consequential topics such as vaccination and climate change. This literature in particular reflects the info-pathological view, noting that ‘misinformation’ can have a long incubation period before a person is fully persuaded. That certain behaviours are more or less desirable in certain contexts is not in dispute, that bias informing interpretation of data should be controlled for. It is difficult not to consider large-scale attitudinal and behavioural change as something that is deeply political. It is doubly so if it is ‘merely’ a-political and corrective, seeing scientific misinformation outside of any lived context or wider networks of belief. That it is psychologist’s duty to govern public beliefs they deem to be mistaken is more so, with the social endlessly displaced as the invisible barrier sweeps everything in front of it. Anything not a part of authoritative information, stubbornly refusing to be integrated into knowledge, is subordinated to it. This idea of being ‘sick’ from information, of a mental immune system for the body (and mind) politic, requires a clear definition of who or what is desirable, of what is friend and foe. If we consider this from a wider ecological perspective, entailing the rejection of ideas or their exclusion, it is difficult not to consider this an overreach.

A recent study proposes that a ‘lack of introspection’ may have caused researchers trying to understand COVID-19 preventing behaviour to misattribute blame. They suggest that if conspiracy theories and misinformation are part of wider problems, then attempts to ‘censor or correct CTM beliefs will do little to impact vaccination rates’ (2022). In acknowledging that people’s beliefs and motivations. They go so far as to admit that missing quote

Similar perspectives abound in discussions about vaccine hesitancy itself, with a call to teach people ‘information discernment’ relegating world-views to secondary. These ideas are not ‘exogenous to vaccine hesitant beliefs’ and that ‘initial claims about an “infodemic” in 2020 may have been overstated, albeit well-intentioned', going so far as to note that intervention to remove specific ideas may have increased mistrust, even going so far as to note that 'removing or labelling content may inadvertently inhibit the free exchange of ideas that are central to democratic societies' (ibid.).

At its heart, problems of misinformation are very human problems, resting on deeply embedded ideas about how information and people interact. The challenge becomes, once those assumptions are challenged the legitimacy and power of scientific enterprise is challenged as well. Inevitable questions about public debate and the relationship between science and politics, flow from these questions but have historically been rendered inadmissible. That something which profoundly affects society yet involves information is only either a social one or an informational one in character will almost inevitably produce either cynical or naïve solutions.

Anthropology has long-since learned that people look askance at you for representing them in ethnographies. That you become an expert in *their lives* is something that has provoked vigorous and complex discussion for decades (e.g. Clifford and Marcus 1987). That communities can in fact read what has been written about them and speak for themselves radically changes the dynamics of knowledge production. Given the intimate nature of ethnographic research, these are challenges that the discipline has learned to handle. The further one is from one's participants, the more they exist in a laboratory context, the less unpredictable and human they are. Population-level governance needs-must deal with abstractions and broad brush-strokes. Yet when people see and feel the direct impact of intrusive policy measures, it should be little surprise that some respond negatively. That ‘mental vaccines’ can be considered a possibility in scholarly literature belies a worrying view of people, information and the world at large. It has the hallmarks of early sociology’s visions of a perfectly engineered society – one that leaves the people out of it, as docile bodies or rebellious ones to be controlled.

Much of this, I argue, flows from claims about what information (and therefore misinformation) is and does. The previous chapters have charted many of these assumptions as the outcome of historical processes, brought into view at the moments where they had not yet come into being or flicker and fade in different ways. The concept of (mis)information is denuded of sociality and so will struggle to offer any meaningful social analysis as it is current composed. Softer than facts, it nonetheless carves up the social world with paranoia at the grass-roots. My proposal is first that by viewing information as relational, affective and situated in social worlds that we bypass the either-or questions of truth or falsity. Secondly, by eyeing the purificatory tendencies of information-as-facts, of immunity as protection and a clear I-and-not-thou, the nature of the margins that vaccines produce in how they are informationally constituted become clearer.

If these margins are composed of the same stuff as the great divide, fragmenting into ‘little divides’ that criss-cross the increasingly unstable ground beneath our feet, what are we to do? The answer cannot be a call for more and better information, but to attend to the relations and practices that are produced in and through these conversations. The reasons for vaccinating or not are deeply imbricated within wider life-worlds; to only look at specific beliefs about ‘big issues’ such as climate change or vaccines will only ever give a limited understanding of the issues. Doubt and anxiety are not obstacles to be overcome for some policy outcome or held up against some standard of cognitive wellness, but evidence a need for human engagement and compassion.

However, these margins are not absolute. The work of activism and resistance reframes and challenges them, seeking to move them and move out of them. How can Ireland’s rich, complex and often tragic histories of activism and resistance help us to understand the way in which the margins produced by vaccines intersect with others? What kinds of resistance are legitimate or intelligible?

6. Whose Body, Whose Choice?

My Body, My Choice!'

The members of Repeal

'My Body, My Choice!'

The crowd at the 'Rally for TRUTH and Civil Rights'

'My Body, My Choice!'

The daughter of a neighbourhood woman, on being told to brush her teeth one evening

6.1 Public Confrontations

In 2016, the Irish government was responding to the initial success of REGRET's campaign to raise awareness of what they believe had happened to the 'gardasil girls': in Ireland, around a hundred young women who activists claimed had suffered life-changing adverse effects from the state-sponsored HPV vaccine. The narrative ran that they were once-athletic, bright young women made into shadows of their former selves as a side effect of the HPV vaccine. Following the convening of the cross-sector HPV Vaccine Alliance by the Irish state, two 'town hall' meetings were arranged in Cork and Galway to address public concerns. Amongst the panellists who took questions from the public was the prominent Cambridge professor of immunology Professor Margaret Stanley, who'd agreed to speak as part of the effort to bolster vaccine confidence. At the event in Galway, a church had been converted into a space to facilitate the conversation. Normally where heaven met earth is mediated by a robed cleric, soberly dressed scientists and clinicians made the immanent and the real accessible to alienated and concerned members of the public.

A section of the event was depicted in a video filmed by an onlooker who captured a disruption to the proceedings, centred around a teenage girl in a wheelchair who raised her hand to ask a question. Her name, as I gleaned from REGRET's Facebook post where the video was posted, was Rebecca. Whilst the event had an official livestream, it was abruptly stopped as the young woman began speaking. The uploaded recording was undertaken by a man saying he'd had to resume filming on his phone on noticing that the livestream had been stopped. The awkwardness in the room was palpable, but Rebecca was nonetheless allowed to ask her question to Professor Stanley. I have transcribed the exchange below:

> Rebecca: "I have four doctors treating me for vaccine injury. I just was wondering, do you feel guilty for promoting this vaccine that has left so many girls out of school, wheelchair bound and basically don't have a life?"
>
> Stranger: It's just like that thalidomide!
>
> Facilitator: Sorry, no come on, let's just be respectful to the lady asking the question, ok!
>
> Filmer: I think he is being!
>
> Facilitator (to man filming): I thought you were leaving?
>
> Filmer: I had to come back because you stopped the live feed so I had to come back up to hear ye.
>
> Facilitator: Could you, could you please out of respect to your peers in the audience could you keep your thoughts to yourself?
>
> Bystander: Sorry, you weren't even asking the question. Nobody asked you anything.

Filmer: Sorry

Rebecca: Do you feel guilty, so more end up like me, in a wheelchair, not attending school.

Camera pans to the stage

Margaret: I can't say anything to you other than I am, you know, you'd have to have a heart of stone not to feel deeply for the situation that you are in. So let's not run away from that. This is a-

Rebecca: Do you feel guilty, yes or no?

Margaret: No, I don't feel guilty because-

Rebecca: So you are fine with more girls turning out like this? Chronic pain? So you are fine with that, you can have that on your conscience?

Pause

Margaret: I'm, I'm an advocate for women's health.

Bystander: You're an advocate for money.

Rebecca: Yeah, you're saying more girls are allowed to get sick.

Bystander: Shame on you, shame on you! And don't interrupt.

Facilitator: I'm sorry but you will get your chance on the microphone in a minute

Bystander: Listen, she just told that girl that she doesn't care what happened to her, alright, and she is here promoting what she, what happened to that girl, shame on you.

Other facilitator: Okay everybody, could we have a little bit of calm please?

(Clip ends)

Whilst Professor Stanley expresses sympathy for the young woman, she does not see any link between her condition and the doses of Gardasil she received. The Irish Cancer Society, who convened the event, subsequently hired security for another town hall due to run in Cork a few days later to prevent similar disruptions. Despite the effort to contain the damage, the video clip went viral, achieving over a million views on Facebook in its first week. Looking at it in 2023, the total count is around 1.8 million with nearly 4,000 comments - the majority are critical of the HSE, of the HPV vaccine and the way the situation looks. This is the angle that REGRET's materials often take - presenting the body of the girls as a question demanding answers and accountability. As I have explored in previous chapters, available epidemiological data and meta-analyses do not identify a casual link between the 'Gardasil Girls' in Europe and their symptoms. The proper language would be adverse effects occurring *with* as opposed to *from* a vaccine. That an experience of brain fog, chronic pain, numbness or tachycardia happens in some period after the dose of a vaccine has been given does not link the two. The embodied experience of young women like Rebecca presents a challenging story - whilst it is easy to look at the benefits of vaccines at a population level, numbers don't talk back. A confrontation and a claim like this raise complex questions about how smaller-scale body-vaccine interactions might be understood. What does it mean to explore this link in its multiplicity? What do different understandings of bodies add to the understanding of vaccines in Ireland that I have attempted to sketch so far?

6.2 Framing Vaccine-Body Interactions: Feminism and Material-Semiotics

Vaccines *do things* as they enter into relation with the body. After all one might say that’s the whole point.

It’s easy to think of being vaccinated as a single moment in which the vaccine dissolves into the body - is absorbed into it, modifying it and resting in it. By whatever mechanism - an attenuated virus, synthetic virus-like particles, new mRNA technologies or even the pus from an open sore - the vaccine does its work to stimulate an immune response to a particular pathogen. There are niggling questions one might ask as to whether ‘the vaccine’ extends to its container, the adjuvants, stabilisers, suspension fluid or other bits and pieces. In interrogations of where something may be the culprit for causing bodily harm, the ‘vaccine’ becomes decomposed and re-constructed. In the infamous investigation of the linkage between ethylmercury and autism, there was a moment when the US FDA curtailed the usage of the substance (Kaufman 2010; Kirkland 2016). Some controversial scientists question the usage of patented Aluminium Adjutants as a potential irritant in the HPV vaccine (e.g. Exley 2020, Gotzsche 2021, p.145-186). A substance removed or replaced, the vaccine nonetheless carries on.

The material-semiotic approach that I have taken so far somewhat short-circuits without entirely precluding these sorts of messy ontological questions. If we assume that what constitutes a vaccine or its co-actors is not known advance, then we are free to explore those meanings inclusive of but not limited to chemical compositions, technologies, delivery mechanisms and so on[11]. Yet many things about vaccines *are*

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[11] Analyses in this vein, exploring the social lives of pharmaceuticals (e.g. Moulin 2003) or particular chemicals (e.g. Adams 2022) are a step down the scale too far for this thesis.

known; some of them so firmly, so deeply entrenched and robustly fortified that they seem unassailable. Much of the task I have set myself so far has been to try and understand how this strength is created, such that the powers that the force of public sentiment around HPV and COVID vaccine hesitancy in Ireland may be made more apparent.

There is one key, and perhaps most obvious, actor that has yet to be introduced into this story alongside facts and vaccines: that of the body, itself. This is a deliberate choice - the other sets of relations that go into stabilising, strengthening and supporting vaccines on their way into interactions with the body are ones too often overlooked. So, when the vaccine enters into relation with the body does that mean that the vaccine is gone or disappears? That as a vaccine comes into contact with the body - as a syringe is depressed and a needle penetrates the skin, as a spray is discharged into a nasal cavity, or a few drops are dissolved onto a sugar cube that melts on the tongue - that it somehow ceases to be?

Knowing about vaccines is a complex business, but knowing about their relationship with bodies is more challenging still. Once a vaccine has been administered and seemingly vanished, a person can’t tell a vaccinated body from an unvaccinated body. Moreover, you can’t tell someone’s opinions about vaccines - or anything else - unless they deliberately make them visible, audible or otherwise sensible. Whilst many people quietly kept their opinions about vaccines to themselves, others vocally and loudly proclaimed them on the streets, in social, print and other forms of audio-visual media. Badges, placards and slogans on clothing were common at protests throughout the pandemic, but there have been large-scale protests since public immunisation campaigns began. There are, for some vaccines, hints and traces that can mark a body as vaccinated; although no longer routinely administered in

Ireland the BCG (a vaccine against Tuberculosis, Bacillus Calmette-Guérin - named for its creators) leaves a distinctive mark on the arm (and memories of anxiety that it would hurt). The old pre-vaccine method of variolation left a single, mild smallpox pustule that doctors would need to examine in order to certifying that an inoculation had in fact worked.

Yet for HPV and COVID, no immediate and obvious physical trace remains . The vaccinated body is in one sense enigmatic; unmarked and unremarkable in day-to-day social interactions. Despite the fact that it is individual, for particular bodies that are vaccinated their effects are often only reflected in aggregate, epidemiological data. A recent UK study shows a sharp decline in cervical cancer rates following the introduction of the HPV vaccine (Falcaro et al. 2021, 2024). The existence of vaccines is found in the rate of deaths, hospitalisations or otherwise severe infections from COVID plummeting as vaccination rates rose to fight the pandemic (e.g. Marron et al. 2024). Even as far back as Jenner's 'good tidings from the farm', the possibility of Cowpox deduction was only found through its interference with variolation campaigns. At-scale effects can make themselves visible through a constellation of effects, even in the absence of sophisticated statistical instruments. The techniques and processes of noticing, the production and authorisation of 'legitimate' or acceptable connections between them and the relations that are constructed in the process has been at the heart of my exploration so far.

This complexity in the domain of individual vaccine-body interactions is articulated especially well in the wider context of chemical-body interactions by Michelle Murphy. Writing on 'Sick Building Syndrome', she explores the slow rise of workplace health and questions of indoor pollution as they arose in the US throughout the twentieth century (2006). Whilst there is a lengthy history of industrial pollutants, the question of these ‘sick buildings’ looked at the challenge of multiple exposures with multiple symptoms without any easily identifiable cause. The conflict between the laboratory-based science of toxicology and that of ‘popular epidemiology’ both worked to materialise particular chemical-body interactions, even though they were ultimately near-unprovable. As Murphy writes:

> ‘Chemical exposures were, and are, notoriously difficult to prove. They are composed of molecules invisible to the unaided eye (if not the nose) and are usually only investigated well after the initial moment of their presence. In debates over incidents of chemical exposure, the difficulties of objectively proving that errant molecule *A*, released at moment *B*, caused symptoms *x*, *y*, and *z* have habitually thrown the very reality of exposures into question’ (ibid., p.82)

Vaccines can be read in the most literal sense as a form of chemical exposure, but in a very different sense to the industrial pollutants and workplace hazards that Murphy is writing about. The substances in a vaccine are rigorously tested for their ability to stimulate an immune response. When considering ‘sick building syndrome’, the properties of specific materials were often only partially known in advance. The unknown properties were those which manifested as negative effects on the body. From this, came a bundling together of sets of symptoms into discrete ‘syndromes’, for which a cause is to be found. The tension underpinning between ‘popular epidemiology’ and laboratory-sanctioned toxicology - the attempts to render the body intelligible and the dynamics that render particular bodies illegible in different contexts - is at the heart of this chapter.

Michelle Murphy notes the manner in which women’s experiences - embodied or otherwise - sat in explicit tension with the standards demanded by expert, scientific and otherwise authoritative knowledge. Still within the history of occupational health, American feminist labour activists included stress in the scope of their analysis alongside chemical exposures. The movement from the realm of tangible, material causes the intangible movement into the social presented certain challenges, as the movement ‘materialized a nonspecific phenomenon that clashed with juridical, medical, and compensatory institutional demands for proof of linear causality’ (2006, p.78). Straddling the biological and the social, stress - and later SBS itself - were a postmodern health concern, one ‘without essence’ (ibid., p.6). Something with an ambiguous cause but bundles of bodily symptoms (nausea, headaches, fatigue), connected to economic and gendered concerns. As Murphy notes, widespread office complaints made by women ‘opened up the possibility of using a diagnosis of hysteria as a means to explain workplace unrest’ (ibid., p.5). A significant struggle was thus how these office workers were to produce their collective experiences as legible to silently gendered standards of evidence. The question around vaccine injury is different - there *is* a posited link for the bodily experiences of the girls represented by REGRET.

The inability to establish such a link can be read as a failed work of translating bodily experience into legible evidence, owing to the friction it faced and the forms of resistance arrayed against it. The power of the Irish state, the global scientific establishment, the media and even public opinion made them into censured agitators that threatened the lives of hundreds of women who may die – as Laura Brennan had done – from now-preventable cervical cancer. The strength of the HPV vaccine is found in these stories. Here a wider culture which romanticises rebellion and speaking truth to power meets a moment where civic participation with a status quo is key. The ‘critical instincts’ of the anthropologist which drive them to support marginalised groups whose voices have been silenced finds itself in an awkward predicament. I should be clear that I do not propose a clever way out of this situation, but that by trying to understand the tensions that unfolds around the politics of bodily resistance in the face of vaccines is a valuable way to gain insight into how they are constituted. Thus, the next and final chapter of this thesis looks at what happens when this incommensurability remains through recent work on failure (Alexander 2023, Leannel et al. 2017); at how such a state is produced, where and how it is attributed. To examine the strains of vaccine-body relationships, however, it is necessary to explore the body in Ireland, itself.

The privileging of the individual, phenomenological body that is legible to biomedicine sits at the crux of much feminist critique in Ireland and elsewhere. Indeed, critical theorisations of the body in Ireland owe much to explicitly feminist scholarship and activism. One of the most significant papers in this vein can be found in the work of Nancy Scheper-Hughes and Margaret Lock, *The Mindful Body* (1987). *The* paper sets out to challenge dominant biomedical conceptualisations of the body, taking aim at the same Cartesian dualisms that I have analysed so far. Descartes’ reasoning left the question of the immaterial, spiritual and mental realms to the church. The new domain of science was thus free to pursue ‘radically materialist thinking’ that was ‘much to the advantage of the natural and clinical sciences’ (ibid., p.9). This freedom of pursuit was part of the same settlement that I explored in Chapter three - fact-body interactions, as in the power of factual information to normatively depict the body itself – is a key underpinning strand of these conversations. Recognising the situatedness of this perspective, Scheper-Hughes and Lock then note that:

> '… it is essential that we begin our project in medical anthropology with a suspension of our usual belief and cultural commitment to the mind/body, seen/unseen, natural/supernatural, magical/rational, rational/irrational, and real/unreal oppositions and assumptions that have characterised ethnomedical anthropology to date' (1987, p.7)

The primacy of the material body is still felt in the dynamics around vaccine hesitancy, as in the struggle for women's stories to be heard in Murphy's analysis and in the wider experience of women in Ireland and around the world. We might return here to the description of the Colombian girls in Carmen de Bolivar being described as a mass psychogenic illness. Despite an acknowledgment that their symptoms were 'real' and sympathy for the plight of the girls, the classification of their condition as psychogenic was nonetheless heard as a dismissal by parents who had long been on the periphery of the state (Simas et al. 2019). It is within this space between people and the state that the dynamic of body-vaccine interactions, made visible through moments of putative adverse reactions, become visible. Beyond this, it is the epistemic friction - the resistance to certain stories being heard and the mechanisms that provide this resistance - that I am especially interested in. The capacity to articulate and depict the real is an affordance of facts, information and data that I traced in the previous chapter. My argument is that exploring vaccine-body interactions can usefully be approached through feminist framings of the body linked to women's histories in Ireland. A history of women's experience in Ireland is precisely the attempt to gain bodily, economic, social and moral autonomy against powerful state and church institutions (e.g. Inglis 2003, Hogan 2019, Fitzsimmons 2021).

The vaccinated body is, however, never *only* a vaccinated body - just as women's bodies are never *only* defined by gender. I take cues from Emily Yates-Doerr, who proposes a material-semiotic approach to bodies. As I have done with vaccines, her starting point is to reject the body as a fully-formed, discrete entity that enters into social relations. She presses the argument that health is distributed and situated in wider practices and artefacts, even arguing that ‘the anthropology of health has become too focused on bodies’ (2017, p.143). She critiques how trenchant the tripartite approach of Scheper-Hughes and Lock has become in different spheres of critical health education, not as regards the substantive content of the paper itself but that its quasi-canonisation can foreclose other approaches. Rather, Yates-Doerr proposes the need to ‘to centre analytic techniques that do not claim to know how bodies are structured from the outset, but ask how – and even if – bodies materialize in practice’ (ibid., p.144). So vaccines, bodies - and the interaction between the two.

As such, what the body ‘is’ is never outside of its various entanglements. Rather, in a manner akin to Ann-Marie Mol - whose work I also draw on later in this chapter - the body is co-produced, distributed and rendered ontologically multiple through a variety of actors and practices. Yet Scheper-Hughes and Lock begin their own critique in a manner that links back to the central theoretical themes of this thesis; specifically, their rejection of the Cartesian, dualistic subject and modernist binaries which are woven through the biomedical gaze. This overturning and re-theorisation should be seen in the same trajectory of feminist activism and scholarship that I have referenced. My proposal is that the point of departure for Mol, Scheper-Hughes, Lock and Yates-Doerr is in the problematisation of the body. Yates-Doerr’s approach is most compatible with my own, as she does not deny the political and social dimensions of the body, but proposes that we might leave open space for a greater number of its potential ‘surfaces’ and collaborators to emerge in different practices and situations as health (and for me, vaccination) is investigated. Body-vaccine interactions produce bodies and vaccines in multiple ways that are complex to access and highly resistant to the critical machinery of deconstruction which underpins the socialist, feminist and other progressive commitments of my participants.

There is, however, a curious dogleg in the account. Returning to my opening vignette, I am curious as to why it is that the stories around HPV vaccine injury seem so disconnected from feminist and critical politics. I am not saying that this *is* or *should be* a feminist issue, rather that it is interesting that it is considered quite the opposite. In a 2023 analysis of the wider cervical cancer prevention scandals, Sundstrom and Delay describe the stories of REGRET as an 'HPV Vaccination Misinformation Campaign'. Whilst the depiction of the Cervicheck scandal is a misstep of powerful institutions and a deliberate withholding of vital cancer diagnoses from numerous women, I find this harder to square with the accounts of the gardasil girls. Sundroma and Delay frame the chapter of their book dedicated to this story in terms of the power of women's 'truth-telling' combined with 'ethical communication' as a means of contesting biomedical accounts of women's experiences (2023). The Cervicheck scandal concerns the withholding of positive cervical cancer diagnoses from Irish women by the US-based company analysing smear-test results. This lead to many women beginning treatment later than they otherwise would have done. In high-profile cases like that of Vicky Phelan – who passed in 2022 from cervical cancer after exposing the scandal in 2017 - this may well have condemned them to death (Carroll 2022, Phelan 2019).

The parallel with the works cited thus far is relatively clear: bottom-up, situated storytelling that works to convert experience into meaningful evidence against various forms of authorised knowledge and institutional power. Feminist and other forms of wider post-structuralist critique contest naturalised discourses and the processes of subject-formation that they entail[12]. This interlinks with a pivotal experience that joins all of these reflections together and opens up the problem space for this chapter: the chants of ‘my body, my choice’ used by anti-lockdown activists at their various rallies, one of which was covered in the previous chapter. This brings me to my core questions: why is it that the efforts at ‘truth-telling’ through the women of REGRET are not read in themselves through a feminist lens? Why is it that young women like Rebecca, offering their stories in a vulnerable capacity in public, are interpreted as agents of misinformation by public health officials and publics as opposed to people telling their own truth in the face of biomedical and scientific consensus which has historically marginalised women’s voices? What are the tensions and contradictions that exist across these spaces and discourses that can help to understand the complexities of vaccine-body interactions in Ireland?

In sum, the central purpose of this chapter is to explain what the chant ‘No to forced vaccines! My body, my choice!’ means. It may be well apparent by now that this is a dense, complex problem. Yet it also uniquely traces connections between different groups of my participants and the spaces I undertook fieldwork in. To get at the ‘vaccinated body’, I start by exploring the trajectory of women’s experience and women’s bodies in Irish history, the lives of some of my participants and the testimonies of many other Irish feminist activists. Through tracing what it is that these women experienced, resisted and fought for, the outline of nationalist biopolitics that

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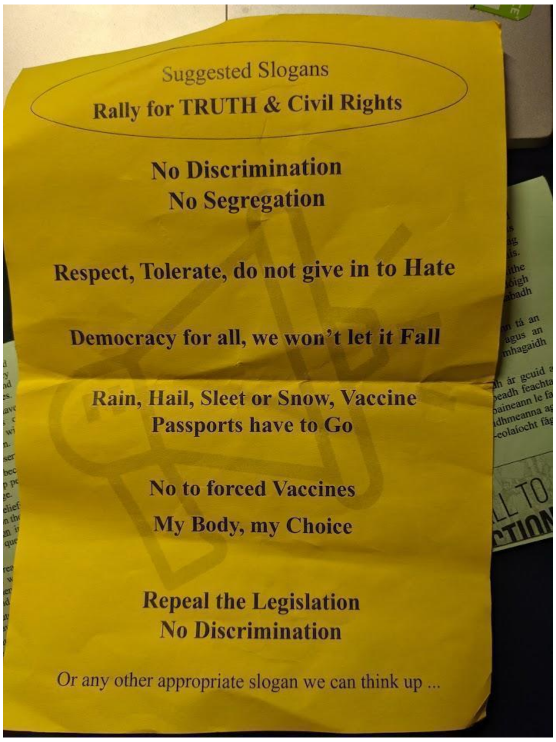
[12] Namely, that subjectivities and bodies are produced through specific discourses - many of which are the purview of powerful institutions who possess a monopoly on truth-production. Simultaneously embedded in materialised, disciplinary apparatus of built environments and the architecture of power or through biopolitical governance. Irish activists and academics make extensive use of Foucault and Agamben, as one participant put it her ‘bastardised understanding of *homo sacer*’. These will be visited in due course (e.g. Donnan and Hastings 2003, Aretxaga 2003, Inglis 2003; Lentin 2007, 2012; Fitzsimmons 2022, Hogan 2020)

encircles women’s bodies becomes more readily apparent. The second half of the chapter explores how these critical politics play out in the experience of what Sundstrom and Delay describe as the ‘HPV Misinformation Campaign’ (2023). In following an open, material-semiotic method of enquiry that does not presume its objects in advance, I attempt to explore the difference that gender makes to bodies and activism around vaccination.

Through examining contexts of where gender shifts into and out of focus, I conclude by examining some of the gendered dimensions of the HPV vaccine in the context of wider feminist critiques of medicine and medicalisation. In charting the parallels and divergences between these trajectories of the body, I conclude with wider questions about how it is possible to think through the vaccinated body in the context of the COVID vaccine which I opened with. The body itself becomes problematised through different vaccines, being neither wholly multiple (Mol 2003) nor singular, but caught between tensions and contradictions as to how the body and self are conceptualised in contemporary Ireland. The hard-won and ongoing fight for women’s bodily autonomy and the possibility of mandatory vaccination mobilise different trajectories and histories that nonetheless interact in different ways, at different times.

6.3 Awkward Comparisons and Impossible Methods

The phrase ‘No to forced vaccines! My body, my choice!’ was one I’d heard at the largest of the Dublin protests in the previous chapter. It was printed alongside several suggested slogans handed out by the organisers of the march on little A5 yellow pieces of paper - the one pictured below is still in my little box of artefacts, alongside other pamphlets accusing the HSE of genocide, claiming mask-wearing and lockdown measures contravened equalities legislation and more. The list of suggested slogans were distributed to attendees as they gathered and chatted in Parnell Square, at the top of O'Connell Street. The usage of the phrase reflects not just an assertion of bodily autonomy against lockdown, social distancing, mask-wearing and the threat of mandatory vaccination (which, after a lengthy consideration by Siobhan O'Sullivan, the HSE's chief bioethics officer, was not pursued in Ireland owing to the risks of damaging public trust versus vaccinating a comparatively small cohort of people (2022). The phrase, as I will explore below, was also an accusation that the Irish pro-choice movement was being shamelessly selective in their commitment to bodily autonomy.



Suggested Slogans
Rally for TRUTH & Civil Rights

No Discrimination
No Segregation

Respect, Tolerate, do not give in to Hate

Democracy for all, we won't let it Fall

Rain, Hail, Sleet or Snow, Vaccine
Passports have to Go

No to forced Vaccines
My Body, my Choice

Repeal the Legislation
No Discrimination

Or any other appropriate slogan we can think up ...

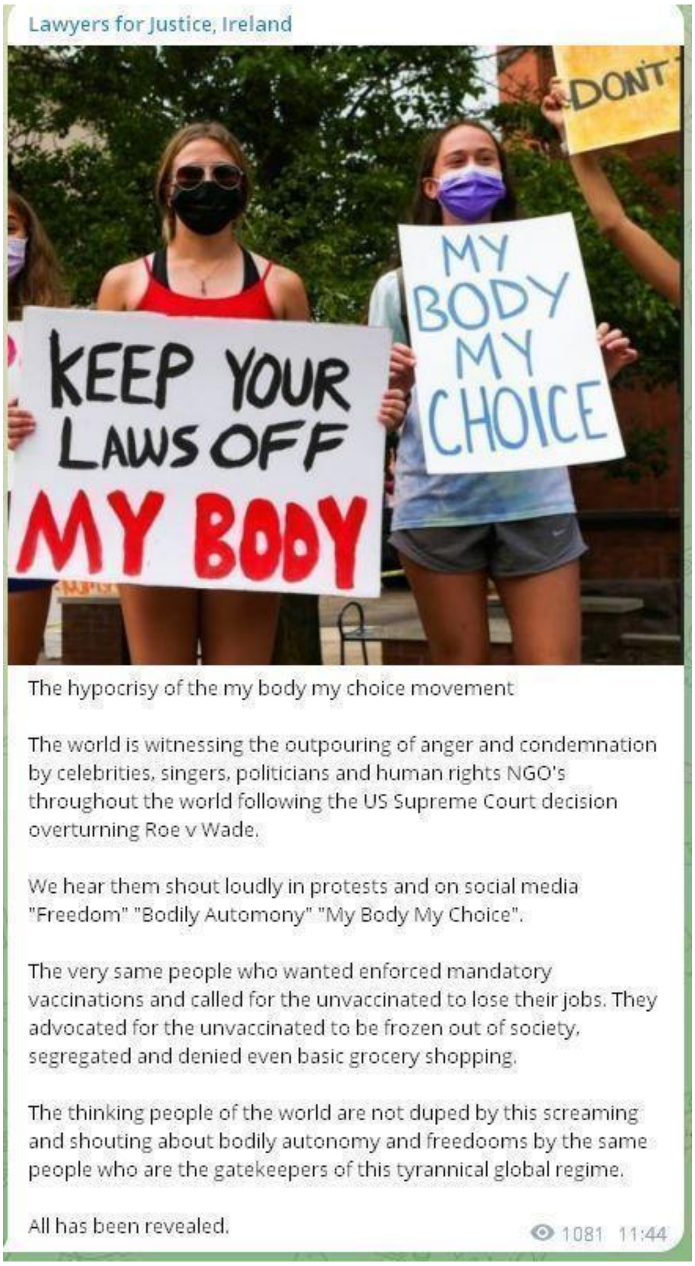
Figure 6.1 – Flyer from an anti-lockdown march in Dublin during November 2021

Put simply, the implicit question is this: 'If it's a woman's right to make choices about reproductive healthcare, then why isn't it everybody else's to make choices about immunisation?'. I am not proposing that the experiences of people who resisted lockdown throughout COVID, of the unvaccinated, or those that believe themselves to have been injured by a vaccine are wholly and simply commensurate with what the women of Ireland have endured in broader terms. Comparison is a tricky business – an 'impossible method' for anthropologists as Evans Pritchard famously described it, and a phrase that Mattei Candea used for the title of an extensive book on the subject (2018). As Candea notes, the risks that come with comparison are the privileging of explanatory frameworks over their objects. The comparison encircles, absorbs and reduces the objects of their analyses and loses much in the process. The significance of this in anthropology, whose 'objects' of analysis are human lives, is something that I have explored at length; for this reason, comparison is a problematic endeavour. Candea goes to the very root of what comparison entails and should aim for proposes that 'good comparisons tend to give us more than what we aimed for'. That is, a comparison should be to focus on difference as well as similarity. Appropriately attending to complexity should make comparisons that are 'robust and intricate enough to *object* to them' (ibid., p.353). This is the mindset with which I approach the question 'whose body, whose choice?' - a comparison not for the sake of commensuration or incommensuration, but to reveal the seeming convergences and contradictions that are too easily lost sight of in highly substantial issues.

I want to begin this section through exploring the wider framing of the issue through an interview with Ursula, a member of the PHMT who had been involved in campaigning for the pro-choice movement during the referendum. Many of my participants had been well-aware of the way that the feminist slogan they had campaigned behind had been appropriated by the FAN. Ursula was one of two who had joined Niamh's communications unit during the pandemic. After an initial joint interview with Niamh, Ursula and another new colleague late in 2021, Ursula was kind enough to speak with me in a follow-up interview focused on the intersection of her experiences. She explained her thoughts on the usage of the phrase ‘my body, my choice’ by anti-lockdown campaigners, explaining to me that:

> ‘Well, in the first instance it's very clearly a tactic used by right wing or fascist groups. They want to wind people like me up – people who actually fought for reproductive rights and who actually *do* believe in bodily autonomy. So, so yeah, so it's very much a tactic on their part. And it's, you know, it's quite transparent that, for sure, they don't actually care about vaccines, one way or the other. It's been used as a hook to draw people in – that’s just how conspiracies work. It's, you know, they're bringing them in - it looks like they’re standing up for human rights, but you know that they don't *actually* care about human rights.’

The sentiment that Ursula was referring to was one that I encountered a lot in the online spaces that I followed. A number of socially conservative small organisations sprung up over the pandemic, many of their names similar to prominent Irish civil liberties organisations. Irish Layers for Justice, for example, posted the following to Facebook that encapsulates the inflection of the comparison:



Lawyers for Justice, Ireland

The hypocrisy of the my body my choice movement

The world is witnessing the outpouring of anger and condemnation by celebrities, singers, politicians and human rights NGO's throughout the world following the US Supreme Court decision overturning Roe v Wade.

We hear them shout loudly in protests and on social media "Freedom" "Bodily Automony" "My Body My Choice".

The very same people who wanted enforced mandatory vaccinations and called for the unvaccinated to lose their jobs. They advocated for the unvaccinated to be frozen out of society, segregated and denied even basic grocery shopping.

The thinking people of the world are not duped by this screaming and shouting about bodily autonomy and freedoms by the same people who are the gatekeepers of this tyrannical global regime.

All has been revealed.

1081 11:44

Figure 6.2 – Facebook discussing the 'my body, my choice' phase by Lawyers For Justice Ireland

The slightly cryptic-sounding post asks the question explicitly - accusing pro-choice activists of silence where lockdown is concerned, but condemning the striking down of Roe vs Wade in the US. Another organisation, named the Irish Council for Human Rights (ICHR) sprang up in 2022, their name echoes the well-known Council For Civil

Liberties (ICCL). The ICHR's website promises to 'defend rights that already exist, rather than advocating for the further erosion of fundamental rights under the guise of a common greater good'. As regards the right to bodily integrity enshrined in the Irish Constitution, they write:

> Bodily integrity is the inviolability of the physical body and emphasizes the importance of personal autonomy, self-ownership, and self-determination of human beings over their own bodies. In the field of human rights, violation of the bodily integrity of another is regarded as an unethical infringement, intrusive and possibly criminal.

The ICHR is concerned that the Irish Government may attempt to erode the Right to Bodily Integrity through the introduction of laws or coercive measures which shall require citizens of this State to submit to a programme of mandatory vaccinations in the not too distant future'

Alongside this commitment to the constitutional aspect of bodily autonomy, they also write more cryptically on abortion. They state that whilst many who advocate for abortion may prefer that the issue 'never be put to the people again', public opinion is always subject to change. As new information about the number of abortions under the new legislation becomes apparent, they state that it would be 'just and reasonable to put this issue to the Irish people once more and [we] shall advocate accordingly'. Leanne, another participant whose stories I will come to below, asked me as I was discussing the rally with her how it was that people in these spaces squared their commitment with bodily autonomy. A tension sits unacknowledged between their two stances – that of the foetal right to life and bodily autonomy. These issue are deeply complex and beyond the scope of what this chapter sets out to investigate, although there is a large body of pro-life argumentation along these lines - the crux of which is asserting the right to bodily integrity on the part of the foetus being inviolable in its own right. For the purposes of this section, however, this serves to illustrate the type of tactics and rhetoric that Ursula was responding to. Groups like the Catholic think-tank the Iona Institute and Gript Media had pronounced online presence, as well as overlaps with UK and US right-wing media outlets[13]. She continued:

> So, so just on a rational level, you go 'right, okay so I know that' [it's just a tactic]. But also, deeply, it is actually offensive when people turn around and say, 'Oh, it's my body my choice' because my belief is, yes, well, your personal choice should not have an impact on anybody else. So yeah, it's it is offensive.
>
> But then I've heard people who are organisers and who have campaigned for repeal and who are brilliant campaigners, and really good people, they've also used that same language so I can't take that away from them even if I wholeheartedly disagree with it, and they see it, as I said, a tactic and it's a tool to draw people in and kind of send them down to another rabbit hole that you know, tying into other conspiracy.
>
> So yes, I suppose that's my first instinct that's what I first think about it when I'm first hearing by that use of that language. That's what the right does; it appropriates the language of the left. When previously, in terms of abortion rights, you know, when they read when in anti-abortion in America, they when

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[13] Flora spent a good hour giving me an overview of this landscape - the highlight of which was the glee she took in telling me just how many prominent figures in these groups had blocked her on Twitter. I had earlier considered a fuller mapping exercise of this territory, but owing to my lack of direct engagement with them I have opted to largely use them as reference points for my primary material.

> they realised that, you know, their message wasn't landing, they went to turn their messaging around, you know, about the protection of women and putting amendments first and saving women from making the mistakes of having an abortion was actually putting women first. So they went, it was like that was an empowering message. So it's a kind of a tactic that they use all the time. So it's, it's from the textbook.’

The politics of the particular groups aside, Ursula’s core conviction for why the comparison between the choice to abort and the choice to vaccinate concerns the consequences. Vaccination is a decision that impacts other people, whereas abortion is solely personal:

> ‘It’s simply that if I have an abortion nobody else in the world is affected by it. So, that’s how I rationalise it. Whereas if I choose not to get the vaccine, yes it’s a personal choice, but it does have potential consequences for the community if I get a disease and get sick and pass it on. So that’s, you know, that’s basically it for me.’

Were I to pose the question ‘whose body, whose choice?’ the answer would be simple; a woman's body is her own, to make reproductive choices (on when, if and how to become pregnant and how to carry said pregnancy to term) independently. The vaccinated body - here in particular the COVID-vaccinated body - becomes articulated through the demands of a collective crisis. Taking the material-semiotic approach I have proposed, the body is responsive to the demands of particular situations. However, what is neglected at this point is the trajectory of these bodies.

6.4 Rialto, Activism and Women's Histories

It's a strange coincidence that a left-wing, feminist academic-in-training ends up living in the 'independent Soviet of Dublin 8' (as Leanne referred to Rialto; being only *slightly* tongue-in-cheek) completely by accident. Abortion and women's rights had originally been a topic that I'd been keen to avoid, in part because of its complexity, but also because of its seeming distance from vaccines. There's perhaps a case to be made that the HPV vaccine is a form of reproductive healthcare (cervical cancer, needless to say, potentially having a significant impact on getting pregnant), but the link initially felt rather tenuous. Writing about feminism in Ireland is also rather saturated market, especially with the repeal of the eighth amendment[14]. Yet over time I became aware of a wider activist streak in both Rialto and Fatima. It turned out that the neighbourhood WhatsApp group that I was part of had been created to coordinate protests during the Water Strikes[15].

I began thinking about activism as a comparative framing in its own right, especially in how it is that the body itself becomes a site of resistance and struggle. Indeed, in a literature review of bodies and state control in Ireland, Wilson and Hastings describe the body as 'at once both the site of domination and discipline, and the means of resistance to it' (2003, p.66). I began thinking about REGRET and the

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[14] There has been an immense amount written about abortion, the referendum and women's rights in wider terms in Ireland. As such, I don't propose that this chapter should be read as an addition to feminist scholarship in Irelan. Rather, feminist theorisations of the body that have grown out of the stories of Irish women might help to make sense of questions of bodies, choice and vaccines. For a sample of the type of works I'm talking about, see figure 6.4 or the references to this section. The special issue on the referendum victory by x by many of the anthropologists at Maynooth, Ireland's major anthropology department, is particularly worth a read (Drazkiewicz & Strong 2020).

[15] Whilst an interesting activist moment, I won't focus on this too much. The Irish government in 2016 had attempted to privatise water utilities. Some of my participants were sceptical over the necessity of the resistance, seeing it as political opportunism and agitating by far-left parties. Dublin has notoriously poor water infrastructure - the costs to upgrade it had to come from *somewhere*, so the idea that levying funds to do so was outrageous seemed odd. Regardless, the mutation of a protest group into one that was functionally a normal neighbourhood group chat - and occasionally for other forms of local advertising - illustrates the neighbourhood's activist streak rather nicely.

anti-lockdown movement through the lens of activism - specifically, as a comparative framing in how the body is produced differently across the two. The analysis I've already set out proposes a framing that takes the body beyond its material constitution, leaving it as an open question that emerges through specific interactions and relations. The trigger for the enquiry comes in no small part from my conversations with Leanne. An active member of Rialto's community life, parent, academic sociologist and seasoned activist, I owe her a lot for my understanding of Rialto. As I was explaining my attempts to understand 'the Irish Body' in wider terms, she told me – quite simply – that:

> 'If you want to understand the Irish Body you've got to look at women's rights!'

I took a deep breath and asked where I should start.

She introduced me to a friend of hers – Marsha - who lived up the road from me, in the little suburban labyrinth nestled in the crook of the canal that is Rialto. Leanne made an introduction, I dropped Marsha a message over WhatsApp and went across to her house one morning. We drank strong, black coffee and talked about life in the neighbourhood as well as her experiences of campaigning; it turned out that Marsha was an organiser of the community picnic I'd met Leanne at in the first place, back in 2019. Much of what we discussed she asked me to keep private, but after a lengthy conversation, she sent me away with an impressive armload of books, which I'll admit I read too few of.

Figure 6.3 – The books lent to me by Marsha

In parallel with my conversations with Leanne, Marsha and others, my friend and quasi-colleague Leah was investigating the post-referendum life of abortion legislation. I periodically visited friends in Galway and attended rallies there, whilst she did the same in Dublin. Having a comfortable base in another city and chance to compare field-notes on complex topics was a rare comfort. On one of her visits across from Galway in late 2021, she invited me to the book launch for *Repealed* by Camilla Fitzsimmons. It was a story of the campaigning for the referendum to repeal the eighth amendment, full of the testimonials of the women and men that had been involved in the long journey. I make use of it below in exploring some of the internal dynamics of the movement that link back to the tensions between feminist activism and medical care in Ireland. The launch event itself was held at a dimly lit, artsy café-bar in the South of Dublin - rather unassumingly tucked away at the bottom of a newly developed block of flats. Leah and I chatted about the book and her work at the bar before Camilla (much to Leah's excitement) read excerpts. Mid-conversation I was surprised to receive a tap on the shoulder from a woman I recognised; with thick glasses and brightly dyed hair, I ran into another participant: Mary.

Whenever anything happened in Rialto, there was a non-zero chance that you'd find Mary there – either as a bystander or, more often than not, in the thick of things as an organiser. A member of Dublin's Resistance Choir, she'd also been an organiser of socially distanced street parties during the COVID Lockdowns when I was back in London. With the help of another resident's powerful sound-system, the events had been so popular that they'd made local headlines -a testament to the community spirit and resilience in difficult times. At another of Gerry's *Dublin Eight Live* talk-shows in the function room at the back of the Circular, she was distributing fliers for a march against domestic violence before settling back down for the local cabinet of curioisities (headlined by a young musician that Gerry had found under a bridge by the canal).

Mary and I had several interviews through the course of my fieldwork, despite having first met in the lobby of her workplace at one of the local community centres as she ran into a lift saying 'The HPV vaccine? I don't know anything about that, I'll not talk to ye!'. As I explained later that my work was about understanding the wider community, she helped arrange several volunteering opportunities that I undertook in prior to the pandemic. We spoke about her experience of working in the community centre and the area, but during the post-lockdown part of my work I spoke to her about her involvement in local and national activism as a socialist and a feminist.

Mary had been campaigning in one way or another since 1983 when she joined Socialist Worker at the age of sixteen. She first started an anti-nuclear campaign protesting the building of a nuclear power station in the rural Carnsore Point, as well as for free public transport within another group. Yet it wasn't until she spent time in London that she encountered specifically feminist politics. Having come from Ireland, she began with a remarkably different frame of reference from her peers in the British feminist movement. She recalled:

> 'When I hit London, it was such a shock to me, because I was obsessed with whether there was a God or not. And these women that I was going to meetings and conferences with were discussing whether you should have a boy child or not. So I was catapulted into a world where they were looking at me like a little baby sister, saying 'get over it!'. Because I was coming from Catholic Ireland and I was anti-abortion and I was grappling with all the chains of schooling and the Catholic Church I was brought up in, and I was catapulted into this universe where if you weren't gay or lesbian, then there was something wrong with you! It was great, it was really, really good for me. Did you ever just go into a maelstrom and everything is challenged?'

Her depiction of the experience of a 'maelstrom' was evocative, of being 'catapulted into' a transformative environment. Despite her radical tendencies, she carried the traces of a Catholic cultural environment through the questions she'd initially been posing herself - ones that were almost laughed out of the room by her comrades. Leanne commented similarly how the softly Catholic environment had influenced her own views on abortion as a young teenager. Remarking that her father had been pro-life before his death, she pointed me towards a public blog-post she'd made shortly before the 2018 referendum:

> “Dad was a supporter of the 8th amendment, as was Mum. For a period in my early teenage years, I took to wearing his pro-life badge, a pair of tiny brass feet the size, supposedly, of a baby’s at 12 weeks of pregnancy (or 10 weeks of gestation, as I have learned to point out. One thing about a referendum campaign is that you become very expert in the technical details of your subject). It was easy to be pro-life in Ireland in the early ‘90s, it took a lot of knowledge to see things any other way. I wore my teeny tiny feet as a way of holding on to the father I didn’t really know; at the same time, I was actively encouraging every adult I knew to vote for Mary Robinson for president. I knew nothing about life or womanhood or pregnancy or babies. It may be the case that we, as a society, knew nothing.”

> ‘I was 13 years old when the Eighth Amendment was inserted into the Constitution of Ireland. I proudly pinned a silver ‘precious feet’ lapel of two baby feet to my school uniform which showed my support for the amendment. I was against killing unborn babies, and why on earth would I have been anything else? I never connected a constitutional ban on abortion and its impact on the lives of women to my mother’s situation at home raising nine children whilst enduring constant putdowns from a domineering husband. She’d stopped working on her wedding day because of the marriage bar. Her job was to be a wife and a mother’

The statement that it was ‘easy to be pro-life’ traces a link back to how beliefs are embedded; that normal is contextual, historical, cultural and fragile. Leanne’s not linking the constitutional and cultural restrictions on women to her immediate situation points to the lack of connections made. Her own process of education and learning, and Mary's immersion into the maelstrom of feminist London point towards processes of transformation and periods of connections being frenetically made.

Returning to Mary, later in her life, she saw the interconnected character of the different struggles that she'd been involved with. The community centre that she worked at was in the middle of a socially deprived area, with numerous outreach, health and wellness programmes. Drama clubs, cultural clubs, walking groups, group exercise sessions, lessons on how to cook healthy food each focused on engaging different needs. Commenting that she saw things through the social determinants of health framework, her socialist beliefs provided a holistic wrap-around view that linked class, gender and economic struggles. As with Michelle Murphy's account of feminist labour organisation in 1970s and 1980s America, the body is not separated from its interactions with the environment. Wider community art projects directed by Joanie, another participant, helped address and express the experience of gendered violence as well as the senses of alienation and trauma experienced by male residents.

From Mary's perspective, real change was rooted in community activism, participation and sensitisation to local issues. She saw the benefit of formally elected representatives - being an active member of the small, left-wing political party People Before Profit-Solidarity (represented by local TD Brid Smith since 2016). Having been reading Irish history at the time, I asked her about the relationship of her own activism and the wider history of struggle and resistance that was part of Irish identity. She told me that 'the sort of struggle the government will celebrate is not… what I believe is the real struggle'. She continued that:

> Mary: …I think it's great to have advocates, voices, like the Dail and everything, but actually real change happens from below. That's my bottom line.'

> Dan: And correct me if I’m wrong, but from my perspective there’s a culture of civic resistance and bottom-up organising and thinking-
>
> Mary: Except it was fucking crushed by the Catholic church in the early 20s. And all the *real* activists from independence and the anti-treaty, things were crushed. You know, women were written out in the [19]20s. The radical women; so, there’s a whole raft of women who had to fight to get their pension from their struggle, right?
>
> The letters are amazing, they’ve all been revealed in the last five years basically… It’s the foundation of the State! I mean, there was a Soviet in Limerick. I don’t know how much you know about Irish history, but all around country because of the 1917 Revolution in Russia. So to some extent there was a burgeoning ability – I suppose a different type of Ireland than we ended up with, unfortunately’

Both of these stories frame the historical and present context of women’s rights in Ireland, particularly around feminist consciousness-raising. I want to add a final story, drawn from the interview with Flora’s mother May - the elderly lady whose grandfather’s smallpox vaccine certificate framed the second chapter of this thesis. May referenced a conversation with an aunt she rather disliked that hints at the older Catholic Ireland Mary and Leanne emerged from. May had spoken with the aunt shortly before she married her husband, Peter:

> May: ‘I’ll tell you the story! Now, it seems comical. I had never met this aunt before... And the first thing you’re saying to me, ‘hello, May. What’s your

> name?'. She didn't say 'hello, May. What's your name?'. She's asks me 'Are you getting married at the High Altar?'
>
> Dan: That's very strange, what did she mean by that?
>
> May: Well, I didn't know what she meant either! She meant 'are you pregnant'?-
>
> Dan: Ohhhhh!
>
> Flora [interjecting]: She was asking if it was a shotgun wedding!
>
> May: -I was so offended!
>
> Dan: Rightly so.
>
> May: I mean, I didn't even know you could get them[pregnant] before you were married! That's how thick I was.
>
> Dan: You weren't thick if no-one told you!
>
> Flora: That's how it was in those days! It was seven o'clock in the morning, at the side altar. So the High Altar was like getting married properly.
>
> May: I asked [my husband] 'Does she have to come to our wedding?' He said 'She's not coming to the wedding!'

The casual cruelty of May's aunt is an example of the interface between peer-level policing and the Catholic moral infrastructure of Ireland at the time. The High Altar was reserved for purportedly 'good Catholic' women, whereas the side altar was for a clandestine, shameful wedding for women who were typically pregnant out of wedlock. The existence of the Foundling Hospital so close by, the scandals of the Mother and Baby Homes and the mass graves at Tuam point to the merciless non-space that fallen women and their children suffered. Yet May had been unaware that it was even possible to become pregnant out of wedlock at all, at the time - self-deprecatingly saying she was ‘thick’ for not knowing so at the time. Knowledge of and about bodies, self-knowledge and the power of control through these different apparatuses frames how it was that women were perceived in Catholic Ireland. Pieced together, these stories show a microcosm of wider stories that have been told and retold by thousands of Irish women; of the symbolic ‘non-places’ that they were to occupy as socially or bodily dead.

Whilst I will turn to wider stories, I want to briefly sketch the shape of the ‘Other’ Ireland that Mary mentioned and explore the place of women within it. Leanne had mentioned the marriage bar, blocking her own mother from work. A brief exploration of these questions provides the legal, political and historical terrain that situates the wider struggles for women’s rights in 20th century, newly created Free State.

Ireland on the cusp of revolution was one in which women played a key role. The women of Cumann na mBan had risked their lives in intelligence gathering, hiding caches of weapons and clandestinely sheltering IRA men from relentless patrols of British troops through Dublin’s narrow streets. Yet throughout the early years of the free state, women gradually lost the legal rights that they had expected to enjoy after the revolution. They had been enfranchised along with their British counterparts in a 1918 act, a status they lobbied for in the 1922 constitution - reflected in Article 14 of which famously allows ‘no discrimination on the basis of sex’ as regards suffrage. Despite this initial promise women who had been collaborators and active supporters of the revolution were gradually pushed out of public life and ensconced in the home, with the gradual erosion of their legal rights (Luddy 2005).

As differing visions of what a newly free Ireland would become, the Catholic Church grew to prominence and swept aside the secular, socialist and egalitarian stake in the nation. This was reflected in the gradual passage of restrictive legislation - for example, divorce was banned in 1925, as was the import and sale of contraception in 1935. Likewise, the Jury Services Acts of 1924 and 1927 allowed women to apply for exemption from jury service, which Beaumont argues demonstrates a difference of expectation for an otherwise universal duty of citizens (1997). Whilst more fine-grained analyses are plentiful and highlight complexities, I think it is apposite to say that it was not inevitable that Ireland would become the country it did.

Many of these decisions were taken as advice from the Catholic hierarchy, reinforcing circulating papal teaching on the role of women in the home and as mothers. As Valiulis (2011) suggests, the revolution can be considered more of a triumph for Catholic - as opposed to more generally Irish - Nationalism. She proposes that this came about in three ways. In the first and broadest sense, ties to the Roman Catholic church promised a degree of political and ideological stability to the new Free State. Secondly, the recent historic oppression of the Catholic majority by the Anglo-Irish protestant elite was still firmly established in collective consciousness. As such, the separation from protestant England gave force to an embrace of embattled Irish Catholic identity. The shift brought with a moral shift and expectations of what Catholic women should do - a contrast drawn between ‘pure and virtuous’ Catholic women of Ireland and the English women who were ‘pagan and immoral’ with ‘drinking, smoking, in paid employment, living on their own and practising birth control’ (2011, p. 575).

Within this Catholic nationalist framing, women’s bodies and morals are identified as collectively linked with the health of the nation. This was consolidated into the twentieth century through the relationship between Eamon de Valera and the powerful

Archbishop of Dublin, John Charles McQuaid. The former envisioned a distinctly rural, Catholic country that was disinterested in the accumulation of material wealth that he saw as gripping the rest of Europe. The latter was fiercely ultramontane[16], seeking to create Ireland as an instantiation of the ideal Catholic country. His own resistance to the influence of what he perceived as Jewish bolshevism was in-step with nascent Irish fascistic tendencies; the Fine Gael blueshirts being an uncomfortable proxy for Nazi brownshirts. McQuaid was in frequent correspondence with De Valera, giving advice on particular issues and clauses in the new constitution. Amongst them is the infamous and still-extant provision that firmly defined the place of women in the home, Article 41.2. It reads:

> 1. In particular, the State recognises that by her life within the home, woman gives to the State a support without which the common good cannot be achieved.
> 2. The State shall, therefore, endeavour to ensure that mothers shall not be obliged by economic necessity to engage in labour to the neglect of their duties in the home.

It should be said that considering women as passively brainwashed or compliant with Catholicism would be disrespectful and mistaken in equal measure, with women's groups voicing vigorous opposition to their place in the new constitution (which only passed via popular referendum). A report from the National Women's Council of Ireland highlights that whilst the article had limited legislative effect in-and-of itself, it retained significant symbolic and ideological power with the article not being amended

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[16] A Catholicism which is fanatically devoted to the Pope, Roman centralisation. For McQuaid, this entailed wanting to transform Ireland into a country in line with a papal vision.

until 1998 (NWCI 2012, p.39). Of the wider response from Women's Rights movements, Luddy highlights that:

> "At a fundamental level the campaign against the draft constitution was about ambiguity in language, about the inadequate reflection of the reality of women's lived experience, about the mistrust that women had of male politicians. It was a protest against the discursive construction within the constitution that all women, whatever their marital status whether they were mothers or not, were enmeshed in traditional families" (Luddy 2005, p.194)

Perhaps most interesting is that a referendum in 2024 rejected the proposed removal of article 41.2. A few participants commented that it was less owing to any special love for the proposal itself, but instead that the whole enterprise was poorly thought out. The premise within clause 41.2.2 that the state has a responsibility to ensure that primary caregivers 'shall not be obliged by economic necessity to engage in labour to the neglect of their duties in the home'. In essence, it represented the state letting themselves off the hook; a dereliction of duty that made the striking down of a then largely symbolic reminder of the country's past. Women's bodies, what they represent and the norms that assign them specific places and roles are remarkably complex but entwined with the history of the Irish state. What bodies are 'meant to do' is governed through multiple interlocking systems; legislative, moral, social, political or otherwise. Each is a point of contact of the body in its multiple, relational articulations. It is this system and these histories that created the context for the experience of my participants and other feminist activists into the latter parts of the twentieth century.

It is here that analyses of women's bodies and reproductive capacity are linked explicitly to the state and form a backdrop for the significance of issues around abortion. A further case illustrates this, linking together much of the analysis given above, for which I draw on Tom Inglis' analysis of the 'Kerry Babies'. The story centres on Joanne Hayes and her family. Hayes was an a-typical woman by the standards of the time; she'd fallen in love with a married man and gave birth to a daughter, Yvonne, in 1982. Despite being a single mother with a child born out of wedlock, she lived a normal public life and raised her child on the family farm. Yet after her third pregnancy, when her lover abandoned her, she instead attempted to hide her status and lived in shame. She went into labour on the evening of 12th April 1984, giving birth alone in a field, marking the beginning of a chain of events that would soon become of national proportions. She reported that she broke the umbilical cord with her hands, trying to stop the baby from crying. Sadly, the baby died. She went back to her bedroom and the morning after, she put the body of the dead child in a pair of plastic bags, placing it in a water hole some distance from the house.

The following day, the body of another newborn baby was found fifty miles away, stabbed to death in Cahiriciveen. Two weeks later, Joanne and her family were bought in for questioning by the Gardai's elite Dublin 'Murder Squad'. Within twelve hours, Joanne and her family gave signed confessions admitting to the murder of the Cahiricveen baby. Later that day, the body of the child that Joanne had given birth to was found on the farm. The gardai linked the two deaths, believing Hayes to be responsible. Theories as to how it was possible abounded. The gardai rapidly concluded that Hayes had given birth to twins. Yet when blood tests showed that the two dead babies had different blood groups, they theorised that Hayes had had sex with two men with different blood groups, becoming impregnated by both. Despite the signed confessions, the charges against the Hayes family were withdrawn in October of 1984. Despite this, no repercussions were faced by the police – although some scrutiny was given to the fact that confessions were obtained under duress. These are the bare bones of the case – of significance is laid out starkly by Inglis' analysis. He notes in particular the way in which Hayes was treated by the media, that she was 'not vilified because she was a woman, but because she belonged to a class of sexually transgressive women – women who behaved like men' (2003, p.4). He goes on to note:

> 'It was less to do with any crime she might have committed, and more to do with challenging the traditional Catholic habitus within which Irish male power had been created and maintained for generations. What was central to the crisis was not so much that Joanne Hayes might, as Mr Justice Lynch claimed, have done away with her baby, but that she was seen as a sexual predator luring men to her downfall. This could unleash fear of the social world being turned upside down, of women behaving like men. This could in turn be linked to an undeclared, repressed fear of women's sexuality which, if not controlled, could undermine if not destroy culture and society. Women like Joanne Hayes consequently became infamous, exotic, scapegoats because they were a threat not only to the traditional Catholic conception of sexuality, women and mothers, but to a patriarchal order centred on the sexual oppression of women' (p.226).

Thus, the compound work of the judiciary, the policy and the state in possessing a joined presents the core issue of 'how the truth produced by state functionaries can be resisted and challenge' (Inglis 2003, p.3) . The state monopoly over the production of the truth, the symbiotic relationship between the police, government and juridical system insulate them from meaningful critique. Women's sexuality, uncontrolled, independent and made shockingly public is parsed as a threat to the social order. It is in this sense that women’s bodies can be interpreted as collective - the assertion of agency over and against these forces.

Abortion, then, should be situated within wider understandings of the body as a site of specifically gendered resistance. The Irish feminist movement did not take place in a vacuum, nor were questions of gender equality separate from these wider movements in the shifting legislative, political and religious perceptions of women. The eighth amendment was passed in 1983 by popular referendum, which would become Article 40.3.3 of the Irish Constitution, which stated:

> ‘The State acknowledges the right to life of the unborn and, with due regard to the equal right to life of the mother, guarantees in its laws to respect, and, as far as practicable, by its laws to defend and vindicate that right’

As Hill et al. outline, despite some modest gains in the status of women around employment throughout the 1970s and 1980s, the economic climate of the 1980 was ‘a time of recession, high unemployment and emigration became the decade when the politics of the body, particularly the reproductive body, became paramount’ (2022, p.1). With the passing of the referendum many women could only pursue abortion through travel to the United Kingdom, where abortion was legal following the 1967 Abortion Act. Whilst Irish feminist groups couldn’t directly provide access to abortion services, they nonetheless could provide information to women on how to access abortion, largely in England. This was undertaken through organisations like Open Line Counselling and the local network of Well Woman Centres. Yet in 1987, the influential lobbying group the Society for the Protection of the Unborn Child (SPUC) was granted an injunction by the Supreme Court against these groups. SPUC had been influential in lobbying for the 1983 referendum, seeking to close loopholes or indirect methods of access.

The struggle would continue through the decades, with high-profile stories of young women in dire situations periodically catching national attention and sparking new conversations. In the year after the referendum was passed Ann Lovett, a fifteen year-old, gave birth to a baby boy at a grotto of the Virgin Mary in Granard, county Longford. Both her and the child died in the cold, alone. There are other stories – similarly bleak is that of the ‘x case’. A young girl who fell pregnant after being raped was denied the right to leave Ireland by a high-court judge, who surmised that she was likely to seek abortion. She was only granted the right to leave the country once it was established that she was a potential suicide risk. SPUC and other campaigners perceived this as a legal loophole, lobbying for the article in the constitution to be amended to not consider the suicide of the mother as a risk to her life. This is not simply a consequence of abortion legislation being restricted, but around wider attitudes to women in Ireland.

Whilst other scandals and tragedies followed, a particularly significant recent event was the death of Savita Halappanaver, who was denied access to an abortion in 2012 while she was miscarrying. The year was the twentieth anniversary of the ‘X Case’ discussed above when Ms. Halappanaver and her husband went to University College Hospital Galway, presenting with a miscarriage at seventeen weeks. She and her husband repeatedly requested a termination, but was told by doctors that they were unable to issue immediate treatment owing to the presence of a foetal heartbeat. The comment made by one nurse, that ‘this is a Catholic country’ was widely reported. Following this delay, Savita died of septicaemia on 28th October 2012. Thousands gathered for a silent vigil outside the Dail, with tens of thousands marching on the weekend after her death.

As Lentin highlights, ‘the body of the woman creates and contains birth-nations, which is why nation-states are moved to strictly control female sexuality’ (2013, p.134). The articles of the 1937 constitution, 41.2 and that passed in 1983 40.3.3 are the clearest representation of this institutional control in the fabric of national identity. I have attempted to sketch some of its consequences, linked through the lives of my participants, historical analyses and other case studies. The meanings of bodily autonomy for women in Ireland - and the answer to my question of ‘whose body, whose choice’ should be read against this history and these struggles.

Yet in *Repealed* Camilla Fitzsimmons highlights some of the tensions that sat within the national movement ‘Together For Yes’. As the referendum date loomed, they pursued advice on shaping campaign messages from professional agencies in advertising and market research. Contentious language on ‘Choice’ was shifted away from towards a softer, more medicalised approach focused around 3 Cs of Care, Compassion and Change. As Fitzsimmons highlights, these decisions were taken under significant time pressure, it sat at odds with the more consultative, bottom-up approach that was characteristic of the movement and reflected in Mary’s comments. Given intersectional feminist activism strives towards ensuring disempowered, marginalised and otherwise vulnerable groups a voice, the more ‘command and control’ approach was surprising. As Fitzsimmons puts it, ‘the movement’s grassroots were, by April 2018, almost invisible on the national stage’ (2022, p.113). Indeed, the final televised debate prior to the referendum involved Simon Harris in his role as health minister and Peadar Toibin, who had been expelled from Sinn Fein for his anti-abortion views. Whilst the programme started with an apology from the presenter

Miriam o’Callaghan for the absence of any women behind the podiums, the optics were nonetheless jarring. The final public debate about a fundamental issue of women’s rights was undertaken by two male politicians.

Then-Taoiseach Leo Varadkar controversially described the victory as a ‘quiet revolution’, as politicians with little track record of support for abortion swept in to celebrate the result of the referendum as a victory for Irish democracy. Despite its divisiveness, the people had had their say. Publicly positioned as a national change of heart, Independent and left-wing TDs Brid Smith and Ruth Coppinger were quick to highlight the community-based nature of the movement, with activists galvanised through tragedies like the eminently preventable death of Savita Halappanaver in 2012. Returning to the very opening of this chapter, when women’s experiences come into contact with systems of expert knowledge production, it is easy for things to be lost in translation. Fitzsimmons highlights one canvasser being critical of ‘soft messaging relying too much on doctors and experts, rather than the lived experiences of those affected’. A professionalised, expert-lead and data-driven campaign strategy was - for many experienced campaigners - inimical to the spirit of the organisation. Fizsimmons notes that these internal tensions will ‘inevitably generate complex and sometimes contradictory experiences of the same event’ amongst the campaigners (p.121). There was significant positive support of the messaging being less strident and more palatable to a wider audience.

This much is well-known, well-documented and well-understood. But what can it do to help understand vaccines? How are bodies and their various dimensions produced in the interaction with vaccines - and what can this do to help answer the question ‘whose body, whose choice’?

6.5 The Limits of Critique: Solidarities, Ruptures and Broken Bodies

The HPV vaccine is, strictly speaking, not a gendered vaccine in Ireland at the time I write this. By that I mean that it isn't a vaccine that is intended to be administered for people of any particular gender. The Irish government's campaign extending the vaccine to boys was positioned as making it gender neutral; correcting a deficit by removing an exclusion. The strongest protection accrues to girls owing to the strength of link between HPV strains 16 and 18 and cervical cancer (or at least, the Cervical Intraepithelial Neoplasia that are associated with roughly 90% of cervical cancers). Boys being vaccinated limits the spread of HPV strains, although Gardasil-9 protects from penile, anal and throat cancers which do affect boys. The vaccination campaign may be gender neutral, however at moments of vaccine-body interaction gender is produced and strategically managed in complex ways.

Key to understanding this is that much public resistance and mistrust of the vaccine occurs in gendered ways, particularly as HPV is often transmitted through intimate or sexual contact and is intended for administration at a young age. For example, the bishop of Waterford, Alphonsus 'Phonsie' Cullen suggested that a vaccine against a sexually transmitted infection endorsed sexual behaviour at a young age would better be spent on promoting a 'pure and chaste' lifestyle (McGreevy and Cullen 2017). Despite this, much of the framing of opposition to the vaccine in Ireland from REGRET's perspective was not based around these issues, but rather bodily events that parents linked to the administration of the HPV vaccine. Framed against the backdrop of how women's sexuality has historically been regulated within Ireland, that such things bear assonances is of little surprise.

Parental anxiety around their young daughters being vaccinated for an STI are far from unique to Ireland. In another interesting example, Pop (2016), traces resistance to HPV vaccination in rural Romania, much of which echoes questions about protection from an STI given at such a young age. Amongst a lingering distrust of the formerly authoritarian Soviet state, female virginity in Romania is generally highly prized and regulated through parental control in the lives of her participants. For example, it is common that women will be virgins on their wedding night. Within this context, despite it being expected that young women will go on to be wives and mothers, their reproductive capacity is separated from sexuality and sexual agency. Thus, the thought of being vaccinated against a predominantly sexually transmitted infection is tantamount to sanctioning sexual activity. Pop writes that for many parents ‘to evoke the possibility of STDs in the lives of young girls was to contradict the innocence they represented. For some parents, the act of vaccination even came to represent a symbolic defloration’ (2016, p.568).

As such, many public health and pharmaceutical marketing campaigns for Gardasil instead focus on a more medicalised, less contentious depiction of the vaccine focused around cancer prevention and the robustness of scientific evidence. Particularly notable in Ireland is the story of the prominent patient-advocate Laura Brenna, who tragically died of cervical cancer in early 2019, and whose experiences I discuss earlier in chapter 3. On her diagnosis, she contacted the HSE and made the decision to publicly campaign alongside my other participants and their colleagues in the PHMT. In a documentary produced shortly after her death titled *This Is Me* - it had originally been planned as a series, but was turned into a single documentary following a rapid decline in her health - it embodies and exemplifies the reality of cervical cancer, as well as her surprising experience of criticism. Towards the end of the documentary, Laura reflects on the criticism that she received online - from people accusing her of stupidity for not having been screened for cervical cancer, to the moralising around HPV as an STI and the experience of being a young woman suffering from a disease that normally impacts women in their forties and fifties, to death threats.

Whilst my participants in the PHMT were somewhat in awe of her, outside the sphere of public health some others were more sceptical. An osteopath that I interviewed, for example, voiced concern that she had somehow been exploited by the HSE as publicity for the vaccine. The slogan that she is perhaps most associated with is the stark ‘It could’ve saved my life - it could save yours’. It was her brother Kevin, back in the third chapter, that had stood up to celebrate Laura’s contribution to the recovery of HPV vaccination uptake - continuing her legacy through displaying the logo of the HPV vaccine on GAA teams in Ireland[17].

This focus on cervical cancer prevention is coherent in wider terms. Mamo, Nelson and Clark (2010), for example, summarise how HPV vaccination is entangled with the production of what they term ‘risky girlhoods’ in their analysis of Merck’s pre-licensure marketing materials in the US. As they write ‘Merck’s ideal consumers are girls at (future) risk, unaware of the tumultuous passage upon them but ready and able (with the wisdom of Mom) to rationally respond to the risks of adulthood and the demands of the free market’ (ibid,

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[17] REGRET issued a challenge to this, viewing it as marketing a private product - something against GAA regulations.

p.141). The advertising campaign positions young women as subjects who are simultaneously at risk of an uncertain future which may contain cervical cancer, but are also now empowered to address it via Gardasil. It is not difficult to see assonances of concepts like Nikolas Rose's biological citizenship - where self-understanding is framed in terms of specifically biological and pharmaceutial categories, moving from a scientific discipline to embodied, social choices, shared epistemologies and common values. Mamo, Nelson and Clark further highlight the multiplicity involved in the production of young womens' bodies and identities; pre-pubescent girlhood is fragile, vulnerable with an innocent sexuality, yet one that is also empowered to protect itself within a model of rational consumer choice. They write:

'Enterprising bodies through vaccinations are a route not only to health but also to achieving normal adulthood— to realizing one's imagined sense of self, one's goals and hopes for the future. Through vaccination - the reengineering of the at-risk body - girls become women ready and able to function in the life course as "normal" adults and as mothers taking their place in a long line of health care consumers' (p.139)

However, the promotion of the vaccine can easily conflate all forms of resistance to it with anti-medical, anti-science or anti-vax attitudes. Heather Munro Prescott responds to an article written in the very early days of Gardasil's American licensure, where columnist Karen Houppert comments on the 'strange bedfellows' that make up the broad set of groups who were sceptical about potential mandates for the HPV vaccine. Prescott notes that 'the public debate about the HPV vaccine is not the first time cultural anxieties about adolescent female sexuality have led to critiques of a public health initiative' and that Houppert 'ignores how the reservations of contemporary feminist health activists grow out of earlier feminist critiques of the medical profession's treatment of women' (2011, p.104).

The tension between a neoliberal, empowered feminist consumer sits at odds with the grass-roots solidarities produced through decades and even centuries of oppression that Irish women faced. Whilst there are pronounced differences in the context of Irish and American public health contexts (notably, the direct marketing of drugs is illegal in Ireland) the underpinning tension between multiple feminisms is notable - in Mary's vision of a socialist Ireland, back to Camilla Fitzsimmon's reflections on the adoption of a medicalised, expert-lead messaging and Varadkar's 'Quiet revolution'.

The tension is brought into view through Sundstrom and Delay's recently published work *Catching Fire*, analysing the politics of women's health (2023). Taking note of both the Cervicheck scandal and the drop in HPV vaccine uptake, they link the two phenomena as a wider crisis in cervical cancer prevention, describing the experiences of REGRET as an 'HPV vaccination misinformation campaign' (p.44). They propose that, in the face of continued stigmatisation of women's bodies and marginalisation of their voices, situated, bottom-up practices of 'truth-telling' and 'ethical communication'. They write:

'Patriarchy in the health service emerged as a primary cause of the cervical cancer prevention crisis. The ongoing impact of Ireland's religious health services was evident in the CervicalCheck scandal and the HPV vaccination misinformation campaign. Patriarchy and religious health services impacted the care women received related to HPV vaccination and cervical cancer screening by perpetuating a moral approach to female sexuality grounded in myths and fear of women. Women themselves, however, challenged these systems through truth-telling. Through advocacy and raising their voices, women contested medical authority. They addressed issues of con - sent, the right to knowledge about their own bodies, and scientific uncertainty. Finally, as Ireland strives toward a women-first approach to healthcare, experts argue that reforming redress schemes must be grounded in human rights and a commitment to non-repetition to avoid further victimisation. Overcoming misogyny will depend on listening to women and addressing shame and stigma around women's bodies'. (2023, p.44).

This much is continuous with the trajectory of how Catholicism and the state became entwined, the loss of different socialist, secular Ireland and the bottom-up. The HPV vaccine belongs to the empowerment of women through the lens of responsibility, risk-management and cancer prevention - individually focused, but overlooking structural and social contexts wherein misogyny and patriarchy still lurk, even though they are being challenged and reformed. This manifests in the grim stories of the X case, the Kerry Babies, Savita's death, ongoing stories of coercion in obstetric care (Huschke 2022) and the lingering influence of the Church around the new maternity hospital (not to mention its bleakly ironic lineage that traces back to the Foundling hospital).

The question that lingers in my mind is this: why is it that stories like Rebecca's *don't* count as female truth-telling in this context? The weight of scientific certainty, of biomedical consensus and institutional authority is no bar to feminist critique - indeed, more often than not it is the thing that it challenges.

This sense is captured in the first chapter - of the frustration that public health workers have with postmodern critique which hinders efforts to make the world a better, healthier place. What I am interested in, specifically, is where vaccine-body interactions have the capacity to dislocate and problematise tremendously powerful political movements close to my own heart. When I revisit my first question what should anthropology do in the face of vaccines?', this is what I am enquiring after. I am convinced it is the same as the tension I have traced in the very heart of Sundstrom and Delay's analysis of the crisis in cervical cancer prevention.

The HPV vaccine offers remarkable benefits to the health of an overwhelming majority of women. I want to return to a conversation I had with Leanne, where she was reflecting on some of these challenges:

> Leanne: It's all about socially developed meanings and like… It's that what makes conversation difficult. And I think that's one of the biggest things with polarisation, that it's so hard to talk, you know, certain things become infused with completely contradictory meanings. Really, really… symbologically? Psychologically?
>
> Dan;-Semiotically?
>
> Leanne: Loaded. And therefore they stop being things and you're like 'no, no, for me today this is actually just a mask. That's all it is. I'm going about my business. I'm not making any statements. I have complete sympathy for the public health imperative of simplicity. And how do you square those things? How can you make something complicated simple

> without reductionism yada yada yada… There’s not a good way of doing it!
>
> So one of the most frustrating things that I’ve found when talking to intelligent people that I care about, who are also… COVID sceptical, anti-COVID, anti-lockdown and anti-vaxx – that’s not a vaccine position, they kind of fell into anti-vaxx on the back of everything else. For the most part. The biggest thing I find is that they’re ‘blah blah blah, humans are more than bodies, blah blah blah, the state can’t control us, man!’ and I’m like ‘Yeah. WE KNOW!’.
>
> You know, more than anything else, it’s been done! So, I just really enjoyed this essay, because it layed out how it was done in the 1970s, how Agamben continued to pursue it and, how it doesn’t apply. Because basically the state, that the state just isn’t wielding power like that! For the most part, it’s fucking up everywhere. There is no overreaching state, anywhere on this planet, that is successfully controlling social and individual bodies, in the face of the pandemic. It’s all just ‘blerrrrgh’. The political analysis is bullshit! In a way, I find interesting and energising and valuable, but without attaching them to anything they’re just bullshit. They’re all just intellectual masturbation!

Of her same friends, she described to me an objection asked:

> You consent to sending your children to Catholic school, you consent to policing, you consent to all sorts of fucked up stuff. Why is this the one you’re resisting? And you know, I, because COVID’s ‘the thing of the

> moment' I think people fall into that particular resistance because that's what the resistance is. So I don't know what that means. But I do think that there's an awful lot of people who are persuaded by those arguments, because health information is everywhere. And so they're critiquing health information for the first time. And they're doing it badly!

For all of her experience as an activist and an academic, there are moments of a return to the mundane. Of when debate and frippery are meaningless and you just have to carry on. The crux of the matter is that it isn't a significant leap from emancipatory, critical theories to vaccine scepticism. Indeed, questioning vaccines is an eminently rational conclusion if the starting premise that the state is hostile to certain groups. The reluctant admission that vaccine hesitancy is rational on the part of certain marginalised groups, or that heavy-handed 'fact checking' interventions may have undermined the sense of epistemic security in the very society they were trying to protect are gently beginning to surface.

Perhaps nowhere is this made more clear than in the work of Giorgio Agamben - a figure popular amongst feminists and activists; Leanne herself had said that she uses her own 'bastardised version of *homo sacer*'[18]. Ronit Lentin likewise used a gendered form of it, *femina sacra* in an analysis of pregnant migrant and refugee women in Ireland - specifically when describing how non-ethnically Irish women are seen as a threat to the racial homogeneity of the country (2013). Indeed, she framed the death of Savita Halappanaver in precisely these terms (2013).

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[18] The term means they 'who may be killed and yet not sacrificed' (Agamben 1995, p.8). The key point is that the *homo sacer* is whose death is invisible to and permitted by the state. Without going into the complexities of Roman law that Agamben explores, it is sufficient to note that it used here to express how the suffering, death and marginalisation of Irish women seems to be permitted and even sanctioned by the State.

Drawing on her earlier work where she proposed the category of m/other, Lentin notes the urgency of the need for the state to control women's bodies and reproductive capacities. Whilst this fulfils the brief of an enclosed nation-state - perhaps exemplified in isolationist, de Valeran Ireland - when one considers the flows of global migration the picture becomes remarkably more complex. As Lentin highlights, the introduction of the question of race and class creates multiply marginalised groups of people through the class of non-white, non-Irish refugees and migrants. Insofar as the integrity of the ethnically homogenous nation-state is concerned, pregnant migrant and refugee women become a unique form of threat. *Femina sacra* is thus the woman outside of the social order; exiled and discarded, whose suffering and even death are no concern of the state.

Agamben, much of whose legal-philosophical work concerns the existence of the unmappable territory beyond the confines of the law and the state, took the theoretical arc to its logical conclusion in the face of the pandemic. The imposition of lockdowns, in essence, makes the whole world a state of being under siege. It becomes imbued with the type of medico-scientific sovereignty that denies its own existence - the innocence and imperiousness of the fact - it is worse than a tyrannical sovereign, insofar as it cannot be opposed without denying reality itself. Thus, people that resist vaccines are pushed beyond the margins of the state - into a non-extant space that I refer to in the next chapter as an 'ontological hinterland'. Particularly during the pandemic, as I shall explore, I think that members of the Freedom Activist Network have been exiled there - as were the members of REGRET. Yet social relations and networks consolidate in this space; it may be a no-place, but it nonetheless exists.

6.6 Choices, Worlds

Let's return to the question at the heart of this chapter: whose body, whose choice?

Anti-lockdown activists made the claim that Ireland's feminists were hypocritical in their absence from rallies against public health measures during COVID. Do vaccines, then, represent a limit to an otherwise unqualified bodily autonomy and trace the limits of neoliberal individuality or rugged Irish libertarianism?

By this I mean that bodies, vaccines and their interactions are not one. If we commit to not know what any of them are in advance, but rather to see how they emerge across different registers, epistemologies and practices, then what happens? By tracing not what a woman 'is' but what they have come to be through struggle in Ireland (or elsewhere), we find a fight for freedom from layered forms of oppression. The phrase 'my body, my choice' is not an abstract assertion, but a tangible response to specific acts of neglect, coercion and violence. The choices it concerns are both specific and general - a change in what it means to be a woman, the conditions under which it is possible and the freedom to act upon those meanings. As Simone de Beauvoir famously said 'one is not born a woman, rather one becomes one' (1952, p.3); moreover, those meanings are reproduced in the process of becoming.

Not so long ago, bodies and choices were explicitly not solely the concern of particular women; instead these people asked what do the church, the law and my peers allow that I should do? For women in twentieth century Ireland, bodies and choice were constitutionally enshrined in the role of the sanctified wife and mother. Assonances with the image of the Virgin Mary are anything but accidental - a reality regulated through peer-level scrutiny, the media and the supervision of church and state institutions. Yet in an odd twist, Mary takes on the role of Jesus - she is become the suffering subject. No longer weeping beside the cross for the pain and suffering of her son on it, but instead raised up to the eyes of onlookers. Not as a form of penal substitution, but rather an urgent demand for change in a system of cruel and unusual punishment. Why must anyone suffer and die at all?

Returning to the vignette that I opened this chapter with, let's consider that it *was* Gardasil that left Rebecca in a wheelchair (and to be clear: I do not think it was). Let's consider that a group of young women *had* been injured by a state-encouraged pharmaceutical product. Having wondered what happened to yourself, your daughter or friend, your stories begin to make their way into the national media. The Dail and the Senaid take notice, as do public health officials. There are hearings, press coverage and the entertainment of reasonable concern that there may in fact be issues with the new HPV vaccine. The European Medical Association even conducts an analysis of potential side-effects - you submit the best part of a hundred case reports gathered from REGRET. Something in the wind changes and people stop talking to you.

You felt that you exposed something through collective action - at first you had faith in a system, a process, an epistemology and a society. You believed that the government would take care of you, that people would listen to your truth-telling and stories. And then you were thrown into a maelstrom that changed everything. You were told that you were at best mistaken, crazy, manipulative and - at worst - agents of disinformation or emotional terrorists. In no way that I've seen did REGRET seek solidarity with the feminist movement or position the issue as a women's issue. Decoupled from the immediate question of whether the vaccine caused the experiences of the gardasil girls, it is hard not to see a group predominantly made of young women and their mothers being silenced by a powerful cross-sector alliance of corporations, third sector organisations and state institutions. I do not think that REGRET's story *must* or even *should* be interpreted in feminist terms. Rather, I am interested in how vaccines problematise my own political commitments and those of my participants - and the difficulty of accounting for these tensions. They create margins that overlap, but not the kind that can be contested, even at the point of intersection. Rather, different ethical and political hierarchies become asserted in relation to Irish political dynamics.

The vaccinated body is an abstracted, perfectly average, modern and universal body. It is one depicted in epidemiological data, reified and reintroduced into the world. It is the body for which vaccines work, chosen rationally for personal and collective good. Bodies, read as multiple, emergent and relationally contingent are differentially individual and collective across various situations, trajectories and histories. It is not a question of whether they belong to individuals or collectives, but which relations and types of relations are (or are not) entered into in particular places at particular times. To claim that REGRET and others like them are not telling their truth - of women speaking up against what they believe to be faults in biomedicine and public health - remains as something that I do not understand.

Taken with the material-semiotic approach, not knowing what vaccines, bodies or their interactions may be in advance, the wider circuitry and infrastructural properties become more visible. In the context of REGRET and the legibility of their experiences, the strength of vaccines distorts the force of their activism. Even in the face of seemingly unsurmountable scientific evidence, the putatively vaccine-injured body does not go away. The medicalisation and softening of the more radical stances of the abortion campaign disquieted some of the intersectional, grass-roots parts of Together For Yes. Similarly, a struggle accustomed to exposing the inner workings of a patriarchal, biomedical establishment finds itself in awkward relation with vaccination - one of the most staunch and enduring bastions of the state. The HPV vaccine, on balance, *is* good for women’s health as something that prevents cervical cancer, yet many of the complexities that concern bodily autonomy surface in ambivalent ways.

The immunity of vaccines to critique is something that I have traced in the chapters so far. Through attention to vaccine-body interactions, the work that the awkward comparison embedded in the question ‘whose body, whose choice?’ does is to highlight the limits, constraints and internal contradictions of my own progressive politics and that of my participants. There is no neat resolution to this problem. Rather, it opens up space for further questions. The comparison, I think, is a good one in the terms that Mattei Candea might propose - it certainly resists whatever analysis I am able to bring to it. The strategic production of the body outside of contentious terrain de-politicizes otherwise contentious issues; the ‘deterritorialised’ terrain of facts, vaccines and modernity has a counterpart in the vaccinated body, the final piece of the framework that I have spent this thesis developing. Where the bodies and choices multiply, in both their constitution and their outcome, the assumed unity of the autonomous subject falls apart in the tension between individual and collective demands. A different analytic stance, one that ‘gathers’ a range of actors to make sense of the situated vulnerabilities of facts, bodies and vaccines does not look to criticise or undermine them, but to show them all as things to be protected - and doing so requires an acknowledgment not just of their vulnerability, but of the things that we once to be their strength.

The final chapter, then, offers no clear answers. Rather, it asks the question of what happens when vaccines - in its broadest epistemological, social, and ontological sense - fail.

7. When Vaccines Fail

7.1 Positioning Failure

Talking about failure is almost never easy - especially in relation to a subject as complex and sensitive as vaccines. An ongoing task in this thesis has been to unpick why some conversations about vaccines are so difficult to have, many of which involve the expression of doubt or scepticism about them. The answer that I propose is because of their complex, intimate entanglements at multiple scales and temporalities. For the sake of clarity, I should once again

Vaccination is something participated in by a vast majority of the population in Ireland, enmeshed with complex questions about ethical responsibility, civic participation and mutual care. To take a vaccine is to protect yourself, your and others' children, the immunocompromised or otherwise vulnerable and society as a whole. Almost inevitably adjacent to this is an ambivalent entanglement with political and epistemic questions which are constantly displaced in ways explored in chapter 3 of this thesis, seen in the slogan 'get the facts, get the vaccine'. Rejecting common sense is a rejection of the commons. A useful parallel conception of this can be found in Roberto Esposito's work on immunity, which in turn helps to pin down their role in protecting the body (and mind) politic as well as individual bodies:

> "Whether the danger that lies in wait is a disease threatening the individual body, a violent intrusion into the body politic, or a deviant message entering the body electronic, what remains constant is the place where the threat is located, always on the border between the

> inside and the outside, between the self and the other, the individual and the common” (2011, p.2)

When vaccines are entwined with wider civic conversations, the scope and significance of what is entailed with vaccine criticism, resistance, denial, refusal or hesitancy becomes clearer. Yet, as explored in the previous chapter, the inscription of these lines demarcate spaces of acceptable identities, bodies, discourses and the various attempts to shift them through various forms of advocacy and activisms. This chapter is an attempt to at once plenarise these arguments at the coal-face of the moments when vaccines fail. As Carroll, Jeevendrampillai and Parkhurst note, failure can be found in the moments ‘when things do wrong, when things fall apart, when systems collapse’. Whilst it is ‘common practice to move on’ from these moments, scrutinising them can yield new insights (ibid., p.1). This is especially the case when considering large-scale objects such as infrastructure - things that are deeply embedded in the world around us, vital to its functioning, but become sharply visible at moments when they fail. Yet the complexity and significance of vaccines failing are commensurate with the complexity of their distribution and co-ordination. I should be very clear that when I say ‘failure’ I do not mean unaccounted for vaccine side-effects, but rather the complex socio-epistemic processes that coalesce around where people attempt to identify them. Failure is a contested, negotiated state that various parties – the state, the groups claiming vaccine injury, the courts and various expert groups – attempt to allocate and contain.

This chapter looks to understand several moments at which vaccines can be said to ‘fall apart’. This is given in deliberate contrast to Ann Marie Mol's observation that despite how objects are multiplied in practice, with dispute over different methodologies, processes and opinions, things still ‘somehow hang together’ (2002, p.5). Differing experiences, modalities of knowledge, procedures, persons and actors co-produce a fragmented and distributed phenomenon that nonetheless maintains a form of jaunty coherence. A similar approach to seeing how vaccines are multiplied in practice is key to opening them up to the forms of theorisation above. Yet even though vaccines remain remarkably resilient, especially with their reinforced importance in the wake of the pandemic, there are moments where they can be said to ‘fall apart’. These can be productively interrogate by failure. By charting a final protest that took place in Galway as a ‘double failure’ (in its size, but also as vaccine resistance) and the complex ways in which vaccine injuries are established or contested, both the multiplicity of failure and vaccines can be rendered visible.

7.2 Identifying Failure- When has a protest failed?

Back in March of 2022, towards the end of my fieldwork, I observed another protest organised by the Freedom Activist Network across in Galway that was slated to start just after 1pm in the cathedral car-park. After maybe twenty minutes of waiting in the cold, I began to wonder if anybody was going to show up. Gradually, a small crowd of perhaps two-dozen people congregated, taking signs and placards out of cars. I recognised a long flagpole from the other protests; topped with a brass polearm, an Irish tricolour waiting to be unfurled. As the marchers gathered, a young woman pushing a pram walked past with her partner, slowing for a second before looking at them, tutting and audibly muttering ‘Jaysus’ before walking on. Eventually, the group began to march through the streets, tailed by a single bored-looking garda. The procession moved forward slowly - no signs held up, no chants, no flag proudly flapping in the bitterly cold wind. The march was interrupted by a pedal-bus, piloted by what I suspect was one of the many hen parties that frequent Galway - whooping and cheering accompanied the blasting Eiffel 65’s famous *Blue (Da Ba Dee)*. The activists paused to wait as the cheering women passed on by.

Figure 7.1 – Pedal-bus interrupting the protest

The marchers eventually filtered into Galway’s central Eyre Square, coming in to meet a handful of other members of the FAN who had been setting up banners and the sound-system. At one point the rally was interrupted by a hen party running between the audience and the speakers. One young woman carrying a large cardboard cut-out of a cow, making loud ‘Mooing’ noises - I’d overhear that apparently the bride was marrying a butcher. A separate group of onlookers stopped for selfies with the protestors, throwing an arm around them and grinning broadly for the camera. The protestors smiled enthusiastically and leaned back in, giving a thumbs up. Whilst the strictest of the lockdown measures had been relaxed as of January 2022, the Freedom Activist Network (FAN) continued to protest. Alongside stories about the pandemic, they urgently warned against the dangers of a new World Health Organisation pandemic treaty which they argued would cede democratically elected authority of the government to an unaccountable, supranational body (which happened to be funded in no small part by Bill Gates). Similarly, with a looming vote on the emergency powers exercised by the Irish government during the COVID-19 pandemic was due. That the pandemic had been exaggerated or entirely fabricated as part of national (and / or supranational) coup was a recurrent element in the speeches, chants and signs held at the protests. The passers by largely ignored the small crowd, save for momentary curiosity or humorous interactions. I’m reminded of a protest in Dublin a few weeks later - the last I attended - where a young man with thick blond hair walked past, yelling ‘the pandemic’s over, ya dickheads!’.

Figure 7.2 – A hen-party interrupts the rally

At the end of the rally and speeches, the two-dozen members of the FAN huddled around and quietly sang the Irish National Anthem - *The Soldier's Song*, their voices largely drowned out by the hubbub of the city. A protestor remarked that they knew they were down on numbers, but thanked everyone for coming.

My instinctive reaction to the protest at the time, and as I write now, is one of pathos. The sharp contrast between a protest of thousands marching through one of Dublin's busiest and most historically significant streets to *Do You Hear The People Sing?* thundering over loudspeakers outside the GPO is almost impossible to notice. Likewise, the playful interruption of the protest undercut the dramatic tenor of the speeches that replayed the pain of lockdown and the expressed fear of further loss of sovereignty.

This highlights two immediate things about the protest and the concept of failure. In the first instance, simply by asking whether the event was a failure or not highlights several issues. In the first instance, I should note that ‘accusing informants of “failure” is a moral accusation… unbecoming of anthropological work’ (Leannel, Jeevendrampillai and Parkhurst 2017, p.4). The concept of failure itself does not merely diagnose why some event went differently to how it was intended, but often carries explicit and implicit value judgments. The sheepish admission at the end of the rally that there hadn’t been as many attendants as they might have hoped hints at a disappointment of expectations. Appadurai notes that whilst failure’s seeming ‘ubiquity and universality’ makes it easy to regard it as a ‘self-evident or natural fact’ (2016, p.xxi). Yet contrary to this instinctive response, rather than failure being ‘a self-evident property or quality of projects, institutions, technologies or lives’ it is ‘a product of judgments that reflect various arrangements of power, competence and equity in different places and times’ (Appadurai and Alexander 2020, p.1). This observation opens up the pragmatic question of what produces, diagnoses, legitimates and sustains various failures or ultimately allows them (and their associated meanings) to dissipate. As such, I do not judge whether or not the protest can considered a failure, or to accuse the protestors themselves of ‘failing’. The role of an anthropologist is not principally evaluative in-and-of-itself, but to examine how processes of evaluating and adjudicating failure unfold in socio-material worlds. As Catherine Alexander puts it, there is a question of ‘what failure *does*’ in as it unfolds in various socio-material worlds (2021).

In the speeches at the rally the protesters made multiple allegations of failure towards the government and their handling of the lockdown. As one speaker, named Kevin, noted ‘You have failed. You have failed me and you failed the unvaccinated’. The basis for his claim was the sense of being bullied in the media and put in a more vulnerable, isolated position as a sufferer of a rare form of cancer. As he took to the stage, he opening by saying ‘for you that don’t know me, I’ve had a serious illness’. He spoke about his experience of urachal adenocarcinoma - a rare form of cancer with only 300 reported cases and a low rate of survival. Kevin had started a GoFundMe page with a fundraising target of €80,000 for treatment at a specialist clinic. Despite his impassioned speeches and the encouraging comments, he had raised just below €9,000. He went on to explain that he had likely only a ‘couple of years left’, with the cancer having spread to his ‘belly-button, bladder and abdomen wall’. He emphasised to listeners and passers-by that if they were to take one thing away from his speech today, he wanted them to remember one experience he had during lockdown that took place shortly after his diagnosis:

> I was looking out the window and wondering ‘what’s it all for?’ And I walked out the door and just went to walk around the house, and I saw the next-door neighbour.
>
> And the Gardai pulled up, and they asked me “Are you guys the same household?”. And I said “no”, and they told us to separate.
>
> And I want that to sink in. That was the lowest point of my life. If we take nothing else that I say here today out of the speech, take that: I couldn’t speak to my next-door neighbour at the lowest point of my life.

> Our media, RTE,you need to start saying a fair account of what's going on and what has gone on. And I will not stop until you do… Clair Byrne, Joe o'Shea, you called me a hardcore crank. You told me that I should be pushed out of society. A cancer patient pushed out of society.

The RTE segment that he was referring to concerned an interview with TV-presenter Joe o'Shea, being interview on a popular news programme hosted by Clare Byrne. O'Shea vented his frustration at those who refused to get the vaccine, claiming that they prolonged the pandemic and put others at risk. Despite Kevin's accusation targeting Byrne, she seemed to challenge o'Shea's insistence that people should be 'coerced' (as opposed to forced) to take the vaccine. What follows is a transcript of the section in question which prompted much of Kevin's reaction:

> Joe o'Shea: "We have to start compelling people, because a lot of people seem to think that because it's not affecting *me* directly because maybe I'm young or or maybe I'm healthy or maybe I believe some post I've seen on Facebook saying Bill Gates wants me to get vaccinated so he can turn me into a robot that we have to start making their lives complicated.
>
> Claire: "You sound really angry with people that have not decided to get vaccinated, for whatever reason that have made that decision."
>
> Joe: "Yeah I am angry and I think people are angry, 'cause we want to get out of this, we want our lives back and to get back to normality, we want to work again, we want to see people again… We want our families to be protected, we want our communities to be protected and that's why

> there are no - no scientific arguments to be made for not getting vaccinated. I'm not a virologist, but the anti-vaxxers aren't virologists either. There's no debate because you can't debate somebody who believes in a religious belief almost, a cult-like thing of 'well, I'm just not going to get vaccinated and I'm not going to listen to my doctor and I'm not going to listen to the overwhelming evidence and opinion of the world's leading scientists'. You can't debate with them. We're talking about almost hardcore cranks-"
>
> Claire Byrne: "You're talking Joe about forcing people to take a vaccine if they have decided, as they have a right to decide, for whatever reason"
>
> Joe o'Shea: "They have a right to decide and if they want to lock themselves out of society because they do not want to live up to the responsibilities they should be facing then yeah, they have a right to decide that. You can't force people, but nobody's talking about forcing people to take vaccines - marching them down to medical centres, but you can compel people, you can let them know that if that is the decision you take then unfortunately we cannot have you in our spaces. We cannot have you with the risk that you pose to our society, to our people, do our loved ones. It's not forcing, but it definitely is compelling"

In response to this and similar pressures, Kevin continued in his speech:

> To our government: You have failed. You have failed me and you failed the unvaccinated. When you couldn't get the unvaccinated vaccinated, you turned to the media to get the media to do your work. You tried to turn the vaccinated against the unvaccinated. You should be ashamed of

> yourself. We didn’t put you in power, you put yourself in power. Oh, my God, we will… We will get you out of power because you are doing a disservice to the 24,000 cancer patients in two years dying of cancer. When I bring that up people say to me. ‘Yeah, because it wasn’t infectious’. One in 22 People are dying of cancer now - that's pretty infectious. 6000 people died of COVID, most of underlying symptoms. 24-25,000 people died of cancer in two years. And what have you done, government? Absolutely nothing.
>
> There are 25,000 Vicky Phelans and Lindsay Bennetts walking around Ireland. And what have you done? I stand here now to tell you that I'm not going away. Now starts the push for cancer patients. And now it starts to push to get answers to why there’s nothing done. I don't see office shops, restaurants and everything closed because of cancer. And it is the real pandemic.

Kevin’s accusation is of the government failing a duty of care to a segment of the population and other vulnerable cancer patients. Joe o’Shea’s comment that people who resisted vaccination in the height of the pandemic were ‘cranks’ and that debating them is almost akin to talking with somebody who has a religious or cultic belief. In the experience that Kevin describes – of being ‘pushed out of society’ - and the activists in REGRET describe (being ‘injected and neglected’ as they say of the Gardasil girls) a rejection of vaccines is a rejection of something much bigger than a single injection more. The chapters I have written previously have been written with the intent of attempting to situate vaccines in Irish life and history. O’Shea’s description rejecting ‘reality’ itself is a powerful one that I think reflects that journey. How is it that a rejection of vaccines is a rejection of reality – and how does that help to understand the experiences of the protestors, REGRET and others like them?

Vaccine resistance is not merely a social failure, but an failure where the separation between fact and value, or science and politics has been breached. If the work of modernity described by Latour is this purification separation of scientific and political domains, then the question of vaccine injury rendered public threatens to breach it. If the activism of the FAN and REGRET charted in previous chapters moves the border between what is acceptable and what is stigmatised, this process of displacement into the vaccine hinterland - of being ‘forced out of society’ - is in a sense purification at work. They do not belong to the same social order; the form of difference that vaccines produces is surfaced. Failure, here, is multiply situated and negotiated in adversarial terms. As Appadurai and Alexander highlight that these exist as a ‘regime of failure’ in which ‘a certain epistemology, political economy and dominant technology come together to naturalize and limit potential judgments about failure’ (2020, p.2). What can be seen here is two competing regimes of failure, vying for the capacity to authoritatively represent and parse various aspects of the COVID-19 pandemic and vaccination programme. The overlapping fields of accusations represent a sustained ontological tug-of-war in which vaccines are inextricably connected, where failure is produced adversarially with spiralling social effects.

7.3 Contested Failure and Knowledge Production

Whilst the above analysis has focused on failure in public and civic domains, failure can also produce new forms of knowledge. Notably within Carroll et al's theorisation of failure, the 'misbehaviour' of specific objects and the consequence that issue from it (2017, p.1). As they write, ''failure' occurs when objectification ceases to adhere' and 'is a moment of breakage between the reality of the present and the anticipated future'. Moreover, the failure 'carries moral gravity as what *ought* to have happened, what *should* be the case, has not come to pass' (ibid., p.2). Extending Appadurai's notion that failure is produced and sustained through human judgment in concert with regimes of failure, a key aspect is the identification of that failure within a specific object. Its process of 'objectification' is, in essence, how it performs its object-role in line with the intentions of the subject it stands in relation to. This is easy to visualise in the context of simple interactions with something like a cup or a knife - as a cup shatters, or a knife snaps when it is used events diverge with material consequences. In this section I explore the putative 'misbehaviour' in the context of vaccine-bodily interactions. This is not to claim that the HPV vaccine was the cause of the experiences as clamed by REGRET, but to examine the processes by which such claims are evaluated. Thus failure's emergence as an object in its own right is a negotiated, potentially highly contested and destabilising process.

With a particular focus on the modes of producing a bodily experience as vaccine injury, there comes 'exploring alternative knowledge systems and how such epistemologies can be stifled by particular forms of 'expert' knowledge'

(2020, p.13). Failure itself, produced and stabilised as an object of knowledge, is the work of ‘detachment and containment, removing complexity, placing things in and out of scope, creating neat narratives of causality, and deploying certain ways of knowing that frame the object (ibid., p.17). This is then misbehaviour that begins with a bodily event and has an evaluative search that follows it.

Examining how failure is itself produced and stabilised as an object is in relation to that of an at-first unexplained bodily event, contextualised and framed by the wider civic and moral contexts above. Strictly speaking, adverse reactions to a vaccine are not unexpected. They are clearly stated as a possibility in a statutorily required Product Information Leaflet (PIL) to be included alongside every vial of vaccine. Yet how can something constitute ‘misbehaviour’ or failure if the behaviour of an object is anticipated and documented through extensive clinical trials?

In this section I argue that vaccine injury can be read an ongoing process of negotiation about where failure resides – in the parents, in the bodies of the Gardasil girls, in processes of pharmacovigilance and the vaccine itself. A key aspect of failure is its capacity to produce new forms of knowledge, through which failure itself takes shape and is stabilised. Where the process stalls or fails, failure ‘escapes’ or ‘ricochets up’ to larger and larger scales (Carroll et al 2017, p.6). Thus if an individual vaccine injury is ruled by a particular court, then questions are raised as to whether other claims might be considered the same. If a vaccine is deemed to be more generally unsafe, then the processes of retraction and compensation can become contentious and complex. These potential meanings of failure potentially transform vaccines through contestation in public discourse. This returns us to the question of scale and regimes of failure, manifest here as the tension between epidemiological knowledge and embodied experience. What begins with an unexplained bodily event becomes a complex process of negotiation to produce, explain and situate failure involving medical, legal, epidemiological and individual stories. I begin by sketching a successfully resolved case, before moving onto a parallel with the secondary case-histories presented by REGRET.

The first case takes me back to an afternoon at the PHMT offices back in late 2019. A story had recently broken about a young woman who claimed to have developed narcolepsy following the administration of the H1N1 (Swine Flu) vaccine, Pandemrix. After nearly a decade, the case had made it to court and been settled in her favour without any liability on the part of the government Niamh made an off-hand comment about the likely impact on vaccine-critical media, particularly within REGRET. The story concerned a 16 year-old girl named Aoife Bennett who was given the GSK-manufactured Pandremix in 2009 as part of the global response to the evolving Swine Flu epidemic. Yet following the administration on the 10th of December, she developed narcolepsy. Bennett recalled it taking around two weeks for the side-effects to develop, remembering that on the 23rd of December she went shopping with a friend into Dublin. Walking from Busaras to Ha’penny bridge took her an additional 2-3 hours longer than it could have done. When she arrived home, she lied to her parents that she’d stayed out for a meal so as to not worry them with her symptoms. Come Christmas day, she reported spending most of it in bed despite forcing herself out to come down for dinner.

She further described a condition known as cataplexy which occurs in 25% of sufferers of narcolepsy, referring to a sudden loss of muscle tone. Something that can be triggered by strong emotion, the condition can lead to partial or total bodily collapse. Aoife described that ‘my head could go, my neck could just fall, and my voice box wouldn't work, my eyes might roll, my arms would just drop or I’d drop things. My knees would buckle, and sometimes I've fully collapsed to the floor’. As she lived with the condition for longer, she learned some ‘tricks of the trade’ which helped her target her falls towards a chair or to get herself onto the floor. Alongside the cataplexy, she experienced a significant loss of alertness, lethargy and near-constant drowsiness. Of her time in school, she recalled that:

> “The bell would ring it could be a double class. And my friends would be like, Come on, let's go. And I'm like, What are you talking about? We just sat down. And I know that a lot of future very frustrated, because of course, I had no diagnosis. They didn't know what was wrong. I didn't know what I was wrong. I couldn't give any explanation. Yeah, it was very difficult for you had no explanation.”

She struggled in school and was also unable to participate in sporting activity, having been a keen runner and athlete. She struggled with her illness undiagnosed for 18 months until March of 2011, when her mother spotted a newspaper article that described a girl who had the same symptoms following the administration of the swine flu vaccine. Her GP ultimately referred her to a neurologist who, following an overnight sleep-test at the hospital in April 2011 confirmed a diagnosis of narcolepsy. Whilst medications helped manage some of her symptoms, she found herself struggling with the demands of education. She describes an ongoing struggle, where the busier she is the worse the condition becomes, whereas ‘the more energy I have to take care of myself, the better I am’. Whilst she had been studying to become a primary school teacher, the placements were particularly challenging for her and she struggled with the question of whether she’d be able to work full time. She recalls:

> ‘I mean, I'd always say I always would have said, Oh, you know, I'm not settling for part time. I'm, you know, I'm doing it I'm going to teach, but realistically, I will have two job share. I can't see myself being able to live in any way a normal life, while teaching full time, it's just not really an option for me’.

In 2019, when Aoife was 27 years old, the case was finally settled after years of waiting for it to be brought to court. She mentioned that SOUND, a patient advocacy group, was set up to support the survivors. Aoife likewise was surprised by the intenseness of the adversarial approach taken from the government’s lawyers. Around 1,000 people given the vaccine globally were believed to have developed narcolepsy, including 100 in Ireland and 100 in the United Kingdom. Michael Boylan, Bennett’s solicitor ‘told the broadcaster RTÉ that she [Aoefie] was disappointed that there was no admission of liability in her case, which took seven years to get to court’ (Dyer 2019). She continued:

> “I don’t know why the Minister for Health has let it go on so long or why the Department of Health let it go to the courts. I just hope that the rest of the families won’t have to go through what we had to. It was very difficult,

> very time consuming, draining, your life on hold, and I hope that won’t be the case for the rest of the families”

Shortly after the hearing let out, Aifoe spoke with Sean o’Rourke on RTE:

> Sean: “And I think your lawyers pointed out at the start that this wasn’t an anti-vaccine case, it was just about your particular circumstances. Your family isn’t anti-vaccine as such? The settlement was with the HSE and the minister, no admission of liability on the part of the manufacturer?
>
> Aoife: “No, after you know, I mean, if we were I mean, of course, we wouldn't have - I wouldn't have gotten this vaccine. So no, definitely not. Obviously, we have an issue with with this vaccine and the fact that it wasn't fully tested, which we didn't know at the time, but no, definitely not”

Aoife’s story represents what might be called ‘successful failure’, insofar as it provided a degree of resolution and clarity. Quite notably, Aoife received a clear medical diagnosis with epidemiological support. Despite significant delays in being brought to court and a difficult, adversarial process, the case was ultimately won in her favour. The ‘misbehaviour’ which began and was sustained as an unexplained bodily event lasted for 18 months. Aoife was clear in her rejection of the label ‘anti-vaccine’ - the acceptance of the court’s ruling, despite her reservations about the duration of the process and the lack of liability on the part of the manufacturer considered the matter settled. The legitimising power of a medical diagnosis, epidemiological evidence and court judgment produce and contain failure within Pandemrix. The regime of failure has produced and stabilised failure, ‘containing’ and delimiting it to a specific vaccine, issued during a specific pandemic.

7.4 Unresolved failure

Whilst Aoife and others had some possibility of a clinical diagnosis and a regime of failure operating in their favour, the stories of the REGRET girls seem to focus on an inability to gain a clear medical explanation. The following excerpt is taken from the story of an Irish girl named Abbey Colohan, reported in the HPV Vaccine on Trial: Whilst the extract is lengthy, it provides a coherent overview

> On September 22, 2014, at just twelve years old, Abbey Colohan received her first shot of Gardasil in a small office in her school with a friend by her side. She was nervous about it, but no more than other girls. It hurt a lot, but she put on a brave face. She was sitting down for the prescribed fifteen minutes after the shot, when she immediately felt incapacitated and could not speak. When the fifteen minutes were up, she tried to get up to go back to class but fell backward. The doctor present in the room told her to lie down on the mats they had ready. She began to jerk uncontrollably, and the doctor told her she was just having a panic attack and it would be over soon.
>
> Lorraine, Abbey’s mother, got a call from the school saying that Abbey was unwell and she should pick her up. The school didn’t tell Lorraine what happened; she presumed Abbey was just feeling ill after the vaccine that day. She sent her husband, Martin, to get her. When he got to the school, he saw Abbey completely “out of it” on the mat and

asked why the doctor hadn’t called an ambulance. It had been an hour and twenty minutes since Abbey had had the vaccine and she appeared to be having a seizure. She was twitching and couldn’t speak or walk unassisted, with pupils dilated.

The health service staff dismissed Martin’s concerns and said it was just a normal reaction to the vaccine and that Abbey was having a panic attack. Nurses asked what Abbey had for breakfast that day and if perhaps her reaction was to that. Martin said she had had Cocopops but wasn’t allergic to anything. The nurses concluded, however, that it must have been the Cocopops, since they had never seen anything like this before. Incredulous, Martin knew it was not a simple food reaction or a standard effect of a vaccine, the way one would expect. By this time, Abbey’s condition had stabilized, and he brought her home.

When her mother saw Abbey arrive home with Martin, she was in shock. She had never seen her daughter look so unwell. Abbey was gray-purple in color, and she still couldn’t speak. Her pupils were dilated, and her joints were red and swollen. Abbey pointed to her chest as the only way she could tell her mother where she felt pain. Lorraine felt that a completely different child came home from school that day from the perfectly healthy and happy one who left that morning.

The next day Abbey stayed home, and Lorraine called the school to see what had happened and if they had filed a school incident report. She spoke to the school principal, who did not know anything about Abbey convulsing after the vaccine, despite many students having witnessed it. Lorraine tracked down the “flying” vaccination staff, as they had moved on to another school, and spoke with the doctor who had administered the vaccine to Abbey. The doctor recalled “the jerking child” but suggested to Lorraine that Abbey must have had an underlying condition and that it wasn’t due to the vaccine. The doctor said she had never seen such a reaction before. Lorraine wondered how this was somehow justification for not filing an adverse event report with the Department of Health. Something didn’t add up. Later, Lorraine would learn that the FDA knew that “jerking,” or “tonic-clonic movements” indicative of seizures, were common reactions to the vaccine as far back as 2009. It was indicated as a “warning” on the front page of the package insert she found online. So why didn’t the doctor at the school know about this?

Abbey went back to school after taking a day to rest, as Lorraine thought she had recovered and that her convulsions would not recur. She was wrong. A few hours later, Abbey collapsed at school again. This time, a trained emergency responder came to Abbey’s aid and recorded in a school incident report that Abbey was “incoherent, confused, had rapid breathing, her body was shaking, and she had no control over her movement. She was hot, and her eyes were rolling back.” The medic observed that Abbey was having a brief epileptic fit or a staring episode, or a seizure. This time, the school called an ambulance, which rushed Abbey to the hospital, where she spent the next six days.

Doctors at the hospital did all kinds of tests but found no abnormalities. They referred Abbey to a psychologist, thinking that her condition was psychosomatic. Lorraine could not accept this diagnosis given Abbey’s immediate reaction to the vaccine.

> Abbey’s life has never been the same since 2014. It now revolves around doctors and specialists who are trying to ease her pain. She now suffers from recurring seizures and cannot predict when she will have a good day or a bad one. She is still constantly fatigued and in a lot of pain throughout her body almost three years after the first dose of the vaccine. According to Ireland’s health service, they were not notified of Abbey’s reaction. In a letter Lorraine received, they stated that they “do not recall any child that had an anaphylactic reaction” and that “there was no evidence that Abbey had an anaphylactic reaction to the HPV vaccine.” But many people witnessed Abbey’s collapse. There are also hospital records and three school incident reports from when Abbey collapsed two days following the vaccine. There is no doubt in the Colohans’ minds as to what happened, and they have vowed to fight for more answers.

The final words of the extract, that the Colohans are in no doubt about what had happened and have vowed to fight for answers, points towards the inexplicability. I do not share their certainty about what happened – if anything, quite the opposite. The truth or falsity of their position is of far less interest to me than the strength of belief they have. The cause of the unexpected bodily event is shifted between parties - between a ‘normal’ response to the vaccine, the mind in the form of a panic attack or other psychosomatic experience, to the strangely banal culprit of a breakfast cereal. Subsequently, the doctor suggested an underlying but as-yet undiscovered condition that Abbey had may have been the cause - displacing the failure from the vaccine into the body. The account jumps forward to Lorraine’s discovery that the ‘jerking movements’ were known side-effects present in the Product Information Leaflet (PIL), which she expected that the doctor who had administered the vaccine had known about. Following her second collapse at school the day after the vaccine was administered, despite multiple tests carried out at the hospital was unable to provide a diagnosis. The explanation for Abbey's experience was displaced once again to the mind as psychosomatic. The to-ing and fro-ing of theories acts an ongoing negotiation and displacement of failure, causality and - at moments - culpability.

A similar story is found in that of Kiva Murphy, another founding member of REGRET. Whilst Kiva initially suspected no link to the vaccine, she began to search for answers on the internet:

> "Kiva was unwavering in her dedication to healing her daughter and finding out the truth about what happened to her once vibrant, athletic daughter. Like many mothers in this situation, Kiva began searching for answers on the internet. She had started to suspect that it was related to the HPV vaccine and suggested this to Kelly's doctors. After running many blood tests, they told her that there was nothing wrong with Kelly and that it is normal for teenagers to have painful symptoms Kelly was experiencing.'

Kiva's searching for answers lead her to encounter similar stories told in the United States. As she read one story she 'felt punched in the stomach, realizing for the first time what had happened to her daughter'. Stumbling across the website SaneVax, only one other story from Ireland Ireland was present at the time - that of Karen Smyth, who was the first publicly make a connection between the HPV vaccine and her daughter's experiences. Kiva tentatively made post on Facebook about her daughter, being reassured that others had had the same experiences in Ireland and were even visiting the same specialists and doctors. Despite seemingly endless clinical tests, there remained no explanation anything identifiably wrong with Kiva's daughter or the other girls in REGRET.

In Aoife Bennett's, described above, her mother found a newspaper article that reported the same experiences of another child that had been given Pandemrix and suffered the same symptoms. Despite eighteen months without a diagnosis, she was ultimately able to secure one, with significantly more epidemiological and clinical expertise supporting her. The stabilisation and containment of failure in her case does not legitimise the experience of others, but points to a hybrid, complex and highly contested regime of failure, but also what Karen Murphy calls a 'regime of perceptibility'. These regimes 'establish what phenomena become perceptible, and thus what phenomena become perceptible for us, giving objects boundaries and imbuing them with properties. Regimes of perceptibility populate our world with some objects and not others, and they allow certain actions to be performed on those objects' (Murphy 200x, p.24). In the context of experiencing and legitimating the experience of vaccine injury, there is a potential disjuncture between the experience of a parent who suspects their child was injured by a vaccine and these various regimes of perceptibility, failure and truth. What is key is that the mothers of REGRET - and other more hardened activists – are left behind in the wake of where these interlocking regimes themselves fail. Beyond this point, uncontained and charged, failure threatens to 'ricochet up' various scales, enfolding the legal, epidemiological and wider institutions that produce and stabilise vaccines and the wider world that they are a part of. How can we think about the situation left behind?

A helpful parallel can be found in the Smith outlines how failure manifesting in a single tragic event produces new forms of knowledge and highlights long-standing problems. Where a duty of care has been failed - as in the tragedy of the Grenfell tower fire in 2014 - she articulates the moment as when the ‘stuffing falls out’. She described the ‘stuffing’ as the flammable cladding that had been used to coat the building, a figurative and very literal material sign of failure itself, being present in the debris after the catastrophe. As Smith observed of her comment, the figurative ‘stuffing’ echoed the making of long-standing failure and grievances public:

> ‘the material debris of the fire itself (the poor-quality fire doors, the mould, the cladding that was ‘on fire, falling, landing everywhere’) and the metaphorical: the unheeded voices of residents, as well as the other accumulations and endurances such as the longer histories of urban inequality and sense of marginalisation’ (2021, p.153).

The tragedy of Grenfell tower resonated beyond the building itself, exposing deep, systemic and multiple forms of material and social neglect concentrated in high-rise buildings. As is the case in discussions of vaccine injury, failures are not confined to a vaccine or a single body, but cascade through the wider infrastructures and relations within which a vaccine is entangled. Moreover, in the mobilisation of regimes of failure and knowledge, wider public connections are mobilised, strengthened, ruptured and put under strain through media-work and the spread of stories (often bracketed as misinformation). As Smith described of the inquiry following Grenfell, ‘new kinds of knowledge were taking shape that could not be put back in their box’ (ibid). Yet vaccines represent a case where specifically public failures precisely *are* put back in the box - indeed, this was initially the premise of this project around Ireland drop and recovery in HPV vaccine uptake. Corcoran et al. outline, very succinctly, cross-sector partnerships, social media engagement and focus groups deployed to counter ‘emotive personal narratives, and they lobbied politicians and distributed misinformation, with support from local and national media’ that REGRET had put out (2018). From the perspective of Niamh and the others at the PHMT, it was the walking away and the disengagement - an accompanying and counter-process to Kevin’s accusation of a ‘pushing out of society’ - that produces what I have described as a hinterland. It is a place anchored in painful experience of rejection, but that also provides the potential for of solidarity and community in shared experience. Vaccine injury is socially produced, not just through specific bodily experience, but in the unfolding processes of attempting to materialise, stabilise and situate the failures that it represents. A single question persists - did it happen? Did a vaccine injure Aoife, the Gardasil Girls or anyone else?

7.5 On Causality

The bitter answer to the preceding question is ‘probably not’. The irony comes not from the openness, the strength of evidence against their claim, but that the types of certainty that they expect from public institutions and scientific practice does not exist.

The central question of this thesis has been *how do people know about vaccines?* It might be easy to assume that a favourable ruling in a legal case or via a Vaccine Injury Compensation Scheme (VICS) 'proves' that failure is definitively situated within a given vaccine. What is produced is stable knowledge that justice has been at least somewhat served, even if no liability rests with the manufacturer,. Yet as Anna Kirkland highlights in the United States, parents often interpret a successful compensation payout as confirmation that an injury was caused by a vaccine. She references the case of a parent who 'expressed frustration and disbelief that after her daughter had been awarded compensation for damage caused by an acute encephalopathy after the DTaP vaccine, no one from the government called to ask to study her child' (2016, p.156). The standing assumption for many parents is that vaccine injury is a case of medical diagnosis, legitimated through the courts or a VICS. A judgment by a court 'proves' that it was what happened – it stabilises and sanctifies a particular account of failure.

The accounts of the REGRET parents similarly highlight the issue predominantly as a clinical and medical one. Kiva's stated relentless pursuit of wanting to 'heal her daughter' alongside the inability to find medical doctors willing (or able) to testify on behalf of the parents. In the discussion of material failure above, where a tool or object breaks or 'misbehaves' the immediate effects can be easily and readily observable. Yet in the case of vaccines, the task of establishing a direct and clear causal link in a single individual is extremely challenging. As Kirkland states, a tension in the US vaccine court is that between its scientific and policy objectives:

> Court actors understand ‘science’ as offering various ways to show causation [of a specific adverse event], some more firmly than others, but nonetheless held it out as an objective source of information that ideally should guide all compensation decisions. The problem… turns out that there is just not enough science out there to be used in this way’. (2016, p.78)

Yet the purpose of the vaccine court in policy terms is to act as a type of ‘pressure valve’ to contain frustration, rather than acting as a space to ‘transcribe science into law… but rather by its sociological and political profile as a site of contestation that can do justice’ (ibid., p.200). Whilst the US vaccine court is very different than the current process of cases typically carried out through suing for medical neglect in Ireland, the underpinning concerns and questions are remarkably similar. Parents believe that their child is sick and are searching for an answer - something that Fairhead and Leach frame as a positive engagement with questions through the concept of ‘vaccine anxieties’ (2007). Yet, as I have argued throughout this thesis, much vaccine uptake rests on cultural vaccine acceptance with an aesthetic of rationality rather than careful consideration of ‘the evidence’ in every given situation.

The question of whether a vaccine caused a particular bodily event is framed as one of primarily biomedical and epidemiological causality by the parents, but becomes produced as socio-political through the complex, often adversarial process of adjudicating failure in institutional contexts and beyond. Whilst ‘anti-vaxxers’ are accused - as in the Joe o’Shea at the beginning of this chapter - as being ‘reality deniers’, the parents of REGRET at least began with a trust in the system and a firm belief in science. Indeed, the sustained attempt to find a medical explanation for an otherwise unexplained illness points to a persistent trust in science if not the institutions and organisations that carry it out. As Kirkland has highlighted, the complex relationship between policy and science - or justice and truth - points towards the complexity of hybridised regimes of perceptibility and failure whose internal logics can be at odds with how some of those who understand them participate in them. Yet when a case is thrown out, dismissed or rules against a claim for compensation the vaccine-injured body remains. In the case of REGRET's activism, the vigorous defence by the Irish government and the pivot in media coverage following the PHMT's intervention worked not only to raise vaccine confidence but actively produce hardened vaccine sceptics in the process. The question of biomedical causality sits unresolved and the unwell body persists, with the socio-political dimensions at once present and absent.

What remains across these moments is bodies and protestors standing in the cold, quietly singing and holding signs whilst the public has moved on. The pandemic was irrefutable evidence of a world in crisis. Whilst the experience of their children's illness made public through sympathetic media coverage momentarily did the same, REGRET remain out in the cold. The figurative 'stuffing' had come out, but was either slowly disintegrated through time or was put back in the box. Whilst the protestors nominally occupy a public space, they stand in a different world; a world in which vaccines are generally safe and people take them. A world in which pandemics are ugly, lockdowns are necessary, but most of us made it through more-or-less intact.

7.6 Remnants

In this chapter I have argued that many of the complexities of conversations around vaccines, vaccine resistance and injury can be interrogated productively through the analytic of failure. The manner in which vaccines are distributed across varying epistemologies and processes that become visible at moments of failure give new insights into phenomenon otherwise reduced to ‘hesitancy’. The limitations of social-scientific vocabulary to explore this forecloses the ability to address many of the subtler, but potentially far more harmful, issues that might challenge vaccine confidence. Failures become a moment at which the seemingly immutable becomes vulnerable. As I have traced through this thesis, the vulnerabilities of vaccines and the various forms of consensus and habit upon which they rely. This is an identification of their strength, as well as an opening up of ways to understand their weaknesses.

It is not that vaccine hesitancy is cultural, but that vaccine acceptance – perhaps often very quietly – is just as well. The hinterland that I spoke of above will only ever become more full. A margin stuffed with bodies standing, left in the cold drizzle, forlornly singing a soldier’s song. By attending not just to the stories that people tell, but who listens and how, my hope is that we do not view the reality with which vaccines are intimately entangled as something external to be resisted, but how different people participate in it. There remains an open question as to whether all these moments in time will be lost, like tears in the rain.

8. Conclusion: We Have Never Been Rational

In this thesis I have aimed to bring vaccines back into the social world whilst also offering an account of how they left it. Put differently, it is a study of vaccines as an immunitary (as opposed to solely immunological) object. As I outlined in the introduction, immunity concerns processes of recognition and the resultant states of belonging or exclusion that follow them (Napier 2003; Esposito 2011; cf. Kasstan 2019, 2021). The argument that I have made throughout this thesis is that vaccines silently mediate immunitary social processes whilst remaining outside of them, producing what I have termed 'vaccine heterodox marginalities'. Rather than being a form of marginality rooted in conventionally recognisable categories such as class, ethnicity, religion or gender 'what really determines the otherness of those not taking part in immunisation programmes are their views on vaccination (Drazkiewicz 2021, p.73). My aim in this thesis has been to unpick this form of marginality at the intersection of several key conversations - those concerning 'vaccine hesitancy' itself, conversations about marginality, the challenges that vaccines and margins both present for anthropology and finally some more general societal implications as concern anxieties about 'misinformation' or 'post-truth' (Mair 2016). I will explore these as I recount the main arguments of this thesis, before concluding with proposed contributions to these fields, suggestions on future research and some brief final thoughts.

The first conversation I will engage with is the pressing public health problem of why some people won't take vaccines, commonly referred to as 'vaccine hesitancy' (MacDonald et al. 2015). I opened this thesis by reflecting on how I’d used the label ‘vaccine hesitant’ to describe a group called REGRET. Whilst it promptly backfired as they insisted the label didn’t accurately describe them, but rather it left me with a rather useful set of ethnographic questions about the concept. The first was why they had deemed vaccine hesitancy so offensive. Secondly, it led me to ask what alternative ways are there or framing and exploring the experiences of REGRET and others that publicly criticise vaccines. Finally, it led me to ask why there was such a limited amount of social-scientific study of vaccination. As regards the connotations of vaccine hesitancy, it had been inaccurate for REGRET in that they hadn’t hesitated to take the HPV vaccine.

This point speaks to all three questions - the term belies a lack of understanding of a group of people that are used to feeling misunderstood and the lack of easy language to do so. Vaccine hesitancy is a framework useful at or diagnostic of problems at scale, but says little about people themselves (cf. Bussink-Voorend et al. 2021). Indeed, even my participants in the PHMT made distinctions between ‘legitimate’ vaccine hesitancy and the highly public campaigning engaged in by groups like REGRET. My argument throughout the thesis has been that vaccine hesitancy cannot be understood with a narrow, instrumental focus. Rather, using an ethnographic approach attends to vaccines as holistic socio-material phenomena that are interwoven with local identities, history and experiences alongside cultures that engage with scientific knowledge in different ways. This approach does not downplay the importance of vaccines but re-frames in a way that incorporates the experiences and meanings that are often displaced by the public health framings and epistemologies that seek to maintain vaccine confidence. Vaccines being ‘out of’ the social world makes the experiences of those who believe themselves to have been negatively affected by them unintelligible, a point I will summarise further throughout the other conversations.

It was here that I suggested that marginalisation might be a productive concept to explore the experiences of groups like REGRET. However, this in turn led to further questions about how this particular kind of marginality is to be understood. Described as ‘a context-dependent social process of “othering”—where certain individuals or groups are systematically excluded based on societal norms and values—and the resulting experience of disadvantage’ (Fluit, Cortes-Garcia and von Soest 2024, p.7), studies of marginality typically proceed with a normative commitment to overcoming social exclusion.

The conversation gains particularly complex dynamics in Ireland, a country highly sensitized to the dynamics of marginality through a long history of English colonial domination (Ohlmeyer 2024) and that in recent years has become a prominent example of progressive politics despite a conservative Catholic outlook for much of the twentieth century. I made the claim that vaccines intersect with and reconfigure local ethical priorities, rendering groups that might otherwise be viewed as legitimately marginalised as cranks or agitators. As I explore in chapter six, groups of mothers and daughters opposing the official narratives of pharmaceutical giants and a paternalistic state might have been expected to at least be scrutinised by feminist scholars. This does not, as I have argued throughout this thesis, entail an agreement with the claim that the HPV vaccine is in fact the culprit for whatever experiences the ‘gardasil girls’ endured. It rather asks challenging ethnographic questions about how vaccines specifically interact with marginality by drawing attention to acceptable forms of social exclusion which are not named as such. Simply put, considering groups that criticise vaccines as marginalised does not mean following through on an a priori commitment to inclusion, but rather an enquiry as to how these margins are constituted. This is despite the potential for the intellectual viability of applying critical approaches (e.g. those critical of scientific knowledge, the operation of state power and the at-times dubious ethics of pharmaceutical companies).

Inquiring after marginality in this way places the anthropologist in a deeply uncomfortable position, needing to navigate two conflicting imperatives. The first is to uncritically avoid ‘adopting the methods or goals of medicine and public health’ (Yates-Dorr 2017, p.146) and the latter being to do the same with the marginalised groups at hand. I endeavoured to make these tensions productive, folding the cultural and disciplinary framings of vaccines, power and resistance into the ethnographic frame. This redoubles the argument that I made above; understanding vaccine hesitancy doesn’t rest on the study of people that won’t take them, but enquiring after vaccines themselves.

My fieldwork led me to develop two interlocking concepts to pin down the social characteristics of vaccines. The first of them is vaccine heterodoxy, something that I have used in place of vaccine hesitancy for anthropological analysis. It gestures at the same breadth of phenomena without the presumption that vaccines are intrinsically desirable. I shifted this desirability into my fieldsite, opening up the question of how vaccines are sustained in and through widely held cultural orthodoxies, even if these beliefs are rooted in robust scientific evidence. The remit of science is severely truncated without wider cultural acceptance, especially in public health programmes that require the vast bulk of a population to be immunised. Thus the latticework of belief, trust, evidence, facts, experience, affect and memory are co-present in sustaining what vaccination ‘is’. As I explored in chapter two, if we turn our attention to the time before immunisation existed in Ireland we can see how these norms were embedded through complex socio-political processes. Vaccines - like Pasteuris - never acted alone, but were always woven through and extended by a host of other actors that can too readily slip from view (Bennett 2020, Latour 1988). It is this chain of logic that has lead me to use the term ‘vaccine heterodox marginalities’ to describe the phenomenon that I am investigating. Not consisting of a set of views about vaccines or a property of vaccines, but in the dynamic interplay between them situated in the various parts of my fieldsite.

This draws me to my second key concept, that of vaccine exceptionalism. By exceptional I mean two things; the first is to be exemplary or generally excellent, reflected in the triumphalism and enthusiasm that my participants tended to have for vaccines and that I found in the literature. The inverse was also reflected in the hesitancy people felt about expressing their concerns or doubts. I also mean ‘exceptional’ in a more technical sense, as categorically (ontologically) excepted from the social world. This draws me back to the opening line of this conclusion - where this exceptionalism is a critical feature of understanding vaccine heterodox marginalities. Most of my participants spoke about vaccines as neutral, biomedical artefacts. Wonderful things to be celebrated, certainly, but *things* insofar as they do what they do regardless of what people think about them.

Thus opinions and rumours may circulate about vaccines (Larson 2021), but vaccines themselves are left ‘all alone’ (Mol 2002, p.12). This boundary between things and representations serves as a potent means by which vaccines are immunised from social critique and is the substance of their exceptionalism. The division runs alongside many others that are fundamental to critical analyses of modernity (e.g. Latour 1993; Scheper-Hughes and Lock 1987; Napier 2003) and surface in hosts of closely related dualisms. The divides between bodies / minds, rationality / emotion, people / things, science / politics, civilisation / barbarism, facts / values, vaccines / hesitancy and more besides surfaced in conversations about vaccines in my fieldsite as I have traced throughout the thesis. As I explore in chapter three, facts and vaccines mutually reinforce eachother. Vaccines are unique in that they rest not just on a single aspect of dualism, but the simultaneous mobilisation of many together. They represent science, civilisation, facts, medicine, democracy, humanitarianism and modernity simultaneously. This interlocking series of dualisms make vaccines irresistable, producing vaccine heterodox marginalities in the process.

The final piece of the puzzle within this is the counterpart to the exceptionalism of vaccines, which is their mundanity. Between chapters two and four I explored the historical and social processes by which vaccines became normal and a matter of common sense. As I have argued, a cultural enthusiasm for vaccines and science in my fieldsite is not necessarily synonymous with the rational actor who embodies Western epistemic standards. Insofar as vaccines were not a thing thought about by most people in my fieldsite, rather sustained by mutual relations of trust in medicine, the state and the artefacts themselves. 'Anti-vaxxers' are constructed against standards that are otherwise never in practice applied, resting on 'a particularly damaging kind of group character assassination' (Hausman 2020, p.13). In many ways, it is simpler to not have conversations about vaccines - to continue with ontological security. Thus whilst the vaccinated individual represents and embodies rational, civically-minded person, they do so as much as a result of orthopraxis as intellectual deliberation.And, to be very clear, this is not a problem. Nobody is perfectly or absolutely rational, but decisions not to vaccinate are assessed against standards that nobody (in practice) can live up to.

It is this that draws me to the heart of vaccine heterodox marginalities; it is a question of expectation. As I explore in chapter five, information is given as a medium which has the power to depict the real, something purely representational which empowers rational subjects to reach the appropriate conclusions. It is here that the phrase 'get the facts, get the vaccine' that we explored in chapter three is fully expressed; that being in possession of the appropriate factual information will lead necessarily to the vaccine, because nothing else can be said to matter. By situating all of these things together, attending to them through a material-semiotically inclined ethnography, vaccine heterodox marginalities become accessible without collapsing into relativism or scientism.

Despite all of this, there remains an unresolved tension - the epistemic instability of the vaccine damaged body. Vaccines are a biopolitical technology; things that become visible at the level of populations through clinical trials and epidemiological studies before they do individual people. It might tell you that one in a million will suffer a serious, life-long side effect or even die. For most individual people, as I have stated throughout the thesis, vaccines only become visible at moments of failure. Making the connection between a particular bodily experience and a vaccine is a remarkably complex affair, ultimately being settled in a court that considers clinical evidence (amongst other kinds). The cultural trust in science is one that provides ontological security in and of itself - the promise that certainty in these matters is possible at all. These are not claims that were made by my participants in the PHMT, but rather in the wider ‘out there’ of the media, the state and public discourse. The vaccine damaged body exists as a theoretical possibility but cannot be made socially real without passing through institutionally-mediated processes of legitimation. The question cannot truly be settled, only moved to be accommodated.

is useful as a concept for interpreting the experience of vaccine heterodox populations in several ways. More than simply providing a language of description it opens a vista onto the wider conversations that vaccines are a part of. In linking these margins explicitly to vaccine heterodoxy itself, the dynamics of belief and culture that underpin vaccine orthodoxies can be grasped. Thus vaccine acceptance is as local and varied as vaccine hesitancy and, itself, should be engaged with as part of any analysis of the phenomenon. It suggests the need for ongoing and nuanced engagement between social science and studies of vaccination. Where many of the most seemingly robust modern cultural assumptions become unfurled, enfolding them into the lens of analysis can help to sustain vaccine confidence without spilling into over-confidence. Anthropology in particular is uniquely suited to this form of complex conceptual analysis, at the same time finding its own priorities and disciplinary tendencies towards marginality held up to scrutiny. It is less about support for or opposition to vaccines, but close interrogations of the logics that reduce such issues to narrow binaries read through a fixation on limited questions of evidence while occluding much of the very humanity it intends to protect. An immunitary framing attends to these dynamics, bringing vaccines back to earth - acknowledging their strengths as well as their vulnerabilities, of the need for them to protected as well as securing the consent of those they protect.

To conclude, vaccines are a curious way into many of society’s best and worst aspects. In a nearly all-encompassing collectivism that doesn’t recognise its remnants. Marginality might call for their re-integration, but it isn’t that simple. In strange ways, it returns me to Robert Park’s original figuration of the ‘marginal man’ - where specific individuals become a microcosm of wider social processes (1927). Where post-truth anxieties stalk what might be seen as modernity’s greatest achievements - vaccines, science, democracy - coalesce around particular individuals caught in a torrent of things far bigger than themselves. Vaccines are currently an immovable object against which the seemingly unstoppable force of critique is dashed. It requires the holding of space, of recognising the tension and ambiguity inherent in scientific practice. It also calls anthropologists to exercise discernment in two directions - of curtailing solidarity in absolute forms or simply adopting the aims of public health as their own. Rather, open-ended analyses need to situate vaccines back in the world from which, for many, they have successfully escaped. It requires accepting that vaccines, for the overwhelming majority, are taken not for the sake of reason but of faith. This sits uncomfortably for all parties concerned - for scientists in realising that they have to deal with people, for the populace in that perhaps they aren’t and that the heterodox are little different. We may have never been modern (Latour 1993), but we have never truly been rational either.

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