

Platform NHS: Reconfiguring a Public Service in the Age of Digital Capitalism

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Abstract

The platform is emerging as a key organizational form and operational logic of contemporary capitalism, intimately tied to financialization and assetization. However, discussions to date have focused on platforms and platformization in the context of the private, corporate, and technology sectors. In this paper, we develop an analysis of how platformization operates in the context of public policy. Using the UK's National Health Service as a case study, we explore how platformization is altering the form and function of the state. The platformization of the NHS has its roots in the UK government's strategic interest in the development of the bioeconomy. This led to the creation of a research infrastructure within the health service. Subsequently, the NHS has leveraged various assets into a range of

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data- and technology-focused initiatives. We argue that platformization has been a major form of neoliberalization within the NHS. The paper concludes with a discussion of what an analysis of public platformization can teach us about ongoing transformations of the state.

Keywords

platform, platformization, assetization, public organization, bioeconomy, digital capitalism

Introduction

Resisting the specter of a privatizing National Health Service (NHS), the UK's free at point of delivery health-care system has been a chief concern among campaigners, keen to protect the delivery of services to patients from what they see as the corrupting influence of neoliberal market logics (Pollock 2004; Pollock and Price 2011; Tallis and Davis 2013; Sturgeon 2014). While these campaigns have highlighted many crucial issues regarding public health and state restructuring in the United Kingdom, the focus on privatization has meant that other avenues of change have received relatively less attention. In fact, as we shall explain here, over the past fifteen years, the NHS has undergone a significant transformation in its structure and purpose. Successive UK governments have sought to refashion the NHS into a dual-purpose institution: in addition to providing healthcare to the UK population, it must now also contribute directly to the wealth of the nation. To this end, it has been transformed into a catalyst for and conduit of biomedical research. Increasingly, the NHS is being asked to facilitate data production as part of an overall effort to accelerate the process of translation, whereby NHS-supported research informs profitable public—as well as private-sector-led—advances in medical treatment.

This development is part of an explicit state strategy. The UK government offers a hybridized public–private “bioeconomy” (HM Government 2018) as the solution to a range of social and economic problems. According to its promoters within and outside the state, the development of a profitable bioeconomy will leverage, as a collection of assets, one of the UK's most important institutions: the NHS itself, including its workforce, its relationship with patients, its physical infrastructure, its well-established brand and reputation, and its vast troves of medical data. Alongside the more visible signs of commodification, this process of assetization (Birch

2017) can be seen as the expression the broader political–economic process of neoliberalization is taking within the NHS. Specifically, in order to leverage its various components as assets, the NHS is adopting what is for the state health service a hitherto novel organizational shape: the platform, which is being used to facilitate an increasingly entrepreneurial approach to digital medical data. The platform is a major organizational form and strategy of what some analysts call “digital capitalism” (Wajcman 2015) and others term “platform capitalism” (Pasquale 2016). In this paper, we examine the “platformization” (Pasquale 2016; Srnicek 2017; Just 2018; Nieborg and Poell 2018; Van Dijck, Poell, and De Waal 2018) of the NHS. Platformization, we shall explain, names a diverse set of strategies that seek to capitalize on the occupation of a strategic location within specific kinds of networks. The platformization of the NHS is now well underway, and is taking a number of different forms. It has also largely escaped public scrutiny. But we argue that understanding it is crucial for tracking political–economic change within the health service. And given the platformization of other areas of policy, such as urban governance (Fields, Bissell, and Macrorie 2020) and policing (Egbert 2019), understanding public platformization is important for understanding the contemporary state more broadly.

How and why is the platformization process taking root within the state? How are public services being reconfigured in order to facilitate this form of circulation? What new data circuits are being constructed? And what does this mean for the future of public healthcare provision? Using the case of the NHS, this paper draws on the concept of platformization to track ongoing transformations within the health system. Contextualizing this process within broader political–economic changes, and drawing on an analysis of relevant examples, we argue that platformization—as distinct from privatization—is a major form that neoliberal restructuring is taking within the NHS in the current period. As the NHS is refashioned into a platform for digital health data, it is taking on new goals and imperatives. We examine the extent to which these new goals conflict with or amplify its long-standing commitment to delivering healthcare as a public service.

These questions, although situated in our discussion of the UK, go much deeper. They provide us with a more textured picture of how neoliberalism is impacting public institutions. We also seek to contribute to theories of platformization more generally. It is not only commercial firms that are pursuing platformization. Public institutions are also being platformized, and it is important to understand the many impacts of this process for the state, citizens, and public employees. The literature on platforms suggests

that they are not merely new ways of facilitating the exchange of information and services; rather, the platform logic impacts institutional incentives, capacities, and powers. Yet platformization does not dictate outcomes. It introduces ambiguity and is compatible with multiple systems of value (Barta and Neff 2016). Tracing the emergence of platform NHS is a way to track emerging organizational logics that may transform what it means to be a patient, worker, and citizen within the public health system.

This paper has two purposes. First, we want to use the case of the NHS to explore some of the complexities of platformization in the context of a public service provider. Much research has focused on for-profit apps and other private ventures. Public platforms—especially health-focused ones—raise a distinctive set of issues. Discussing consumer-oriented medical platforms in general, Van Dijck, Poell and De Waal (2018) note, “Examining health platforms, we can detect a peculiar double-edged logic in how their benefit is argued. On the one hand, they offer personalized data-driven services to their customers, on the other hand, they allegedly serve an overarching public interest in medical research, the outcomes of which benefit everyone” (p. 98). This paper will parse these multiple conceptions of benefit within a platformizing public health system. Second, we want to use the concept of platformization to explore “actually-existing neoliberalism” (Brenner and Theodore 2002) within the NHS. Platformization, we argue, is one of the major emerging forms of neoliberalization within the UK’s health service. Understanding the platformization of public health can therefore help us understand contemporary changes to the welfare state and public health regimes. Platformization has emerged from and bolstered other processes of change, such as the rise of the research agenda within the health service. Within a platformizing NHS, the potential for data- and research-oriented practices sits uneasily but dynamically with the public mission for healthcare.

Platforms and Platformization

The platform is becoming one of the key contemporary political-economic formations (Just 2018; Van Dijck, Poell, and De Waal 2018; Vallas and Schor 2020). Platforms combine digital technology with particular organizational forms. There are many varieties of platforms, but at their heart, they all pursue a common strategy: value is generated through the occupation of a strategic place within a particular kind of proprietary network. The essence of platforms is that they are “infrastructural arrangements that situate digital operability on proprietary systems that are, to some degree,

programmable and/or customizable by the system users, making possible one- or multisided market exchanges” (Andersson Schwarz 2017, 375). According to Langley and Leyshon (2017, 13), “the generative force of the platform in digital economic circulation turns, in different ways, on *practices of intermediation* and *processes of capitalization*.” Platform intermediation entails the convening, facilitating, and coordinating of relatively autonomous actors, enabling them to function as a network. Platform capitalization is the process by which this intermediated network becomes seen as potentially income generating and is thus able to channel investment. The construction, operation, and exploitation of platforms, and the alteration of existing organizational forms to align them with the logic of platforms, are known as “platformization” (Casilli and Posada 2019; Poell, Nieborg, and Van Dijck 2019). This strategy can now be seen in a variety of economic sectors (see Srnicek 2017; Fields and Rogers 2021).

The platform is not only a business model. Various theorists have built upon this picture to develop an account of *platform capitalism*, which refers to the larger set of relations, exogenous institutional arrangements, and sociolegal conditions upon which platforms depend and which platform actors seek to develop and strengthen (see Pasquale 2016; Langley and Leyshon 2017; Srnicek 2017; Montalban, Frigant, and Jullien 2019). The platform is also an ideological formation that includes terms like “the sharing economy,” “smart cities,” and the “gig economy” (Barta and Neff 2016; Sadowski 2020; Vallas and Schor 2020). The logic of platforms is diffusing throughout social life, producing what some analysts call “platform society” (Van Dijck, Poell, and De Waal 2018).

Platforms are inherently linked to financialization (see Epstein 2005; Krippner 2005; Fine 2010; French, Leyshon, and Wainwright 2011; Lapa-vitsas 2011; van der Zwan 2014). Platformized firms are often supported by venture capitalists and other financialized actors. And in a deeper way, there is a structural affinity between platformization and financialization. Both are strategies aimed at accumulation through facilitation. Both seek to foster new forms of exchange while harboring tendencies toward new forms of rentiership (see Birch 2020; Pinel 2021). Furthermore, while some platforms function as ways to produce, distribute, or consume commodities, it is clear that many platforms are sites for processes of assetization as opposed to commodification (see Birch 2017). If commodification is inherently tied to selling products and transforming uncommodified or de-commodified objects into products for sale, assetization entails the transformation of a tangible or intangible thing (such as a knowledge or skill) into a revenue-generating resource. Unlike commodification, where

value generation is predicated on properties being traded or possessed, assetization does not entail alienation. But it still involves exclusionary rights to access based upon fees or subscriptions and privileges financialized actors and economic rationalities.

Platforms are not politically neutral (Gillespie 2010). They amplify the power of firms that control them, while dispersing responsibility. Platforms create new potentials for discipline and surveillance, even as workers under platform capitalism are still capable of resistance. While their owners or controlling actors do not exercise absolute power, platforms are also easily compatible with hierarchies and stratification. Platformization is strongly compatible with neoliberalism (Fleming, Rhodes, and Yu 2019; Murillo, Buckland, and Val 2017) in its fragmentation and individualization of labor; its contingent and uneven temporalities, which lend themselves well to precarity and on-demand provision; and its emphasis on entrepreneurial surveillance. Platforms should be regarded as always-already political, but they are naturalized to a significant extent within contemporary economic imaginaries, and they do not always resemble commonplace images of commodification or privatization. Teasing out their politics is therefore an important analytic goal.

There are many different types of platforms, which vary across sectors, strategies, and forms. Porter's (2004) typology of virtual communities identifies the range of *actors and organizations* that operate platforms. These include social member-initiated communities, professional organizations, commercial firms, nonprofit organizations, and government bodies. Platforms are heterogeneous by definition, so in practice, they often blend these categories. Srnicek (2017, 49) identifies five different types of platform *functions*: advertising platforms like Google that offer services to users, and in the process collect data on them which are used for targeting advertising; cloud platforms like Salesforce that collect income streams from letting consumers and other business use their proprietary networks of software and hardware; industrial platforms like Siemens that create infrastructure for networked manufacturing; product platforms like Spotify that sell subscriptions for consumer use of their property; and lean platforms like Uber that connect consumers with producers or service providers and that seek to profit from the resulting cost reductions. These various functions and accumulation strategies can often overlap and mutually support one another, and, in practice, actually existing platforms tend to embody a number of these functions simultaneously. Finally, examining a variety of health technologies, Kordzadeh and Warren (2013) provide a useful typology of collaborative platforms based upon their *structure* connecting

consumers and professionals. They identify four types: professional-to-professional (P2P) platforms, which function like online social networks or discussion boards for health workers; professional-to-consumer (P2C) platforms like Ask a Doctor or WebMD that enable health providers to communicate with patients; consumer-to-professional (C2P) platforms that enable patients to provide ratings or feedback to health providers; and consumer-to-consumer (C2C) platforms that include a variety of message boards, social networks, and consumer-run ratings websites. These various typologies should be seen more as analytic tools than strict taxonomies. As we shall discuss, the various platform practices being developed within the NHS tend to move between these categories, in some instances functioning like a state-operated P2P industrial platform, in others operating like a professional-led P2C product platform.

Beyond these general typologies, we can highlight three salient functions of platforms that are relevant for our discussion: the logic of catalysis, delegated governance, and data entrepreneurialism.

Platforms utilize what we term *the logic of catalysis* in that they are never, in essence, ends in themselves; rather, they are set up with the explicit goal of initiating action by others. “A business is an economic catalyst if it creates value by bringing two or more groups of customers together and getting them to interact The economic value created by the catalytic reaction is essential for understanding the feasible set of business strategies that a multi-sided platform can use” (Evans 2009, 100). As catalysts, platforms are essentially infrastructural, in that they exist to facilitate or accelerate other ventures. This creates complex relationships, with for-profit platforms seeking both to support and exploit their participants.

Since platforms convene and coordinate the practices of other actors, they have some quantity of inbuilt instability and indeterminacy. Keeping platforms on task requires a particular political approach that can be called *delegated governance*. This is a form of government at a distance, where decentralized control and autonomy exist within a larger framework of centralized power. Comparing platforms to similar structural formations, Vallas and Schor (2020) write, “In contrast to hierarchies (which centralize power), markets (which disperse it), or networks (which parcel it out to trusted collaborators), platforms exercise power over economic transactions by delegating control among the participants” (p. 282). They describe platforms as “permissive potentates.” Within platforms, there are some actors who exercise domination over others, and platformized firms as a whole can be seen to exercise “platform power” (Cohen 2016) in a broader sense. But this power, along with attendant political responsibility, is relatively

diffuse. Understanding governance and government within platforms therefore requires an analysis of both the politics of domination and the politics of delegation.

We use the term *data entrepreneurialism* to refer to a strategy predicated upon finding new ways to produce and valorize data. The centrality of data within platform formations is widely recognized. “Essential to all of these platform businesses . . . is the centrality of data. Data is the basic resource that drives these firms, and it is data that gives them their advantage over competitors” (Srnicek 2017, 254). But it is not only that platforms produce and utilize data; rather, they encourage and even depend upon the adoption of an entrepreneurial stance toward data that seeks constant innovation and novel applications. Quantified, digitally stored and manipulatable information is treated as a central source of leverageable, investable value. New forms of value must constantly be found. This is not incidental to the platform as an organizational format; it is one of the central valuable resources that platforms are able to capitalize. They therefore become ineluctably optimized toward the generation and exploitation of data. When they seek out opportunities for expansion, they do so by finding new markets and uses for the data that they produce and circulate.

Understanding how the various forms, functions, and consequences of platformization are reshaping the NHS is the goal of the remainder of this paper. Drawing on government statements, official reports, and other public-record documentary sources, we explore the unfolding of platformization within the NHS over the past two decades. This process raises a number of interconnected issues: the financialization of the state, the unique forms that neoliberalism is taking within British public healthcare, and the coexistence of research and care within health settings. Our goal is to tease out the contradictions, tensions, and conflicts within the UK’s public health system’s distinctive pathway through the platforming process.

Retooling the Health Service

Over the past twenty years, there have been a number of significant junctures where platform logic became part of the NHS’s jurisdiction. They have been central in changing the goals and strategies of the NHS as an organization. Platformizing the NHS has been offered both as an open-ended policy goal as well as a strategic route toward other changes.

The rise of the research agenda within the NHS is one of the major areas in which platformization has occurred. Research, in the form of clinical trials, had taken place within the NHS for decades. But during the Blair

government, it explicitly became seen as an area for growth and national enrichment. In 2003, the UK's Department of Trade and Industry's Biotechnology Innovation and Growth Team (BIGT 2003, 7) presented their vision that the "UK will become the most efficient and effective setting for conducting clinical trials in the world." This document reframed the UK and NHS as core actors in the bioeconomy, with the NHS identified as "a unique institution globally, providing a gateway to the largest pool of patients in the world, and caring for those patients from cradle to grave" (p. 7). Pushing for the NHS to be "a leader in clinical innovation, with the infrastructure and the expertise to support cutting edge clinical research that improves patient care" (p. 7), they viewed the NHS as an important actor within wider UK bioscience industrial strategy. This is the birth of platformization within the health service: as a broker of potential research participants for both publicly- and privately funded clinical trials.

It was only with the publication of *Best Research for Best Health* (Department of Health 2006) that the UK government signaled a broader shift in the aims and focus of the NHS as a whole. Moving away from being a provider of care where some research took place, this document presented the NHS as a research *and* care organization. *Best Research for Best Health* situated research in the everyday work of the NHS. This report is seen as the start of the "health and wealth agenda" and articulated clearly the importance of the NHS for health research and national economic prosperity:

The vision that this strategy describes is underpinned by our determination to ensure that the NHS contribution to health research is a centrepiece of the Government's ambition to raise the level of research and development (R&D) to 2.5% of GDP by 2014. (Department of Health 2006, 1)

Situating health research as a core remit of the NHS, this report announced several developments. In particular, it established research infrastructures such as the National Institute for Health Research (NIHR), which centralized the NHS funding of health research and NHS-funded research training. And the report proposed the introduction of specialist centers to bridge university and hospital settings to aid the translation of health research from laboratory bench to patient bedside, known as Biomedical Research Centres. *Best Research for Best Health* emphasized the steps needed to start the process of turning the NHS into a research *system* that would be an interface between hospital, university, and industry.

With the founding of the NIHR and the insertion of research into other areas, research could no longer be considered an incidental activity within a health system primarily oriented toward patient care. Now it would become increasingly central to the mission of the health service. The NHS itself would be seen not only as a public service to be protected but also as a national resource to be exploited. While this shift was initially based on the need to support and develop translational research, the emerging research-oriented NHS aimed to be an active partner in research itself, investing in the research process, research infrastructures and directing the research agenda. This document presented the broad vision of an NHS set up for completing research—with the requisite infrastructure to support research, and routine care delivered and recorded in a way that could support research, most notably through a commitment to and adoption of interoperable, Electronic Health Records (EHR). The research turn kickstarted the process of platformization, by introducing the NHS as a catalyst for private-sector research, bringing on board new partners within its research network, and spurring to set up the infrastructure for a more entrepreneurial approach to data.

Later that same year, tasked by the UK Chancellor of the Exchequer, David Cooksey (2006) reviewed UK health-care research funding. The document supported the “Government’s vision . . . of a holistic health R&D system that will maximise the value of the UK’s health research base, ensuring the UK’s health research is more closely aligned with wider health objectives, builds on scientific progress to date, and translates the results of research into economic benefit” (p. 9). Streamlining R&D and helping to create a more coherent research system, this report presented the NHS as a central asset to be used in developing and supporting the research and economic prosperity of the UK:

The quality of the health research base, combined with a national health service, creates a major selling point that attracts R&D investment from the pharmaceutical and biotechnology industries, which form a major part of the UK knowledge economy. (Cooksey 2006, 2)

The Cooksey report focused on the governance of research and streamlining research processes. Highlighting problems with the NHS culture—“fewer disincentives to carry out research,” “a need for a less conservative approach to new ideas and technologies” (Cooksey 2006, 66), Cooksey presented a disconnect between the vision of research as embedded in NHS work and the practices and processes that existed at the time. Though it was

still more a prospect than a reality, the government saw that turning the NHS into a catalyst for advanced medical research potentially heralded a new economic role for the health system as a whole.

The question became how to connect this research infrastructure to both public and private investment. This was addressed in a 2011 report by the Department for Business, Innovation and Skills, which aspired to create an “ecosystem” for research including the NHS, industry, and the academy. Developing this ecosystem by offering incentives for industry to invest in the UK was said to “strengthen our current position and locate us at the heart of a revolution that will make the UK the global hub for life sciences in the future” (Department of Business, Innovation and Skills 2011, 5-6). This strategy sought to incentivize and support business, but it was not a free-market vision. The UK’s claim to international competitiveness in the bioscience industry, according to the report, was based on the centralized nature of the “the world’s largest integrated national health system” (Department of Business, Innovation and Skills 2011, 8). The NHS was centrally governed, but capable of delegating authority to partners, including academic labs, industrial firms, the nonprofit sector, and arms-length organizations. This particular organizational ecosystem was cast as one of the UK’s major competitive advantages.

It was at this time that the health service began taking a more entrepreneurial approach to patient data. Up to this point, while the emphasis was on research and creating a research ecosystem, access to the patient for research was largely made possible through their active recruitment to specific research projects. The Coalition Government, led at the time by Prime Minister David Cameron, changed this. Claiming that we need to “open up the NHS” (HM Government 2011), the Coalition Government spearheaded changes to the NHS Constitution (Department of Health 2012) and legislation (HM Government 2012a), which facilitated the anonymous use of routine health records for research purposes. The information locked up in NHS records was being transformed into more usable streams of data.

These legal frameworks, and wider shifts, all served to reconstruct the NHS as a central gatekeeper and actor in facilitating, attracting, and supporting health research in the UK and crucial to the UK’s contribution to the bioeconomy. Research was no longer something that was completed with NHS patients and NHS data. Instead, it was to be mediated through a research-ready NHS (HM Government 2012b). In being retooled to support the research agenda, the NHS began acting like a state-sponsored P2P industrial platform. It was reorganized to catalyze research and scientific innovation that would be conducted by others. Private firms, arms-length

organizations, and universities were delegated new powers and capacities. And the health service began treating data as a valuable resource. In short, the NHS was beginning to adopt the logic of platformization. But this was only the first phase of this process. To expand and deepen the platform logic, the NHS looked to leverage other assets.

Leveraging Assets

In recent years, strategists and policymakers within the NHS have become increasingly cognizant of the value of various physical, symbolic, and relational properties that could be assetized by the NHS. Assetization was both enabled and promoted by the platformization of the health service.

The rise of the research agenda begat a broader shift toward the assetization of health data. The NHS patient health record and access to the NHS patient are core assets the NHS brings to research. Over the last two decades, there has been consistent government investment to replace paper recordkeeping with EHRs systems across the NHS (see Wyatt, Lampon, and McKevitt 2020, for an analysis of this digitization process). This ongoing process of digitization enables health data to move around the health system more efficiently. The NHS has long kept records of patients from cradle to grave, but the digitization process turns these data into a valuable asset. As data circulate through the health service, they are enriched. With anonymous use of EHRs for research written into law and frameworks in place to use non-anonymized data without consent when patient benefit can be shown, the expansion of digital recordkeeping is touted as a valuable resource.

Platform NHS, however, is not limited to care and research. With the establishment of NHSX in 2019, the health service developed more direct-to-patients, P2C platform capabilities. Taking its name straight from the corporate nomenclature of Silicon Valley, NHSX is the information technology unit within the health service. It typifies the approach to technology and platformization of the current UK government, under the leadership of Prime Minister Boris Johnson, which in many areas has explicitly announced the goal of using, to the fullest extent possible, all of the powers of algorithmic governance and digitally enabled policy. In announcing the creation of NHSX, the Government stated, “[i]t will combine the best talent from government, the NHS and industry” (Department of Health and Social Care 2019). Managing a budget of over £1 billion (NHSX 2020), NHSX works with tech start-ups to develop new approaches to healthcare and the health-care system, including the use of artificial intelligence (AI), machine

learning, predictive algorithms, and other techniques. Its promoters see it as an opportunity to harness the potential of technology to support staff in the delivery of care, support patients in managing their own care and improving the safety and efficiency of the healthcare system at large. It also intends to set best practice for digital health and innovation within the NHS through data sharing and transparency policies. Through NHSX, private-sector firms like Babylon Health and Google are explicitly delegated authority and invited to find new ways to extract value from the health system, freely mixing supposed public benefits and intended private profits.

One of the key components of this initiative is the development of the NHS App. Modeled on P2C platforms, this is a mobile phone app that draws together some of the services from within the NHS, for example, information on different illnesses and symptoms, repeat prescription requests, and the ability to view certain parts of the medical record. NHSX specifically identifies the NHS App as a platform (Gould 2019, 2020). This platform, the CEO of NHSX, Matthew Gould (2019) explains, is built in such a way as to facilitate others building and innovating on top of the app. In doing so, “[i]t will mean those products will respond far faster to user need than we ever could and will provide more features and uses than we could dream up” (Gould 2019). The NHS App is explicitly cast as a catalyst for innovations developed by others. It represents one way for private firms to become involved in the provision of healthcare but as delegates within the NHS-controlled network. And it facilitates the circulation and collection of health data. As a public-private, digital tool, the NHS App represents one emerging future for public services, one where the logic of platformization is most fully realized.

The NHS App and NHSX are the first initiatives to situate the NHS within the global health technology industry. NHSX brokers access to the NHS, its systems, and its data in ways that facilitate the development of further technologies to improve the health-care system. NHSX draws heavily on the potential offered by digital technologies, data analytics, and the cradle-to-grave data held within the NHS. In the work and partnerships of NHSX, the NHS becomes a platform for tech companies to develop and test their apps and potentially sell back to the NHS. It also allows the NHS to build upon and assetize its own reputation, as a seal of approval for other, commercialized apps. In short, NHSX provides a means of leveraging data, patients, reputation, and access to the NHS in partnership with these tech companies. It demonstrates an entrepreneurial stance that relies on but extends beyond the NHS’s rich data.

This entrepreneurial approach to data is reinforced and developed in continuing, wider shifts to support research and research infrastructures. For example, the NIHR has launched numerous campaigns within hospitals to stress research within these settings, such as “Ok to ask about clinical research” and the “I am research” campaigns (see, e.g., Wienroth, Pearce, and McKevitt 2019, for an analysis of these campaigns). The patient here has been repositioned from solely a recipient of care to a potential research participant (Wyatt, Cook, and McKevitt 2018; Wyatt, Lampon, and McKevitt 2020). In these campaigns, research is cast not only as valuable to everyone but also as a form of national service in which patients and citizens have a responsibility to participate. In addition to these awareness campaigns, the NHS and NIHR have also worked to further develop a research culture within hospitals (Department of Health 2011; Malby and Hamer 2016), linking research recruitment targets to funding (HM Treasury 2011) and increasing commercial research in NHS trusts (NIHR 2019).

Clinical trials represent another area for entrepreneurial, platformized expansion. When commercial research companies require patients for clinical trials, they are now able to pay for access to infrastructure within NHS trusts and NHS research staff. The NHS has reorganized the workforce to help meet the demand for the delivery of clinical trials, introducing and professionalizing new roles with the sole purpose of supporting research delivery, such as Clinical Research Practitioners (Faulkner-Gurstein, Jones, and McKevitt 2019). Such changes demonstrate how a research system has adapted within the NHS, not only to diversify the workforce but also to create infrastructures and policies to facilitate the hospital site as a rentable platform for commercial and noncommercial entities.

Other parts of the research infrastructure, such as biobanks, have also been imagined as platforms (Mittra 2016). Initiatives such as the UK Biobank or the 100,000 Genome project have received significant public funding and support in order to make biological samples available to private and public research organizations. This, too, represents the development of a research infrastructure that seeks to catalyze innovations by others that will generate both medical breakthroughs and new commercial applications.

While platformization began with the earliest turn toward research intensiveness, in the past few years, it has rapidly expanded in multiple new directions, including but not limited to NHSX, the NHS App, biobanks, and routinized availability for clinical trials. In all of these instances, platformization has brought changes to the NHS’s strategic goals, procedures, partners, and parameters. Planners and policymakers have begun to see the NHS as a catalyst for future medical advances and new bioeconomic innovations.

They have delegated new forms of authority to a range of actors and firms as participants within health settings, from pharmaceutical companies to IT firms to outsourced labor. And the NHS has been thoroughly reorganized as a creator and broker of health data. Platformization, in short, has been a major direction of transformation for the UK's public health system.

Discussion and Conclusion

In this paper, we have drawn on the emerging literature on platforms to explore how platformization and platform logic have been adopted by the state, focusing on the case of the NHS. We have demonstrated that the platformization of the NHS has been an explicit state strategy. We have documented how important concepts within the platform literature appear within NHS practice, in particular, the logic of catalysis, delegated governance, and data entrepreneurialism. In exploring platformization as an expression of neoliberalization and a mode of public service provision, we have sought to expand the concept of the platform beyond its usual usage describing private organizational forms. We are not arguing that the NHS is transforming into a tech company. Rather, the NHS is adopting some of the logics and techniques that are common in commercial platforms. The NHS produces, owns, stores, leverages, and mediates access to its data; it provides infrastructures and makes resources available to support research; and it helps produce a patient population that is both researchable and open to participating in research. Platformization has not merely been a process that supplements core NHS activities. Rather, it is a direction of change that has transformed the form and function of the NHS at multiple levels.

The literature on platforms and platform capitalism raises important issues such as how platformization is implicated in precarity and inequality, how platforms treat data and privacy, and to what extent platformization is a way to evade responsibility toward workers and users. When it is part of the state itself that is platformizing—a part connected to fundamental social rights—then all of these questions are relevant as well as other issues unique to public platforms.

The platformization of the public health system directly raises the question of public benefit. Platformization complicates and multiplies the concept of the public interest. The platform research model has facilitated the development of new treatments and medicines, potentially leading to better patient outcomes. But platformization also extends the notion of public benefit into murky areas where developing a research infrastructure uses

the strategies of private firms. As we have explained, the push for platformization occurred as a result of the “health and wealth agenda,” which posited a dualistic conception of the public benefit conceived both in medical and economic terms. But platformization makes these intertwined logics difficult to evaluate. The delegation of authority to private firms means that some public funds and resource are supporting private profit-making. And yet as part of the platform, these private initiatives attempt to define themselves as part of the public good. There is a risk not only that public resources will be predatorily appropriated by private-sector technology or pharmaceutical firms but also that these same actors might use the platform to engage in a kind of reputation-washing, drawing on the NHS as a brand.

The platformization of the NHS is in many ways a promissory and speculative practice. The development of new medical treatments involves decades-long time horizons; new technologies make take years before they have a significant impact on public health. In reorganizing the NHS along platform lines, the government seeks to build an ecosystem where at least some bets will pay off. But there remains a fundamental element of risk.

At the same time, this case highlights the differences between platformization and other forms of neoliberal transformation of public services. Platformization is not facilitating the commodification of health, strictly speaking, nor does it represent privatization in the sense of turning NHS workers into private employees. Rather, platformization is best understood as a process of variegated assetization. Under platformization, numerous aspects of the health service—its facilities, its reputation, its relationship to patients, and perhaps most prominently, the data that it produces—are transformed into assets and entered, in diverse and complex ways, into newly constituted economic circuits. The NHS has not become a profit-seeking organization, but its transformation into a platform for commercial research and data brokerage has in some ways turned it into a revenue-seeking one.

The platform, as an organizational model, is not only an economic logic. It draws on technologies and techniques developed in Silicon Valley, but one of the reasons for its persistence is that it simultaneously seems to speak to a variety of different purposes. It can facilitate market-oriented initiatives and is clearly a bridge for private firms to do business with the health service. But it is also being promoted as a way for the public health service to better meet its obligation to the public. The question, then, is specifically how the platform model is being applied. We have identified the logic of catalysis, delegated governance, and data entrepreneurialism as salient

aspects of the platformization process. If this is the case, then analysts of public platforms always need to ask what is being catalyzed, who is being empowered through delegation, and how data are being packaged and exploited.

Understanding the platformization of public services can also contribute to a better understanding of the politics of platforms in general. There have been calls, for example, to treat social media networks like Facebook or Twitter as public utilities (e.g., Ghosh 2019). This study of the NHS, which remains a public body, suggests that treating other platforms as public utilities will not necessarily resolve many of the current struggles over their purpose and functioning.

It is likely that public policymakers will continue treating platforms as a desirable organizational form—and the ongoing platformization of the state will bring a host of new challenges and conflicts. Questions of privacy and consent will become more prominent as well as conflicts that emerge when new technologies fail to live up to their promise. There will be ever-present questions around mission creep, when growing the platform becomes established as an end in itself. And as new technologies relying on algorithms or AI become more central to everyday state practices, there will inevitably be struggles surrounding legitimacy, fairness, equality, and democracy. Platformization may be changing the techniques and technologies of citizenship and the state, but it is not erasing the political, only reinscribing political questions in new terrain.

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