

## Book Review: *Internet for the People: The Fight for Our Digital Future* by Ben Tarnoff

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**Abstract:** This article reviews the book *Internet for the People: The Fight for Our Digital Future* by Ben Tarnoff.

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### 1. Introduction

The Internet as we know it today is the result of a historical process that began decades ago. *Internet for the People* tells the story of its inception, the stages of its transformation, the current state, and how we can transform it. The axis of articulation between the different moments is privatisation. To demonstrate this, Ben Tarnoff switches between different levels of abstraction, from the criticism of the pipes to the platforms, and from techniques to ideas. The author also alternates between interpretations that go from the systemic to the specific and back from the particular to the general. It is a poignant provocation about what the Internet has become, but, more importantly, a call to action for creating a different version of it.

### 2. Book Overview

Part 1, “The Pipes”, consisting of chapters 1-4, may give a false impression that Tarnoff will only address the Internet’s physical structure. The author certainly does, but “The Pipes” work literally as the physical structure, and metaphorically to refer to the entities that control the channels carrying the Internet. Part 2, “The Platforms”, encompasses chapters 5-9, where Tarnoff shifts his focus to the data flowing through the pipes, the big tech companies manipulating it, and the associated outcomes and challenges.

Chapter 1, “A People’s History of the Internet” (3-23), begins with the story of the first message sent through Internet protocols. This symbolic event, however, does not represent the starting point of the Internet. According to Tarnoff, the conception of the Internet in the early 1960s and its development up to the message sent in 1977 relied on thousands of workers and billions in public investments, unaffordable for any private company. The lack of a profit motive (the military interests were the primary driving force) combined with collaborative work allowed the project to flourish. Tarnoff highlights the crucial role of public money and oversight, which led to an “open-source ethic that encouraged collaboration and experimentation” (8) and the universality of the Internet’s language (9). The chapter is a timeline that places names and events in their historical contexts and can be divided into two parts: 1) the first three decades (the 1960s, 1970s, and 1980s) when the state and the flow of public money without the counterpart of profit played a central role; 2) the 1990s rapid privatisation that started at the turn of the decade and was concluded – in its first stage – in 1995. The swift plunder of the public structure into fully private assets was facilitated by the fact that the companies already owned the infrastructure, and the government was

operating on lines leased from contractors. Legitimation was equally straightforward in the realm of ideas; moving the Internet into private hands was the logical step within the neoliberal consensus. Tarnoff makes it clear that the paths of the Internet were not determined in advance; privatisation was a political choice driven by commercial interests and pushed forward by the telecom companies' lobby. In Tarnoff's words: "The government had spent billions of dollars patiently developing a technology that had finally reached the point where it could serve as the basis for a business, and corporations were determined to reap the rewards" (19).

Chapter 2, "The Plunder Continues" (24-37), delves into the continued rise of the private sector in the Internet's history, focusing on how control of the Internet's infrastructure came to be dominated by a few corporations. Tarnoff examines the socioeconomic implications beyond the technical aspects and the unrealised potential of the Internet by portraying a recurrent reality in capitalism that is replicated on the Internet. He draws on theoretical discussions of democracy and accumulation to show how inequality in Internet access in the United States is a matter of race and social class and is also driven by profit-seeking motives. Such discussions lead Tarnoff to argue that access to the Internet has become as essential as access to energy and health, on which social participation, freedom, and the very conception of democracy depend. In his words, "[a]ccess to the Internet is one of freedom's material preconditions" (34), a precondition that cannot be fully met when profit is the driving force defining access and service quality.

In chapter 3, "The People's Pipes" (38-57), Tarnoff explores a few cases in which Internet access is provided through cooperative means. These cooperatively-owned providers offer fast, affordable Internet, compared to the slow and costly services from big corporations. The comparison between cooperative models and big companies and the glaring superiority in price and quality from the former debunks the neoliberal belief that competition and the search for profit are the best incentives for better and cheaper services. Tarnoff's approach is not naïve; however, he acknowledges the limited possibilities of different architectures to challenge the privatised model without further significant changes. The examples do not represent definitive solutions, but they do suggest a step in the right direction. Maybe even more importantly, they highlight the feasibility of alternatives even within neoliberal sociability. At a more abstract level, they show that the slogan "there is no alternative" suppresses alternative paths by presenting the neoliberal praxis as an inescapable fate. For Tarnoff, building a different Internet requires multiple transformations, from infrastructure to laws and incentives. Although he does not delve into the specifics of these changes, a redesigned Internet necessarily involves reversing privatisation and a more active role from the state since "privatisation does not just describe the political process whereby the Internet became a business, but a social process whereby people's mode of interacting with the Internet was engineered for business's benefit" (45).

In chapter 4, "From Below" (58-70), Tarnoff debunks several myths about privatising (or deprivatising) the Internet. The first, and perhaps the simplest, is economic: First, he refutes the notion that deprivatising the Internet would be costly by demonstrating the public cost in the form of subsidies and for private companies in exchange for poor services. The second myth is rooted in economic ideology: Tarnoff gives an interesting insight into how competition is not just a descriptive way of how markets operate (or should operate), it promotes a set of values and practices that define the individual and their sociability as a consumer. Tarnoff's critique applies both to the logic of competition as the engine of social development and to individualism as a form of social participation. The third and last myth regards state surveillance: Tarnoff

points out that the current private Internet is ineffective in preventing spying, censorship, and shutdowns. He states: "It's not a matter of whether the state has power over the pipes-it always does-but how that power is used. And there is precedent to suggest that power can be used in a positive way" (65).

Chapter 5, "Up the Stack" (71-84), opens the book's second section by addressing the "contents" of the pipes, called platforms. He begins the chapter recurring to a successful strategy employed throughout the book, i.e., starting with a specific example to discuss broader concepts. Tarnoff departs from the creation of eBay in the early days of the world wide web to present an interesting perspective: the dot-com boom was the next logical step in privatising the Internet. After the privatisation of the channels that "carried" the Internet, it was necessary to figure out how to generate profit from its contents. However, the conditions for doing so still needed to be put in place. According to Tarnoff, the lack of Internet profitability combined with speculative insanity resulted in the bursting of the dot-com bubble. Making the Internet profitable would require developments in multiple areas (technical, social, and economic) until new systems replaced the old ones. This process took a few years, but the first signs were already there. Still drawing from the eBay case, Tarnoff outlines a critique of the (cyber-)libertarian values that were one of the main inspirations at that time, though the critique is not further explored later in the book. The eBay case serves as a metonymy for the Internet, an embryonic stage, not (yet) profit-driven, and still groping its way. Nonetheless, this moment was crucial in revealing paths and shaping the sector restructuring after the bubble burst.

In chapter 6, "Online Malls" (85-97), with a historical anecdote, Tarnoff introduces an analogy that runs throughout the book. He asserts that if the creation of the modern mall constitutes a "privately owned public space" (86), a similar process takes place after the privatisation of the Internet. These online malls preserve the role of facilitating commercial transactions and taking a slice from the revenues; but introduce a new source of income: data rent from the amassment and analysis of every trace left by users, something relatively simple since the shopping malls of the Internet control the entire environment as well as any potential changes. Tarnoff's examination of Google is pertinent not only because it is the main symbol of online malls, but also because the case allows him to revisit and reinforce previously developed arguments, e.g., the relationship between public funding and private appropriation of the benefits. The era that began with Google, characterised by the extraction of profits from user data, was solidified with social networks, likewise online malls with their specific features. In the few pages of the chapter, Tarnoff also discusses the technical aspects of online malls, the key players, the commodification of attention, and the users' false perception of sovereignty to point out the significance of online advertising.

In chapter 7, "Elastic Empires" (98-125), in a similar way to the examination of Google in the previous chapter, Tarnoff takes a closer look at Amazon and Uber to show how big tech business models are grounded in data. Amazon's approach may seem different at first because the product bought/sold is the end goal. However, Tarnoff argues that Amazon just happens to sell products, since its platform status stems from its ability to extract and analyse data from sellers listing their products and from everyone who accesses the website, whether they turn out to be buyers or not. Just as the organisation of a large volume of online data was Google's main innovation, the provision of digital infrastructure (clouds) was Amazon's. Unsurprisingly, it is the company's most significant source of income, coming directly from data manipulation. According to Tarnoff, even Amazon's logistical superiority comes from data. On the other hand, Tarnoff argues that Uber's innovation was applying the same data-driven

logic to labour. Instead of a market in attention or in goods, it created a market in labour. If Amazon managed to use data to reduce other companies and its own operating costs, Uber uses data to reduce the cost of labour. Tarnoff also delves into the relationship between finance and technology, as seen in Uber's recurring yearly losses yet still raising capital and increasing its stock value. He suggests that this is indicative of a time where declining labour productivity, increasingly frequent crises, and low traditional asset profitability lead investors to take more risks for extended periods betting that a data company will eventually convert this data into profit, as seen with Google, Facebook, or Amazon. Finally, it is worth noting that Tarnoff is looking at the big picture, but keeps sight of subtleties as to how Uber losses can coexist with profit generation through stock valuation and speculation over data expectations.

In chapter 8, "Inclusive Predators" (126-147), Tarnoff ties together some threads developed in previous chapters, exploring the entanglement between Internet-related companies, lobbying, data gathering, labour exploitation, and financialisation. More generally, he discusses technical, political, legal, and financial issues. For Tarnoff, the result of this entanglement invariably exacerbates inequalities. Tarnoff argues that tech companies concentrate wealth in the hands of a few while spreading risk, including within organisations where employees bear the brunt of the risk while executives and stakeholders reap the rewards. In short, he qualifies online malls, whatever their particular entanglements, as inequality machines. Building upon the concept of "predatory inclusion", by sociologist Tressie McMillan Cottom (2020), Tarnoff delves into some previously under-discussed points such as the labour precarisation that comes with gig companies, the oppression and exclusion based on gender and colour, and the emergence of algorithmic oppressions. The chapter also sheds light on the relationship between social networks, algorithms, and (far-)right movements. Although the arguments are present in other sources, stressing this relationship should be an ever-present effort, especially in light of the rise of (far-)right movements globally and the increasing prominence of tech companies.

In chapter 9, "Toward the Forest" (148-171), Tarnoff outlines two courses of action for reforming the Internet. The first involves writing new rules for how companies are allowed to behave or enforcing existing regulations. The second, which Tarnoff delves into more deeply, aims at reducing the power of the big tech firms. He presents the New Brandeisians, a group of anti-monopoly advocates operating from within the current structures as a case study, though he recognises the limitations of such approaches. While regulations and competition stimulation have some positive impact, as New Brandeisians accomplished, they are limited by the lack of radicalism in keeping the market and the profit motive as core elements. Drawing from Angela Davis' thoughts on transforming the prison system, Tarnoff advocates the need to eradicate the current Internet and rebuild it on new principles and values. Simply making improvements or replacing it with something slightly better is insufficient, as the problem lies in the system's architecture. The proposal to decentralise and deprivatise social networks and to transform them into networks of networks instead of for-profit monopolies, for example, illustrates possibilities of alternative structures, refuting claims that such ideas are utopian.

In the concluding chapter, "Future Nostalgia" (172-178), Tarnoff revisits the book's central theme, the privatisation of the Internet (and the other side of the same coin, its deprivatisation). The chapter's title, a curious paradox, encapsulates the author's innovative idea of replacing nostalgia for an idyllic past of the Internet with nostalgia for possible futures the Internet might have had. Rather than returning to a sparsely

populated Internet with limited access and few possibilities, the author encourages us to imagine an accessible Internet not driven by profit motives.

### 3. Reflections

In his thorough and qualified critique of the (privatisation of the) Internet, Tarnoff looks for the root of the problem. For him, the root is simple: “the Internet is broken because the Internet is a business” (xii). Nevertheless, Tarnoff does not settle for easy explanations, as he recognises that the issues are complex, and the problems cannot be separated from the fact that the Internet is private and profit-driven.

Although Tarnoff repeatedly notes the materiality of the Internet (e.g., the analogy with a body made of glass, copper, silicon, and more (x)), the Internet is also abstract, and difficult to grasp. Through the use of effective metaphors like pipes, stacks, and shopping malls, and the rejection of existing ones such as platforms, Tarnoff brings out this elusive materiality and makes a great contribution to technology-related studies without sacrificing its scientific rigour. The recourse to figures of speech, as well the rejection of existing ones like the “informational superhighway”, is an important process to define the reference frames through which Tarnoff analyses the Internet. These mental frameworks are also critical in constructing roadmaps for proceeding through unfamiliar territory, something even more crucial when it comes to technologies.

Tarnoff’s writing style is clear and easy to understand, while still nuanced and thought-provoking, making the book useful to researchers and interesting to non-experts. It is a must-read not only in technology and Internet studies but also for a better understanding of the ways in which contemporary capitalism reproduces itself.

Throughout the chapters, Tarnoff examines the seemingly inevitable trend of the Internet’s reconstruction towards privatisation. He presents a historical and logical analysis of the process, tackling technical topics without failing to politicise moments and actions. Tarnoff addresses the Internet not simply as technology, but as something social, historical, and subject to political and economic determinations. A standout feature of the book is its ability to provide relatively universal insights, as Tarnoff’s discussions on topics such as the pressure on the labour force or financialisation can be applied to various fields, from the automotive industry to science and research.

Tarnoff suggests deprivatising the Internet through the “imaginative work of abolition” (177), not by merely improving current structures, as he is very clear about the practical and imaginative limits of reorganising the Internet based on what already exists. Tarnoff’s proposal is radical because it is more than a protest or an invitation to reflection; he means to abolish the existing structures and replace them with fundamentally different alternatives.

However, even if we assume this envisioned scenario, it is impossible to think of its continuity as a bubble separated from society. The Internet would remain subject to market pressures, private interests, and the dictates of capitalism. Tarnoff acknowledges “there are many possibilities, but one thing is clear: to remake the Internet, we will have to remake everything else” (171). At the same time, he does not offer potential solutions to the problems that will inevitably arise from a deprivatised Internet. The vision of librarians organising and curating the Internet is attractive and probably feasible locally. Still, there seems to be little room for scaling these narrow proposals in the fast-paced Internet we have today. On the other hand, it is perhaps excessive to expect a single book to offer a solution to such a complex issue in less than 200 pages.

Although Tarnoff repeatedly emphasises state intervention as key, he does not equate public ownership of the Internet with state ownership. However, relying on state

intervention for solutions when the state is part of the problem itself means falling back into the error of seeking solutions within the problem. The present conjuncture does not bear the dynamics of a time when the Internet appeared as a public institution. The idea of thinking of different alternatives that actually put the Internet under democratic control, proposed by Tarnoff on several occasions, seems to be set aside here.

The concept of platforms is a crucial aspect of the book. Tarnoff contends that the big techs and companies like Uber do not fit into definitions of platforms, such as operating systems upon which developers write or run code. In slightly technical terms, those companies are just software that runs online, but they claim the platform status to convey an aura of openness, fairness, and neutrality. Tarnoff's critique pertains not only to the architecture of the so-called platforms but also to the consequences of the dominance they exert.

Tarnoff's stance on the nature of the necessary changes is clear. He argues the situation "calls for shrinking the space of the market and diminishing the power of the profit motive. It calls for developing models of public and cooperative ownership that encode the principles of collective governance and popular participation". However, accomplishing this solution is a daunting task, "it will require much experimentation. It will also require creating new structures that enable such experiments to take place". Tarnoff also acknowledges the limits of his proposal, highlighting that the outcomes of these experiments cannot be predicted. In his words, "the precise contours of a democratic Internet can only be discovered through a democratic process" (xvi).

The notion of experimentation implies that the process of transitioning to a new Internet is yet to be defined. Tarnoff acknowledges the value of efforts to restructure platforms but suggests that going further is necessary. While Tarnoff does not engage with existing alternatives, one can infer his position regarding proposals such as platform cooperativism (Scholz 2016) and the public Internet service (The Public Service Media and Public Service Internet Manifesto 2021).

Scholz (2016, 14) breaks down the concept of platform cooperativism into three parts: 1) cloning the technology platforms use and putting it to work with a different ownership mode; 2) introducing the element of solidarity and 3) reframing concepts, e.g., efficiency to benefit more people. Although different in terminology, it is reasonable to argue that parts 2 and 3 align with Tarnoff's proposals. However, his approach centers on rejecting part 1 since it focuses on a different conception of the Internet. According to Tarnoff, it is insufficient to merely replicate the Internet's current framework but to put it under public or cooperative ownership. He argues that the limitations in envisioning different possibilities will result in outcomes similar to what currently exists. Initiatives like a worker-managed Uber are a step in the right direction, but they remain confined within the same paradigm.

Likewise, while the ten principles of a public service Internet (The Public Service Media and Public Service Internet Manifesto 2021) seem a good fit with Tarnoff's arguments, similar considerations apply. For instance, stating that "public service media are well situated to offer their own online platforms that do not follow a for-profit logic, but serve the public interest" (Fuchs 2018, 2) corresponds with Tarnoff's assertion that for-profit social media suffers from the same shortcomings as other forms of for-profit media. However, Tarnoff indicates these efforts still bear the stamp of the Internet they are trying to escape due to a failure of imagination.

It is not clear whether Tarnoff seeks a critique that addresses concrete proposals (such as platform cooperativism or the public service Internet) or if it is a more abstract critique of the ways of thinking about solutions. The most likely answer is a combination of both. On the one hand, the major criticism Tarnoff raises is the need for a higher

level of abstraction when thinking about the Internet and platform architecture. On the other hand, the logical implication is a critical perspective (at least to some extent) on existing proposals that would be unable to deal with the challenge.

It is important to note that Tarnoff's proposals and others, such as platform cooperativism and the public service Internet share many similarities, including a recognition of private ownership of the Internet as a primary issue, a critique of markets as the governing force, and a call for public management of the Internet through democratic channels. Although Tarnoff provides examples of how the Internet could be different, he does not delve into the specifics. Instead, his emphasis is on establishing the fundamental concepts and framework for generating effective solutions.

Given the differences between the pipes and the platforms, it is natural that different perspectives on deprivatisation processes are necessary. For Tarnoff, the deprivatisation process of the pipes is more straightforward. He advocates for publicly and cooperatively owned community networks as the building blocks of a democratic Internet; however, this conception is considered insufficient for the platforms. It would be beneficial to clarify the rationale for the distinction to demonstrate, for example, why using the existing pipes would not reinforce oppressive power dynamics as the platforms would.

One limitation of *Internet for the People* is its geographical scope. Although most of the content is applicable worldwide, the book adopts a US-centred stance. On the other hand, this perspective is somewhat understandable given the author's background and the fact that the United States is the Internet's birthplace and the headquarters of the platforms discussed in the second part of the book are located in the US. Surely, the Internet for the people envisioned by Tarnoff does not encompass the Internet or the people only in the United States; however, there is a lack of a global perspective, despite several nods to international reflections. The geographical issue is less of a problem than a gap requiring further research to expand upon the framework established by Tarnoff. Naturally, the privatisation of the Internet takes different forms according to the particularities of each place, even with varying impacts within each country, as Tarnoff notes regarding Black and Latin communities in the United States.

The radical nature of Tarnoff's proposal cannot be overstated. Few changes – if any – can have a more profound impact on society than a shift in ownership of the means of production. Regardless of other factors, taking the Internet out of corporate hands and restructuring it in more democratic ways is a crucial step that can benefit both workers and users, as well as change the correlation of forces between companies and the people. With the Internet playing such a significant role in our lives, it is impossible to imagine a different society without a different Internet. Tarnoff argues not only that both are possible but also that a different society depends on a different Internet.

The book does not adopt an overly optimistic tone, but Tarnoff refuses to succumb to defeatism. Instead of rejecting the present and dreaming of the past, he proposes we face the present to design a better future. More than solutions for the Internet's problems, "Internet for the People" proposes a paradigm shift, or as Tarnoff puts it, "an Internet organized by the idea that people, not profit, should rule" (177).

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