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Facing up to Facebook: how digital activism, independent regulation, and mass media foiled a neoliberal threat to net neutrality

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ABSTRACT

This study traces how Facebook-promoted internet.org/Free Basics, despite initial acclaim, was eventually rejected in India – and how net neutrality came to be codified in the process. Topic modeling of articles ($N = 1752$) published over two-and-a-half years in 100 media outlets pinpoints the critical junctures in time at which the public discourse changed its trajectory. Critical discourse analysis of different phases of the discourse then identifies the causal factors and contingent conditions that produced the new policy. The study advances an understanding of technologies as social constructs and technological change as a social process, shaped by the dynamic interaction of a complex array of social actors coming together at critical junctures. It also draws attention to how discourse, produced by social actors in contingent conditions, recursively shapes the dominant ideology and structures these interactions. In addition, the study demonstrates how algorithmic and interpretive research techniques can be combined for longitudinal analysis of textual data sets.

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It was once said that the sun never set on the British Empire. Today, it does not set on Facebook's: the social media company has more than a billion-and-a-half users around the globe (Facebook, 2016). And just as India once sparkled as the 'jewel in the crown' of the British Empire, so it now shines in Facebook's metaphorical tiara. The country's 130 million Facebook users are next in count only to the United States (Babu, 2016). But the jewel lost some of its sheen in February 2016 when India's telecom regulator framed a new policy banning internet.org, a service that was supposed to provide free internet to those who could not afford it, on the grounds that it violated net neutrality.

Facebook had introduced internet.org, later branded as Free Basics, to wide acclaim in India in February 2015 – following launches in Africa and Latin America. In the months that followed, the company pulled out all stops to make it a success in the enormous Indian market. This included spending tens of millions of dollars on an advertising 'blitzkrieg' (Choudhary, 2016; Joshi, 2015). Mark Zuckerberg, the celebrity founder and CEO of Facebook, became the public face of internet.org, addressing town halls in New Delhi, hosting Indian Prime Minister Narendra Modi at the company's California headquarters,

and reminiscing eloquently of his visit to an Indian temple during Facebook's early days of struggle (Agrawal, 2016).

It did not work. The Telecom Regulatory Authority of India – TRAI – issued an order on 8 February 2016 – almost exactly a year after internet.org's launch in India – 'disallow (ing) service providers to offer or charge discriminatory tariffs for data services on the basis of content being accessed by a consumer' (Hindustan Times, 2016b, para. 1, TRAI, 2016). This, in effect, outlawed internet.org. TRAI added that its view had 'largely been guided by the principles of Net Neutrality seeking to ensure that consumers get unhindered and non-discriminatory access to the internet' (para. 2).

What went wrong – or right? Why did internet.org fail in India when it had met with success elsewhere? Why was one of the world's biggest and most powerful companies, despite its best efforts, unable to provide free internet in a nation desperate to expand connectivity? How did net neutrality come to be such a vital concern for Indian regulators?

This study answers these questions by using a 'process tracing' approach to chart the evolution of internet.org/Free Basics as a social and political discourse in India over two-and-a-half years: starting with its global launch in August 2013 through its introduction and eventual ban in India in February 2016. Topic modeling, a machine learning technique, is used to examine the media coverage and pinpoint those critical junctures in time at which the discourse changed its trajectory. Critical discourse analysis then takes the analysis further by identifying the causal factors and contingent conditions in which those shifts took place, leading up to internet.org's rejection. Theoretically, the study advances the view of technologies as social constructs – demonstrating how independent regulation, digital policy activism, and mass media sequentially interacted in enabling circumstances to shape the course of technological change. It also provides a methodological model for combining topic modeling with discourse analysis for longitudinal analysis of textual data sets.

The epistemic and normative implications of this study are just as significant as its theoretical and methodological contributions. India is not only a major market for digital technologies but also sets the benchmarks for policy-making in many developing nations. After internet.org became controversial there, several Asian, African, and Latin American governments said they were having second thoughts about it – some of them explicitly citing India as the reason (Karr, 2015). The Indian experience could thus not only become an example for how net neutrality and other digital debates pitting public utility and market values on opposite sides unfold, but also a causal factor shaping patterns of global technological change.

Literature review and theoretical framework

Net neutrality

Net neutrality is a normative standpoint that the internet, as an infrastructure, should not discriminate among the various kinds of services, applications, and content that is shared through it. Wu (2003) coined the term, defining the concept as 'an internet that does not favour one application (say, the World Wide Web), over others (say, email)' (p. 145). Gilroy (2008) added that net neutrality also meant 'owners of the networks that compose and provide access to the internet should not control how users lawfully use that network; and should not be able to discriminate against content provider access to that network' (p. 2).

Without net neutrality, internet service providers could charge content providers for preferential treatment that would make their websites or services more easily accessible to end users. Bigger and more powerful content providers would be able to absorb such costs while smaller companies and individual content providers such as bloggers would be forced to transfer them to their own users. The absence of net neutrality may thus effectively create a two-tiered or even multi-tiered internet.

While some view government regulation to ensure net neutrality as a hindrance to competition and averse to the libertarian ethos of the internet, others argue that the absence of net neutrality would undermine the internet's egalitarian principles and democratizing potential. Quail and Larabie (2010) label these competing views on net neutrality as the *market perspective* and the *public utility perspective*, respectively. Telecom companies, internet service providers, and other businesses often take the market perspective, suggesting that 'any regulation will degrade the efficiency of the internet, stunt subsequent innovation, and restrict potential sources of funding for future infrastructure development' (Quail & Larabie, 2010, p. 34). Scholars championing a neoliberal outlook also subscribe to this perspective. Hahn and Wallsten, for instance, argue that 'mandating net neutrality would be inconsistent with sound economic management of the internet' (2006, p. 2).

Digital policy activists, media reform groups, and non-governmental organizations, on the other hand, often take a public utility perspective favoring net neutrality. They argue that 'some form of additional, net-neutrality-specific regulation would ensure that internet service providers afford equal service to all parties involved, and therefore foster innovation, creativity, and public culture' (Quail & Larabie, 2010, p. 34). Wu (2003) and Lessig (2006) were among the earliest to call for net neutrality regulations. Scholars have also argued that net neutrality is essential for maintaining freedom of speech and an open and participatory internet (e.g., Blevins & Barrow, 2009; Cherry, 2006).

Technical code

The research program in the social construction of technology has, for nearly three decades, challenged the 'technological determinist' argument that technology evolves autonomously and determines social change (Bijker, 2009; Pinch & Bijker, 1984). A number of case studies have illustrated how interconnected social, political, and economic values are embodied in technologies as varied as refrigerators (Cowan, 1985), missile guidance systems (MacKenzie, 1987), and bicycles (Bijker, 1995). Feenberg (1995) assimilated the insights of such studies to propose the idea of the *technical code*, referring to 'those features of technologies that reflect the hegemonic values and beliefs that prevail in the design process' (p. 4).

Studies on the production of technical code investigate continuity, change, as well as counterfactuality. They draw attention to the ideologies and interests underlying technological choices, which are often so hegemonic that they are taken for granted and go unnoticed. At the same time, revealing changes in the technical code lays bare the shifting patterns of social values and priorities, especially in periods of rapid technological development (Flanagin, Flanagin, & Flanagin, 2010). Finally, technical code analysis shows that any technology 'might have been otherwise' (Bijker & Law, 1992, p. 3) – indicating values and interests that have been sidestepped. Exposing unrealized technological possibilities, thus, reveals undermined social values and interests.

Technical codes are often ‘codified in laws or public policy’ (Flanagin et al., 2010, p. 181). Feenberg (1995) believes that the hegemonic values dominating technical codes are primarily neoliberal in orientation and is therefore pessimistic about the public utility aspect of technological development. But Lessig (2006) has a more sanguine view – at least with regard to the internet. In the growing control of commercial interests over the internet code, he sees the potential for regulation benefiting common users: ‘When commerce writes code, then code can be controlled, because commercial entities can be controlled’ (p. 72). For him, the potential of social values and interests to shape the technical code of the internet means that ‘there are choices to be made about how this network evolves. These choices will affect fundamentally what values are built into the network’ (p. 311).

But how can the choices and interests of common users underwrite the technical code, especially when they run contrary to powerful commercial interests – as in the case of the net neutrality debate? How can public utility values trump market values to shape public policy on net neutrality? Previous research indicates a complex array of social actors needs to be mobilized in contingent conditions to produce a new ideology of resistance to the neoliberal hegemony.

Causal factors and contingent conditions

Democratic governments, which derive legitimacy from their citizens, often involve commercial as well as civil society actors at various levels of technological decision-making (Puppis, 2010). One way of doing this is by setting up ‘independent’ regulatory authorities that consult with a variety of stakeholders – including businesses, social activists, and so on – before recommending guidelines, issuing orders, or enforcing legislations. Because they carry the weight of the government’s coercive authority, independent regulators can be an important actor giving direction to technologies.

Civil society actors constitute ‘a social sphere beyond state and business’ (Loblich & Wendelin, 2012, p. 901). Social activists, including digital policy activists, are an example of civil society actors. Drawing on Kern (2008), Löblich and Wendelin define activists as ‘mobilised networks of groups and organizations, who over a certain period of time try to induce, prevent or undo’ certain regulations’ (2012, p. 901). They have played a significant role in driving technological change in different parts of the world (see also Hintz & Milan, 2009).

Mass media are another example of civil society actors, playing a multi-pronged role in debates surrounding digital technologies (Mager, 2012; Shahin, 2016a). First, as institutions disseminating large amounts of information through the internet, they are a significant stakeholder in such issues. Second, as an open forum for policy deliberation, they help negotiate the terms of these debates by representing the views of different stakeholders to each other and allowing them to reconsider, alter, or harden their positions. Third, they take these debates to the public and influence popular perceptions, which may then translate into public support for one side or the other and eventually bear upon the policy outcome.

But the presence of these social actors is hardly enough to make technological change public utility-oriented. As decades of critical scholarship has shown, the government, the media, and other businesses are often imbricated in a nexus oriented towards political and commercial gains and against the public interest (McChesney, 2013; Mills, 1956). Indeed,

the public's understanding of its own interest is shaped by this hegemony (Herman & Chomsky, 1988; Lukes, 1974). The media's coverage of social activism has, in fact, been widely critiqued as elitist and reactionary (e.g., Gitlin, 1980). Even if one social actor considered assuming a public utility orientation on a certain issue – it would face the brunt of the society's institutional and ideological weight against it.

For a multitude of social actors to adopt a public utility orientation on a technology and its development, a new discourse and a new ideology need to emerge. Social actors are needed to drive this new discourse, but its emergence may not be entirely in their hands. Instead, the new discourse may emerge from *contingent conditions* – which no actor created with the intention of changing the discourse, but which nonetheless come to pass and convert social actors into *causal factors* producing and steering forward a new discourse (George & Bennett, 2005). As Loblich and Wendelin (2012) observe, 'The ability of civil collectives to push their goals through depends to a great extent on prevailing (societal and political) conditions and usually is not in the activists' sphere of influence' (p. 902). The new discourse, in turn, produces a new ideology, shaping the values and interests of various individual and institutional actors and of the society as a whole.

This study set out to understand how India, a nation where Facebook is very popular and which is desperate to enhance internet connectivity, came to reject a project like internet.org/Free Basics – codifying net neutrality in the process. Drawing on the review of literature and theoretical framework discussed here, it now proposes the following research questions to guide the empirical analysis.

RQ1: How did the media discourse on internet.org evolve over time, and what were the critical junctures at which it changed its trajectory?

RQ2: What were the contingent conditions that led to these shifts in discourse?

RQ3: What were the causal factors that produced these shifts in discourse?

Methodology

This study takes a 'process tracing' approach to answer these research questions – a methodology that draws causal inferences by investigating how an event or series of events unfolds over time (Collier, 2011; Mahoney, 2012). Process tracing recognizes that (1) a complex array of social factors cause the effect being studied, and (2) the order and circumstances in which these factors interact, rather than their simple presence, leads to the effect. The purpose of the analysis is therefore to chart the *sequence* in which social factors combine – in the process identifying not only the *causal factors* but also the *contingent conditions* at critical junctures that enabled those factors to produce the effect. Description is an essential element of such analysis. As Collier notes, '[T]he analysis fails if the phenomena observed at each step in this trajectory are not adequately described' (2011, p. 823).

The study starts with the assumption that

media discourses reflect wider socio-political values regarding the public interest and public utilities, the relationship between the news and an informed society, and most specifically, the mobilization of ideology and power of naming and circulating narratives and truths about net neutrality. (Quail & Larabie, 2010, p. 38)

Tracing the net neutrality coverage in the media is, therefore, an ideal means of understanding how the discourse evolved and identifying the ideologies and interests that shaped it. A Factiva search for news articles using ‘internet.org’ or ‘Free Basics’ in English-language Indian media published between 1 August 2013 and 29 February 2016 produced 2885 articles. After excluding duplicated articles, the final sample was 1752 articles from 100 different media sources. Although India has many regional languages, English-language sources were used because English is a ‘connective’ national language and English publications are read nationwide.

The analysis is conducted in two stages, using algorithmic and interpretive techniques, respectively. In the first stage, *topic modeling*, which finds probabilistic patterns of word use in textual data sets, delineated the general trajectory of the discourse and identified critical junctures at which it changed direction. These critical junctures divided the discourse into multiple phases. *Ideological criticism* was then used to examine these moments in time more closely to discern the causal factors and contingent conditions that caused the shifts in discourse. This hybrid approach followed Greene and colleagues’ *development model* of mixed-methods research design, which ‘seeks to use the results from one method to help develop or inform the other method’ (1989, p. 259).

Topic modeling

Topic modeling starts with the assumption that every document is composed of a certain number of ‘topics’ that determine how words are used in relation to each other. From this premise, the algorithmic technique produces ‘probabilistic models for uncovering the underlying semantic structure of a document collection’ (Blei & Lafferty, 2009, p. 1). Latent Dirichlet allocation (LDA), a form of topic modeling, is being increasingly employed to study media texts (e.g., DiMaggio, Nag, & Blei, 2013; Jacobi, van Atteveldt, & Welbers, 2016).

Using LDA to analyze documents yields: (1) a series of ‘topics,’ each comprising keywords that have a statistically high probability of co-occurrence and together produce a meaningful theme, and (2) the proportion of use of each topic in the documents. The method, however, does not yield the ‘correct’ number of topics in any set of documents on its own. The scholar has to conduct several iterations of topic modeling, specifying different numbers of topics and trying to interpret each model semantically, before arriving at the model that is statistically and semantically most probable. Its validity depends on the internal consistency of each topic and the theoretical interpretability of the overall model (Jacobi et al., 2016).

For this study, the corpus was divided into eight documents representing contiguous time periods of the discourse. Document 1 comprised all coverage in August–December 2013. Documents 2 and 3 spanned the first and second halves of 2014, respectively. Documents 4–7 covered the 2015 coverage split into three-month blocks. Finally, Document 8 included the coverage in January–February 2016. The initial documents (1–3) span longer time periods because coverage was quite thin in these periods and topic modeling requires reasonably large documents to yield valid results. As the method provided the proportion of use of each topic in every document, the discourse was interpreted to be broadly similar across contiguous documents – or time periods – that had the same dominant topic. A new topic becoming dominant in a particular document, however, indicated a shift in discourse in that time period.

The analysis was done using the software Mallet (McCallum, 2002). Preprocessing included lowercasing, tokenization, and removal of stopwords. Symmetric distribution was assumed. Only variations on topic numbers were used across different iterations, with no changes in alpha or beta parameters.

Ideological criticism

Ideologies are shared beliefs underlying how individual and institutional actors in a society view themselves, their relationships with others, their understandings of good and bad, right and wrong – and guiding their actions (Malesevic, 2006; Van Dijk, 1998). They constitute, and are therefore reflected and reproduced in the works of journalists and media organizations (Shoemaker & Reese, 2013). Ideological criticism, a technique of critical discourse analysis, may be used to unravel these ideologies from media texts.

According to Foss (2004), ideological criticism focuses on (1) the dominant interpretation of a discourse, (2) rhetorical strategies used to make a particular interpretation dominant, and (3) whose interests are served by the dominant interpretation. It implies that any discourse has multiple, and sometimes competing, strands – which create the possibility of multiple interpretations. However, there may be only one ‘dominant’ interpretation as intended by the individual or institutional author, as evinced in their rhetorical strategies or word choices.

In this study, ideological criticism was used to examine different phases of the Indian media discourse on internet.org – each phase having a different dominant topic as identified by topic modeling. The focus of this stage of the analysis was therefore to discern the rhetorical strategies that made one topic dominate over others and whose interests it served.

Empirical analysis

Identifying shifts in discourse

Multiple iterations of topic modeling – each with different numbers of topics – produced different semantic models with one or two dominant topics and some additional topics used in negligible proportions. Finally, the model with three topics emerged as both statistically and semantically apposite. In this model, almost every document used each of the three topics in some measure while also having a clearly dominant topic. Crucially, the keywords associated with each topic in this model cohered meaningfully, indicating that the topics were not just statistically but also semantically probable.

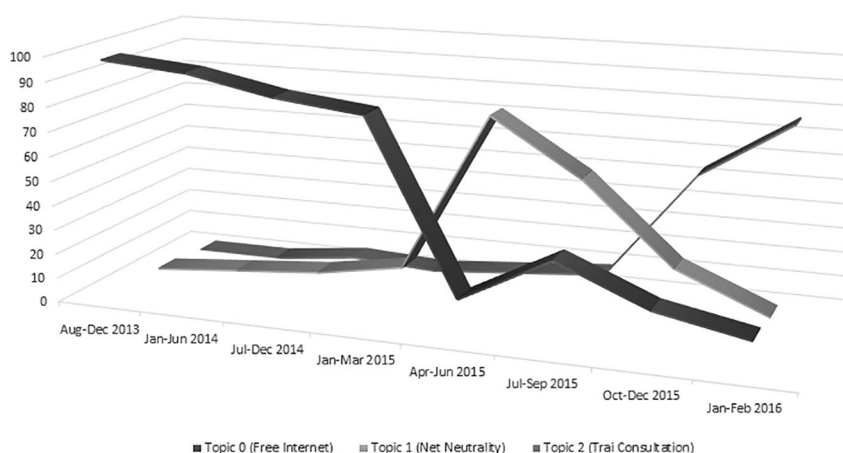
Topic 0 included the keywords ‘internet,’ ‘facebook,’ ‘india,’ ‘access,’ ‘org,’ ‘people,’ ‘zuckerberg,’ ‘mobile,’ ‘services,’ ‘world,’ ‘free,’ ‘data,’ ‘users,’ ‘app,’ ‘billion,’ ‘english,’ ‘make,’ ‘reliance,’ and ‘mark’ (see Table 1). This topic appeared to be about Facebook’s launch of internet.org globally and in India, providing users free access to services using mobile apps. The keywords ‘mark’ and ‘zuckerberg’ refer to the Facebook CEO, while ‘reliance’ refers to Reliance Communications, the telecom operator that partnered internet.org in India. This topic may, therefore, be labeled *Free Internet*. It was the largest topic in Documents 1 through 4 (see Figure 1), indicating that it dominated the discourse from the launch of internet.org in August 2013 until January–March 2015, the quarter in which internet.org was launched in India.

Table 1. Topic model of Indian media discourse on internet.org.

Topic 0 (free Internet)	Topic 1 (net neutrality)	Topic 2 (TRAI consultation)
internet	internet	free
facebook	org	basics
india	neutrality	facebook
access	net	india
org	facebook	trai
people	india	net
zuckerberg	free	internet
mobile	services	data
services	people	words
world	access	telecom
free	platform	english
data	airtel	neutrality
users	users	pricing
app	telecom	differential
billion	service	access
english	websites	services
make	open	service
reliance	operators	december
mark	data	regulator

Topic 1 had a few keywords in common with Topic 0. But several new keywords emerged, including ‘neutrality,’ ‘net,’ ‘airtel,’ and ‘operators.’ This indicated a shift in discourse, with net neutrality becoming a significant issue. Airtel is the name of another telecom operator that launched its own ‘free internet’ service in April 2015. This topic, which may be labeled *Net Neutrality*, was the largest in Documents 5 and 6, spanning April to September 2015.

Topic 2 continued to have keywords such as ‘net’ and ‘neutrality,’ but associated with ‘free,’ ‘basics,’ ‘trai,’ ‘telecom,’ ‘pricing,’ ‘differential,’ ‘december,’ and ‘regulator.’ TRAI refers to the telecom regulator Telecom Regulatory Authority of India, which issued a public consultation paper on differential pricing of data services in December 2015. This indicated another shift in discourse, in which net neutrality remained significant but was discussed in the context of TRAI’s consultation paper. This topic may be labeled *TRAI Consultation*. It was by far the largest topic in Documents 7 and 8, indicating that it

**Figure 1.** Evolution of topics in Indian media discourse on internet.org/Free Basics (figures in %).

dominated the discourse in October–December 2015 and January–February 2016. The mention of ‘december’ as a keyword, however, suggested that the actual shift occurred not in October but December, which is also when TRAI issued the consultation.

The differences in proportion in the use of topics thus pinpoint the critical junctures at which the discourse changed its trajectory. The first shift happened in April 2015 and the next in December 2015 – dividing the discourse into three phases. Keywords in each topic indicate what was the dominant discourse in each phase. In the next stage of the study, ideological criticism helps identify precisely what events and combination of factors led to these shifts.

Phase I: August 2013–March 2015

This phase began with the initial announcement of internet.org as a partnership between Facebook and other technology companies, and continued until a month after the project’s launch in India in February 2015. Much of the Indian media attention in this period applauded internet.org’s objectives and its expansion – both geographical and through the addition of new corporate partners. The project was viewed as Facebook-led but characterized by an altruistic spirit of corporate cooperation. An early article, for instance, noted,

The founding members of internet.org – Facebook, Ericsson, MediaTek, Nokia, Opera, Qualcomm and Samsung – will develop joint projects, share knowledge, and mobilize industry and governments to bring the world online. These founding companies have a long history of working closely with mobile operators and expect them to play leading roles within the initiative ... (Express Computer, 2013)

A belief in benign capitalism suffused the coverage. internet.org partners were often described as do-gooders deeply concerned with connecting people around the world, especially the poor, to the internet. Terms such as ‘human right’ and ‘fundamental right’ were used to describe connectivity. That technology companies intended to somehow profit from the ‘philanthropic’ venture was acknowledged, but social welfare was seen to go hand-in-hand with market values. The Facebook CEO was perceived as a ‘geek’ who was happier writing softwares rather than negotiating business deals. One report said, ‘Zuckerberg ... looked like somebody who could still shut himself in a dormitory writing code – a quintessential geek’ (Mishra, 2014).

India’s importance in Facebook’s grand plans was a significant trope in the discourse. Technology was viewed as paving the path of national progress, and reporters would often ask Facebook executives what the Indian government ought to do to make their task easier (e.g., *Financial Express*, 2013; Mishra, 2013). Airtel, the New Delhi-headquartered telecom operator with the largest share of the Indian market and already an internet.org associate in Africa, was expected to be Facebook’s partner-of-choice in India (Your Story, 2014). But no questions were raised when Facebook chose to go with Reliance Communications as the carrier for internet.org, launching it in six Indian states on 10 February 2015. Nor did journalists examine the project’s objectives in detail. Facebook and Reliance’s claims about internet.org were taken for granted and reported without even the need of attribution to company officials or statements. For example,

By bridging the Digital Divide, it [internet.org] strengthens society by creating a larger, more vibrant community of better- informed and better-connected citizens. Customers can now

explore what the internet is all about, and how it can help them in daily life, without having to worry about data charges. (*Deccan Chronicle*, 2015)

There were murmurs of concern over the privacy of users' personal data passing through Facebook servers. Net neutrality made its first appearance nearly a year into the discourse in July 2014 – in an interview with Facebook's chief operating officer Sheryl Sandberg (Thomas, 2014). MediaNama, an online news portal, took a stand against internet.org citing net neutrality and other concerns. Occasional articles along these lines appeared elsewhere too. But the media coverage of internet.org until March 2015 was overwhelmingly approving, even acclamatory.

Phase II: April–November 2015

On 6 April, Airtel launched 'Airtel Zero,' which allowed customers to access certain mobile applications at zero data charges. Its business model was different from internet.org: Airtel Zero's partners, such as major ecommerce firm Flipkart, had to pay Airtel for their apps to be available on its network for free. The service and its partners were immediately accused of violating net neutrality. Flipkart's app was 'downvoted' by some users, leading the firm to abandon Airtel Zero on 14 April – explicitly citing net neutrality concerns (*Times of India*, 2015a).

Just a day after Flipkart quit Airtel Zero, travel website Cleartrip walked out of internet.org, also saying it was taking a stand in favor of net neutrality (*Press Trust of India*, 2015). In the next few days, leading news organizations including NDTV and the Times Group announced they were planning to pull out from internet.org. All of them cited their commitment to net neutrality as the reason, with the Times Group even calling on its competitors to jointly withdraw. These pull outs, and the principle of net neutrality that spurred them, were widely covered across the Indian mediascape. As euphoric news reports about new partners joining internet.org were replaced by gloomy articles on who was abandoning it and why, the discourse spun on its head.

Suddenly, there were a spate of news features and op-eds explaining net neutrality and its implications to the lay public. TRAI, whose mandate is to regulate operators, had issued a consultation paper in March asking if it should regulate 'over the top' telecom services such as apps and websites and if operators should be allowed to charge more for such services. The consultation paper had received very little coverage until then – but now it did. Perhaps most tellingly, even the routine description of internet.org changed from 'internet for free' to 'certain services for free' – signifying that almost overnight, the news media had changed their tone and were no longer taking Facebook's claims at face value.

Digital rights activists now became a vital part of the discourse. News about internet.org started to include the rising number of signatories to net neutrality campaigns such as #SavetheInternet and #FBBlackOut. Special reports focused on the specific issues these activists were raising. The biggest issue was that for users of internet.org, Facebook would not create access to but *replace* the internet. *Hindustan Times* published a commentary titled 'Dear Mark Zuckerberg, Facebook is not, and should not be the internet,' written by SavetheInternet.in Coalition (2015). It highlighted research from Indonesia and Africa that showed many people who used Facebook did not realize they were using the internet. The article noted, 'And that is exactly what internet.org is – Zuckerberg's ambitious project to confuse hundreds of millions of emerging market users into thinking

that Facebook and the internet are one and the same.’ Digital activists also asked why companies like Facebook and Airtel should become ‘gatekeepers’ deciding what apps, sites, and services users were able to access online. If multiple ‘walled gardens’ like internet.org began to sprout, it would effectively fragment the internet and force users to access only a minuscule part of the internet but no more.

The shift in discourse forced Facebook to defend internet.org, saying it could ‘co-exist’ with net neutrality (Indo-Asian News Service, 2015). The company later ‘opened’ internet.org for developers to create services in response to accusations that it was a ‘walled garden.’ It even renamed internet.org as ‘Free Basics’ in September. Zuckerberg himself returned to India in October, visiting villages, speaking to students, and addressing public meetings to promote Free Basics. In November, Reliance began offering Free Basics nationwide.

Phase III: December 2015–February 2016

As indicated by topic modeling, the discourse shifted again in December, when TRAI floated a new consultation paper on whether ‘differential pricing’ should be allowed for data services. This was not so much a shift in tone – which remained antagonistic towards Free Basics – as a shift in focus. The discourse now revolved around TRAI’s consultation and how digital activists and Facebook were responding to it. The media attributed the issue of a second consultation paper to the change of guard at TRAI: Rahul Khullar was its chairman when the March consultation was issued, but he had since been replaced by R. S. Sharma who, apparently, wanted his own consultation (Ghosh, 2015).

Facebook responded by launching a campaign called ‘Save Free Basics’ to garner public support. It started prompting all its social media users to click on a message highlighting its benefits. When users clicked on the message, the website sent an email on behalf of that user to TRAI that read, ‘I support Free Basics and digital equality for India.’ The social media/email campaign was accompanied by ‘one of the most expensive newspaper ad campaigns in Indian tech history’ (TechTree.com, 2015), as well as advertisements on television and public hoardings, reportedly costing more than \$45 million altogether (Choudhary, 2016).

The campaign received substantial news coverage – most of it unfriendly. Even as newspapers published double-spread ‘Save Free Basics’ ads, their reporters and commentators wrote articles suggesting that Facebook was misleading the public. Critics pointed to the money being spent on the ad campaign as evidence that Free Basics was anything but philanthropy. Questioning the ‘public support’ emails that Facebook was sending to TRAI, an article observed,

Facebook is just trying to play on the fact that most of us click the like button on its platform without reading or understanding the complete picture ... What Facebook users should be made aware of is the fact that if you send out this e-mail to TRAI then you are against Net Neutrality ... Do you want that? (*Times of India*, 2015b)

After TRAI released its consultation paper, a number of local and global technology companies spoke out against Free Basics. Many of them urged users to write to TRAI against differential pricing. Eventually, 700 start-ups signed a petition urging Prime Minister Modi to ‘Save Net Neutrality’ in India. Business lobby groups like Nasscom, Assocham, and IAMAI, some of whom had initially voiced support for Free Basics, now said they did not favor differential pricing. Scientists working at highly respected academic

institutions issued public statements opposing Free Basics. Even protests broke out in parts of the country on the issue of net neutrality. All of this received massive media coverage.

There were supportive voices too. Some business newspapers such as *Business Standard* (2015) and *Financial Express* (2015) regularly questioned the opposition to Free Basics and criticized TRAI's handling of differential pricing. Zuckerberg himself wrote an op-ed enumerating the benefits of Free Basics and claiming that it had already helped connect millions in India (Zuckerberg, 2015).

None of it made a difference, however. TRAI asked Reliance on 23 December to put Free Basics on hold until a decision was made. As December turned to January, TRAI chairman Sharma criticized Facebook for trying to turn the consultation process into an 'opinion poll.' He said the 1.4 million 'template comments' TRAI had received through Facebook's social media campaign were meaningless as they did not address the specific questions TRAI had raised (*The Hindu*, 2016). A public spat ensued, and the regulator eventually said Facebook's ad campaign had 'dangerous ramifications for policy-making in India' (*Hindustan Times*, 2016a). The public consultation process ended with TRAI receiving 2.4 million responses by 7 January. Bureaucratic and ministerial consultations followed while public outcry for net neutrality grew louder. By the end of January, the media started reporting that TRAI was 'set' to reject differential pricing services, including Free Basics and Airtel Zero. TRAI made this official on 8 February.

Conclusion

This account of how, despite Facebook's best efforts, internet.org failed in India – and how net neutrality came to be codified in the nation's legal framework – has wide-ranging theoretical and normative implications. First, it shows that technologies and their development is a complex and negotiated *social* process. Technical code theorists have made the counterfactual argument that any technological change forecloses those alternative paths that technology could have taken but did not (Bijker & Law, 1992; Flanagan et al., 2010). This study, by explaining how a prospective technological change *did not* come to pass, demonstrates this notion still more clearly. The rejection of internet.org prevented internet in India from becoming something else – perhaps just another name for Facebook for millions of people, or perhaps a fragmented space of multiple 'walled gardens' with a few companies as their gatekeepers, reminiscent of internet service providers of the 1980s such as Prodigy, Genie, CompuServe and AOL (Hogendorn, 2005). Also, internet.org required a particular approach to app and web design – stripped down and highly data efficient (Zuckerberg, n.d.). Its failure also closed one direction in which digital design may have proceeded in coming years. By the same token, the technology may have influenced mobile phone designs: this, too, now will not happen. These implications are global in scope. The same process could unfold elsewhere, especially in developing nations. Moreover, India's fight for net neutrality could become a causal factor shaping the trajectory of the internet. Facebook itself repeatedly said that internet.org's success or failure in India would determine how it proceeded with its plans elsewhere – perhaps the reason why it spent millions of dollars to save the project.

Second, this study demonstrates that unlike Feenberg's supposition, technical code does not *always* reflect 'hegemonic values and beliefs' (1995, p. 4). Commercial control of

technology opens the possibility of regulation for the public good, as Lessig (2006) suggested. The process of social construction of technology is as much about *construction* as it is about technology being social: agents such as independent regulators, digital policy activists, and the media *can* bear upon hegemonic structures and alter the process. But this is never an easy task. Hegemonic values and beliefs, by definition, tend to be taken for granted. They dictate what is the ‘right’ thing to do – at least at the outset. In this case, for instance, arguing against ‘benign’ technology companies providing free internet to connect the poor to vital facilities was not simply difficult but also counterintuitive – as long as the climate of techno-euphoria lasted. That is why many media outlets not only welcomed internet.org but even joined it. Only a concatenation of multiple social factors, drawn together in contingent conditions, led to the change.

Contingent conditions enable social factors to become significant and effect change. Both shifts in discourse in this case study coincided with such conditions. The first was the launch of Airtel Zero in April 2015. Until then, the discourse surrounding internet.org had been adulatory, constituting what Mager has called a ‘techno-euphoric climate of innovation’ (2012, p. 769). But Airtel Zero immediately sparked concerns about net neutrality – and internet.org got pulled into the cauldron of public debate. This enabled net neutrality activists, a peripheral voice until then, to suddenly dominate the discourse. The second shift came with TRAI’s issue of a consultation paper in December 2015. The previous chairman, Rahul Khullar, had already conducted a public consultation on the issue – and it had not had much impact. Had he remained in place, he was unlikely to conduct another consultation. But a new chairman decided to do his own consultation, allowing the disparate voices against internet.org to coalesce and instigating more actors to join the fray. These two contingent conditions thus enabled social actors to bring about a change in discourse, ultimately leading to a change in policy.

Digital policy activists and the independent regulator were two of these social actors. Though both also acted independently of each other – activists mounting a net neutrality campaign and TRAI issuing consultations and finally making the policy – their interaction created its own dynamics. For instance, TRAI issued the consultation only because there existed a civil society sector from which it expected to receive feedback. TRAI’s ability to engage in such consultations, meanwhile, stemmed from its own independence. The Modi-led government was ostensibly in favor of internet.org, as evident from Modi and Zuckerberg’s repeated shows of bonhomie in the public. Without regulatory independence, TRAI may not have been able to play the crucial role it did.

The mass media were another social actor, playing a three-pronged role in this affair. First, as institutional stakeholders. The departure of major media organizations like NDTV and Times Group was a blow to internet.org, substantially reducing the service’s value for users. Second, as a forum for policy debate, the media helped shape the positions of other stakeholders. Several companies, organizations, and lobby groups altered their position vis-à-vis internet.org once the media changed its tune. Finally, the media helped create public awareness regarding net neutrality. One need go no further than look at the money spent by Facebook on newspaper ads in late 2015 to urge the public to write to TRAI on its behalf, or the war of words between TRAI and Facebook about the validity of public emails, to understand the importance of public opinion and the media’s role in shaping it.

A complex array of social factors thus combined to defeat the neoliberal threat to net neutrality in India and helped the principle become codified in public policy. Instead of simply

identifying such factors and weighing their influence – as factor-analytic research tends to do – this study traced the *process* by which they interacted to produce change. This process-oriented approach is especially valuable on account of its attention to contingent conditions that ‘enable’ particular factors at particular times. In addition, the study demonstrated a novel way of combining computer-assisted and critical/interpretive methodologies to conduct such process-oriented research. Looking at voluminous data is becoming increasingly important, not simply because such data are available but also because they are computationally processible – opening new vistas for algorithmic research. At the same time, viewing data with a critical eye and in a contextually sensitive manner, as critical discourse analysis does, is useful for scholars to ask consequential research questions and arrive at meaningful answers (boyd & Crawford, 2012; Shahin, 2016b).

The analysis presented here thus helps improve our understanding of how technosocial change can take place for the benefit of the public rather than technology companies – especially in so-called ‘developing’ nations. At the same time, this study has its own limitations, which future research can help address. First, its reliance on media coverage means that any causal factors that eluded the media – for example, if the regulatory authority believed in economic protectionism – would lie beyond its analytical scope. In-depth interviews of regulatory officials, journalists, digital activists, and technology developers, can shed more light on such factors. Second, this study did not examine social media reactions on the issue. Net neutrality campaigns such as #SavetheInternet and #FBBlackOut as well as Facebook’s ‘Save Free Basics’ initiative were conducted mainly on social media. Digital ethnographies of such campaigns can add new insights into the technosocial process traced in this study.

Notes on contributor

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