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THE INFRASTRUCTURAL POWER OF PROGRAMMATIC ADVERTISING NETWORKS: ANALYZING DISINFORMATION INDUSTRIES IN BRAZIL

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The informational disorder that sprawls through multiple state-nations, exacerbated by violent uprisings and coup attempts such as the US Capitol Storm on January 6th, 2021 and the Brazilian coup attempt on January 8th, 2023, has shed new light on the political economy of disinformation industries. In particular, it brings to the forefront the problem of economic incentives for creating and spreading disinformation. This paper builds on critical platform and infrastructure research literature for analyzing the multilateral infrastructural power of programmatic advertising networks. While governing the techno-economics conditions of a real-time bidding process, this ecosystem monetizes different kinds of publishers, including those aimed at maximizing profits by spreading misinformation.

By scrutinizing the power relations that interconnect different advertising ecosystems and the publisher Terra Brasil Noticias, this study seeks to delineate part of the infrastructures that provide economic resources to the Brazilian disinformation industry. We also aim to contribute to theory-building efforts developing a theoretical framework for studying the both hierarchical and relational configurations of programmatic advertising infrastructures, here understood as sociotechnical assemblages of institutions, norms, practices, business logics, software code, algorithms, and data.

Programmatic networks and disinformation industries

Previous research on the programmatic advertising ecosystem advanced the comprehension of how this model contributes to the plummeting of professional

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journalism revenue (Couldry & Turow, 2014). Historical perspectives also demonstrate how the advertising industry perceived and adapted to the fast growing model of digital advertising constructed by Google and how this shaped the social-materialities of the Internet (Crain, 2019; McGuigan, 2019; Turow, 2012). Recent literature refocused the issue through the perspective of surveillance capitalism (Zuboff, 2015), predatory advertising practices (O'Neil, 2017) and informational disorder (Bakir & McStay, 2018). The work of Braun & Eklund (2019) provided an in-depth understanding of how the ad-tech industry is challenged by informational disorder scandals, and McStay (2017) discusses how it relates to the model of prevalence of behavioral profiling of the audience over contextual placement or editorial considerations.

Nevertheless, there is a lack of theoretical and analytical proposals in literature that focus on the power of platforms and infrastructures in order to investigate the social and material underpinnings of the programmatic advertising industry in relation to the informational disorder. We draw on the interfaces between platform and infrastructure studies (Plantin et al, 2018; Edwards, 2021) as the main analytical and theoretical frameworks. More specifically it builds on the notion of reframing platform power away from economic dominance in the market and towards a more nuanced consideration of the sociotechnical reconfiguration of democratic functions (van Dijck, Nieborg & Poell, 2019). As stated by Blanke and Pybus (2020), understanding platform monopolization demands a closer look on how its technical integration creates specific forms of dependency and competition.

Thus, we argue that programmatic advertising networks (McStay, 2017) should be approached as a singular example of "disinformation infrastructure," defined by Pasquetto et al. (2022, p.26) as "a multi-layered, relational and distributed sociotechnical entity that supports the maintenance and distribution of information that is false or misleading". Our paper adds to this definition suggesting that advertising networks are a fundamental infrastructure that fosters disinformation by providing financial incentives that sustain the epistemic work on these industries, requiring an analytical perspective that recognizes how their asymmetric exercise of power is connected with the governance of a distributed and interconnected range of actors (such as publishers, advertisers, citizens, legislators). Our research questions are: how is power exercised by programmatic advertising infrastructures while managing its multilateral relationships? In terms of technicalities, governance and business models, how does these infrastructures enable or reinforce disinformation disorder?

Method

These research questions are discussed based on an empirical study on the programmatic advertising infrastructures that monetize the Brazilian website Terra Brasil Notícias focused on the elections period (October, 2022). Displaying the slogan "God Above Everything and All" to its 12 million monthly visitors (according to SimilarWeb), this publisher was the most shared among the extreme-right leader Jair Messias Bolsonaro supporters on Telegram groups (Mello, 2021) and was pivotal to spreading disinformation that fueled distrust in the electoral process and triggered

antidemocratic insurrections against the result of the 2022 Brazilian presidential election.

This case study draws on a multi-methodological approach, combining digital methods research and critical analysis of platform documents. The empirical data obtained has 95.269 ads collected on the website (data scraped with a Python script developed by one of the authors) during the election month (Table 1).

Results and discussion

Empirical data show that MGID, a native advertising platform, placed 54% of the advertisements on Terra Brasil Notícias. Google Ads was the second largest provider of digital ads on TBN, despite its policy's restrictions on sellers that host unreliable or harmful content on issues such as health, climate, elections and democracy. The most frequent advertisement displayed via Google Ads was related to SmartFit, the largest fitness company in Brazil - its owner (Edgar Corona) is accused of financing fake news and since 2020 has been investigated by Brazilian Federal Supreme Court. Taking into consideration the MGID programmatic network, most of the URLs exposed are related to content farms, online bets and similar, it could also identified a significant presence (9,1%) of the institutional page of a major automotive company (Nissan).

Table 1: Ad servers provided at Terra Brasil Notícias

Server	N	Percent
clck.mgid.com	43,641	54.0%
googleadservices.com	33,915	42.0%
adclick.g.doubleclick.net	2,336	2.9%
googleads.g.doubleclick.net	761	0.9%
lax1-ib.adnxs.com	23	0.0%
servedby.flashtalking.com	20	0.0%
infolinks.com	17	0.0%

pixel.quantcount.com	10	0.0%
exch.quantserve.com	9	0.0%

Source: developed by the authors using data scraped from the website.

Even before the certification of election results, TBN was a leading propagator of false claims that electronic voting machines were rigged against Bolsonaro. However, only in November Google decided to demonetize the publisher by removing TBN from its ad-space inventory. This delayed action enabled the publisher to profit from disinformation, false claims and conspiracy theory for years. Following the cut off from Google, TBN resorted to lesser known programmatic networks, such as MGID, Infolinks and other companies with lower standards of moderation and filtering against disinformation.

The research data demonstrates how programmatic advertising infrastructures not only financially sustain disinformational industries but also enact a singular governance power of the informational systems. In this sense, ad-techs develop policies, norms and practices to verify and validate potential content producers that aim to sell advertising spaces, and also provide the algorithmic tools of brand safety for accreditation of publishers. Findings from the Brazilian case also contribute to understanding the infrastructural power of big tech governing the monetization of publishers in the Global South, as also demonstrated by Silverman et al. (2022). Further research could develop theoretical frameworks focusing on the power of platforms and infrastructure in order to investigate the social and material underpinnings of the programmatic advertising industry in relation to the informational disorder in different contexts

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