

Techlash or tech change?

How the image of Mark Zuckerberg changed with Cambridge Analytica

RASMUS HELLES & STINE LOMBORG

DEPARTMENT OF COMMUNICATION, UNIVERSITY OF COPENHAGEN, DENMARK

ABSTRACT

The Cambridge Analytica scandal shook political establishments and news audiences alike in 2018. The scandal, which figures prominently in accounts of the “techlash”, has been followed by a substantial reorientation in the attitudes held towards the digital sector. The aim of this chapter is to tell the story of the developing history of the digital backlash as seen through an empirical analysis of the Danish media coverage of Mark Zuckerberg and Facebook. While we find that the public’s view of Zuckerberg, Facebook, and the tech industry did change dramatically, we suggest that this was anticipated by a long-term change in the media representation of them in the years before. This challenges the notion of quick and sudden pushback, as implied by the metaphor of a backlash, instead suggesting that the scandal is part of a gradual process of change in public opinion regarding technology companies, their CEOs, and their operations.

KEYWORDS: agenda-setting, techlash, quantitative content analysis, natural language processing, NLP, news coverage

Helles, R., & Lomborg, S. (2024). Techlash or tech change? How the image of Mark Zuckerberg changed with Cambridge Analytica. In K. Albris, K. Fast, F. Karlsen, A. Kaun, S. Lomborg, & T. Syvertsen (Eds.), *The digital backlash and the paradoxes of disconnection* (pp. 25–43). Nordicom, University of Gothenburg. <https://doi.org/10.48335/9789188855961-2>

Introduction

The Cambridge Analytica scandal forcefully brought the politics of Big Tech to public attention in 2018. The scandal ostensibly exposed what the algorithms of data mining systems could accomplish when unleashed on the vast collections of personal data hoarded by social media companies (even if the actual capabilities of Cambridge Analytica have since been questioned). The scandal unfolded in the wake of the Brexit referendum and the election of Donald Trump for president in the US, as well as the Snowden revelations, which shook political establishments across the Global North. It also contributed significantly to a growing sense of unease around social media platforms as means for information, communication, and action in society, as well as about the unprecedented surveillance regimes that were made possible by digital technology. In a Danish context, it has been part of a process that has brought the operations of Big Tech to the forefront of political debates, if not (yet) to meaningful, regulatory initiatives.

The metaphor of the techlash, which emerged as a catchphrase in the wake of the scandal (e.g., Doctorow, 2019), embodies the notion of something reaching a tipping point and a sudden change of state – in this case, in the perceptions and public debates about Big Tech. Our analysis in this chapter finds that the metaphor, in some important ways, clouds our vision of a broader set of concerns about digital technologies, data, and the role they play in shaping societal developments and individual everyday lives over a longer time span (Rust, 2019).

The aim of this chapter is to tell the story of the developing history of the digital backlash as seen through the Danish media coverage of Mark Zuckerberg and Facebook (now Meta), one of the key entities in debates about the role of digital technology in society during the past decade and a half (Bucher, 2021). We rely on a full sample of all coverage of Zuckerberg and Facebook from 2010 to 2021 in the Danish daily newspapers *Ekstra Bladet*, *Jyllands-Posten*, and *Politiken*, all owned by JP/Politikens Hus and kindly donated to us for this research as part of the “Platform Intelligence in News” project. Denmark is often considered a digital frontrunner, and the backlash in public discourse on tech should arguably be viewed against a generally tech-enthusiastic Danish public. At the same time, we do not mean to suggest that the digital backlash is a nationally specific process of push-back, but rather that it largely mirrors an international (notably American) shift in public opinion and debate about Big Tech and its translation into the politics and ethics of ordinary people’s lives through debates about, for example, digital disconnection and detoxing.

In using a longitudinal analysis of media coverage of Zuckerberg and Facebook as a case in point for studying the techlash, we seek to bring empirical nuance and deepen explanatory efforts to account for the current, largely critical debate over the role of technology and tech giants in society. At the

same time, we use the chapter to showcase and reflect upon what can be learned about the digital backlash by studying media coverage in full scale.

With the empirical analysis, we situate the so-called techlash in public opinion in critical developments that started before the Snowden and Cambridge Analytica events but was catapulted further by them (see also Bechmann, 2019). While the analysis of media coverage suggests that the public's opinion of Zuckerberg and Facebook did change dramatically with the Cambridge Analytica scandal, which hit the news in 2018, this was anticipated by negative changes in the media representation of them also in the years before. In addition, many of the preceding changes were linked to other dimensions of the role of Zuckerberg and Facebook other than the Cambridge Analytica scandal. This challenges the notion of quick and sudden pushback and forces us to think about the techlash as part of a gradual process of change in public opinion regarding technology companies, their operations and CEOs, and – perhaps – their place in everyday life and in society (O'Sullivan & Fortunati, 2021).

Background

Prior work has dealt with the scandals that came to fuel the techlash, particularly the Snowden leaks (Dencik & Cable, 2017) and Cambridge Analytica (González et al., 2019), albeit without a particular interest in the key human actors involved in these cases. Existing work on the media representations and coverage of tech entrepreneurs is surprisingly sparse.

Some work exists on representations of the so-called celebrity CEO status of tech entrepreneurs and media moguls, from Rupert Murdoch and Richard Branson to Jeff Bezos and Mark Zuckerberg. It has particularly paid attention to the interrelation between the personal brand of the individual entrepreneur and the brand of the tech company they lead. Little and Winch (2018), for instance, analysed how company public relations material from Facebook, capitalising on showcasing stories from CEO Mark Zuckerberg's personal life, contributed to the corporate branding of the company in question, Facebook, and the storytelling of global tech leadership of Zuckerberg himself. This work was extended in a book (Little & Winch, 2021), which drew together celebrity studies, feminist theory, and more to explore the mythical status and ideological power of Zuckerberg alongside fellow tech celebrity entrepreneurs, who are dubbed the patriarchs of digital capitalism.

Park and Wallace (2020) analysed alleged tensions between personal leadership, power, and ethical judgments in the social media performances of global leaders, using Elon Musk, Donald Trump, and Mark Zuckerberg as case exemplars. Their study was based on a sample of news articles on the uses and misuses (misinformation or “big blunders”) of said social media to show how these celebrity CEOs construct and brand specific personas

while at the same time troubling and politicising the relationship between ethics and technology innovation. Additionally, there is a handful of studies that use textual analyses of Zuckerberg's public speeches and corporate communications to suggest the discursive power of Big Tech in future-making, by their advancing narratives of technological developments as political forces for enhancing individual freedom and connectivity for social progress (Haupt, 2021; Hoffmann et al., 2018). Taking a somewhat different analytical route, Moran (2020) appropriated Arsenault and Castells's (2008: 492) theory of network switchers and power to explore how Zuckerberg acts as a "network switcher" who connects economic, political, and cultural networks by way of his control over Facebook, which in turn serves as a "programmer" of common goals and resources in society. Moran's analysis suggests that in addition to discursive power, we should take interest in how tech CEOs, through the relationship between themselves and the platforms they own, wield social, economic, and political power.

A few studies have taken their starting point in other public actors' communication about Big Tech and their CEOs. For instance, Karppi and Nieborg (2021) used the confessions of key figures who left Facebook and other companies to show the development of dystopian counter-narratives of the Silicon Valley that have emerged in the wake of the Brexit referendum, the Trump election, and the Cambridge Analytical scandal. Creech and Maddox (2022) analysed public debate around Zuckerberg in American elite media outlets and attended to the role of these media in legitimising or challenging the discursive power of Zuckerberg. Hobbs (2007) studied mass media coverage of Rupert Murdoch, demonstrating the co-existence of positive and negative narratives about the "Aussie underdog" and the "greedy media mogul". These studies show how media coverage carries and co-constructs myths and ideologies of celebrity CEOs and contributes to facilitating societal debate and forming public opinion around them. By extension, they suggest the political and ideological power of tech CEOs as exercised through the discourse surrounding them. When compared to the quite extensive body of literature existing on the media coverage, social media use, and public personas of politicians, especially in the wake of the election of Donald Trump for president of the US in 2016 (e.g., Boczkowski & Papacharissi, 2018), the sparse literature on tech CEOs is somewhat surprising.

Even if there is a surprising gap in the literature on media representations and public opinion on tech billionaires and their personas, we suggest there might be important lessons to learn about the digital backlash from analysing such representations. In this chapter, we take inspiration from the historically grounded core tradition in media studies of the role of the mass media in agenda-setting and framing to cultivate public opinion (McCombs & Shaw, 1972; Weaver, 2007). We are indebted to this tradition for the ways of understanding and studying media coverage of a specific topic and for how

our study changes over time to understand the formation of public opinion and deliberation about a topic of societal interest. In this chapter, however, we are not eliciting framings, but simply – and more descriptively – looking for semantic connections and formations around Zuckerberg and Facebook in Danish media, and what stories these might help us tell of the techlash and the historical trajectory of the broader digital backlash.

Research design and operationalisation

In our analysis, we aim to outline how media representations of Mark Zuckerberg have changed, with particular emphasis on the way scandals and criticism have played a crucial part in shaping those changes.

The project is a spin-off from an applied research project on artificial intelligence in news, where we take part in a consortium of researchers and practitioners to understand the role and consequences of implementing recommender systems and natural language processing techniques in news production and dissemination. Our empirical analysis departs from a sample of articles from *Politiken* (a national broadsheet), *Jyllands-Posten* (also a national broadsheet), and *Ekstra Bladet* (a national tabloid). The sample comprises all articles that mention Mark Zuckerberg in the three newspapers from October 2007 to April 2021. The three papers can be considered core exemplars of the Danish newspaper landscape, and they broadly cover the existing spectrum of political leanings: *Politiken* and *Ekstra Bladet* are considered centrist or slightly left-leaning in their editorial orientation, whereas *Jyllands-Posten* is right-leaning.

We approach the analysis as a corpus-based analysis, using an array of natural language processing techniques, with the goal of mapping the way that coverage of Zuckerberg has changed and how it is interlaced with the coverage of Facebook. The natural language processing-based approach to the analysis of news content shares a number of general assumptions with the traditional approach in quantitative content analysis (Eskjær & Helles, 2015; Krippendorff, 2013), in particular, the general assumption that news texts can be meaningfully quantified and operationalised for analysis, and that core changes in news coverage can be identified through numerical analysis of such datasets. A major difference between traditional content analysis and the natural language processing-based approach is in the specifics of how the quantification of the data is done and the analytical techniques employed. Traditional content analysis relies on the development of coding protocols that are used by human coders to capture chosen patterns of textual meaning, such as particular relationships between specific entities (e.g., how different journalistic framings are applied to political actors in relation to a given topic). Since the coding process is labour intensive, sampling is almost always used, and typically aims at selecting as small a sample of texts as possible.

Manual coding of thousands of news stories is costly, so the selection of texts for analysis typically aims at being just large enough to support the requirements of statistical analysis for representativity in relation to the total universe of texts that could be sampled. Subsequent analysis typically focuses on tracing how the coded constructs differ over time or between different news outlets, and explanatory validity is often established through statistical significance testing. Complete corpora of texts, such as the one we use here, sidestep the issue of statistical representativity because there is no need to assess the relationship between the coded sample and the complete corpus.

In contrast to traditional content analysis, the approach of natural language processing does not employ human coding but instead uses a variety of algorithmic approaches to make the language in news stories available to quantitative analysis. Therefore, natural language processing-based analysis is often conducted on much larger corpora than those that are typical of traditional content analysis, which means that the pool of stories that are of relevance to a study often coincide with the sample that is analysed.

The shift also means that the analytical procedures differ substantially, not least because the datasets that follow from the two approaches have different analytical units: In traditional content analysis, the unit of analysis reflects theoretical concepts from mass communication theory, such as, for example, framing (Krippendorff, 2013). Frames are broadly understood to be characteristic ways that news organisations cast different issues, for example, whether environmental issues are addressed, or framed, as political, economic, or existential problems.

In contrast, natural language processing-based approaches typically depart from linguistic categories such as word type or syntactical relationships, or from mathematical concepts such as vector spaces (Grimmer et al., 2022). This also strongly influences the analytical tools that are used in the two approaches, where the natural language processing approach employs a wide range of tools for analysis and visualisation of relationships in the data, many of which are adapted from the traditions of corpus linguistics and computational linguistics. Other analytical techniques have developed natively as part of the natural language processing landscape, such as, for example, topic modelling for typologising stories in different categories, or sentiment analysis for establishing the tone of sentences or entire texts.

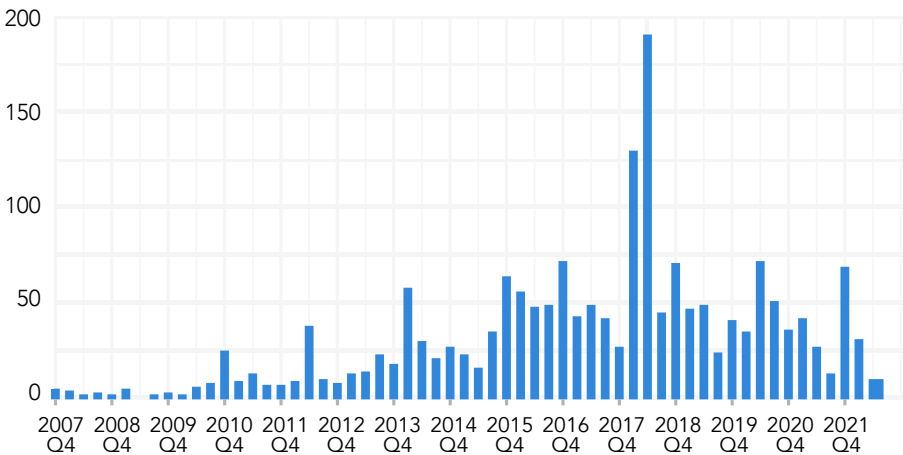
We are interested in the broad trajectories of changes in the ways Zuckerberg and Facebook have been covered in the sample, and how this relates to the techlash that is broadly conceived to have followed in the wake of the Cambridge Analytica scandal. However, we do not focus specifically on that scandal, but approach the data in ways that allow us to assess both the timing of the techlash in more detail, as well as changes that happened prior to it as part of a broader process of pushback against digital developments. Our dataset covers about 14.5 years (from October 2007 to April 2021) and comprises 1,836 articles.

Findings

The techlash did happen

A very general indication of the importance of the events related to the Cambridge Analytica scandal can be seen in Figure 2.1, which shows the annual distribution of stories. The spike in the two first quarters of 2018 clearly reflect a massive change in the intensity of coverage related to Zuckerberg during 2018, when former Cambridge Analytica employee Christopher Wylie’s revelations brought the scandal to the news media. Indeed, half the stories in our corpus have been published since March 2018, even if the period between that date and the end of our sample covers only a quarter of the total sample period.

FIGURE 2.1 Number of news stories mentioning Mark Zuckerberg, 2007–2021



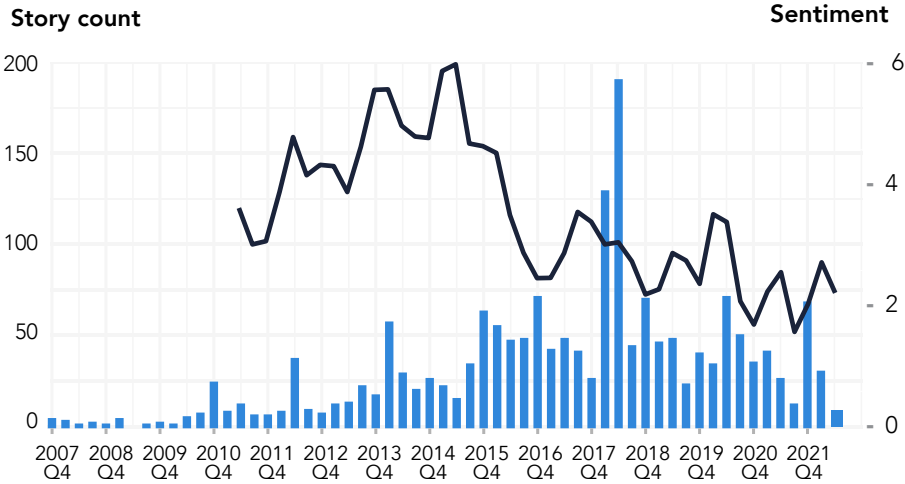
Comments: The graph includes all stories that mention Zuckerberg from the sample from *Jyllands-Posten*, *Ekstra Bladet*, and *Politiken*, October 2007–April 2021.

The spike in 2018 means that 23.1 per cent of all stories in our corpus are from that year, even though 2018 only represents 6.9 per cent of the period covered in the sample. The spike reflects the massive change in both public and political awareness of the relationship between social media as reflected in news coverage, even if our corpus only comprises stories that explicitly mention Zuckerberg; this means that there is likely to be additional news texts that could meaningfully be included in a complete analysis of the techlash, but that are not part of our sample.

However, the presence of the spike does not document any change in coverage beyond the increased intensity. To better understand the *character* of the change in the coverage of Zuckerberg, we conducted a sentiment analysis of

all sentences in the corpus that mention him. A sentiment analysis algorithm uses (long) lists of words in a selected language (here Danish), where each word is given a value on a gradual scale from negative to positive.¹ For example, words such as “murder” or “fraud” are given large negative values, whereas words like “happy” are given large positive values. Algorithms for sentiment analysis seek to take the role of modifier words (e.g., reinforcement words like “strong” hatred) and signs (e.g., “!”) into account. About 10 per cent of all sentences in the corpus mentions Zuckerberg, and the analysis of the rolling quarterly average of these sentences are shown in Figure 2.2. The line shows a marked dip in average, annual sentiment.

FIGURE 2.2 Number of news stories mentioning Mark Zuckerberg, and average sentiment of sentences mentioning Mark Zuckerberg, 2007–2021



Comments: The number of news stories mentioning Mark Zuckerberg is indicated by the blue bars. The average sentiment of sentences mentioning Mark Zuckerberg is indicated by the black line. Average sentiment not calculated prior to 2011 due to the sparsity of data before that time.

It is noticeable that the steepest drop in sentiment happens during the third and fourth quarter of 2015, which likely reflects discussions of the role of social media in relation to the 2016 American presidential election and the perceived inaction of Facebook in relation to Donald Trump’s campaign. While the techlash appears as a change in the intensity of stories in 2018, the tone of the coverage already began to change in the third and fourth quarter of 2015. This suggests that the techlash is not uniquely linked to a singular incident but consists of a compound effect of different moments in a sequence of events and developments. In particular, the dramatic change in 2015 suggests that the transformation of the representation of Zuckerberg and Facebook is linked to the moment when it was no longer possible for them to deny their role in real political power struggles in American politics.

Developing a story typology for the broader digital backlash

The changes in sentiment depicted in Figure 2.2 refer to a very high level of aggregation and reveal little about how these overall changes manifested in terms of actual, discursive patterns in the news coverage that could further substantiate the analysis of techlash or tech change.

To explore this, we produced a typology of the stories in the corpus. In natural language processing–based analysis, this is known as topic modelling, and there are different ways to do it. The approaches share the goal of grouping together texts that are more similar to each other, and they all do this via measurements based on the words that constitute the corpus texts. The main differences are found in how the words in the text are approached. Until recently, the most common method has been to use latent Dirichlet allocation, which finds sets of words that often occur in the same documents, and subsequently scores each document according to which sets of words are most prevalent in it. If applied to our present data, one set of words might turn out to be about stock market prices and value, and another might be the names of top managers from Facebook. A news story about a new, all-time high course for the Facebook stock would probably score high on both (because financial news often mentions top management), whereas a news story about the pros and cons of using Facebook during one’s holiday would likely score low on both those sets.

For the purposes of our analysis, we have opted to go with a more recent approach to topic modelling, called *top2vec*, which uses vector representations of words and documents. Instead of relying on statistics of word counts per document, vector models score a word by recursively looking at its immediate neighbourhood: For each unique word in the corpus, all windows (meaning the 5 or 10 words immediately before and after it) are pooled, and based on the words in the pool, a string of numerical values (usually between 50 and 300) are calculated. This string (the vector) ends up acting as a kind of semantic profile of the word. In vector models, words that often occur closely together in the corpus have similar vectors. If run on a corpus of cookbooks, “salt” and “pepper” would most likely have similar vectors, because they often occur together; however, whereas “salt” and “water” would also have similarities, “pepper” and “water” would probably not. The key affordance of vector models is that words with similar vectors also often belong closely together semantically.

In a vector-based topic model, a single vector is calculated for each document based on the vectors of individual words that constitute the document, and it is shaped from the semantic domains that dominate among them. Developing a document typology consists of grouping together documents that have the most similar document vectors, since they are likely to deal with semantically similar domains.

We chose the vector approach over the latent Dirichlet allocation approach in part based on experiments with the corpus, and in part in recognition of

the persistent critique that latent Dirichlet allocation models are highly dependent on the settings that control the statistical parameters for the model development: Even very small changes often have dramatic consequences for the resulting model. Vector-based models also depend on settings (hyper parameters), but in our case, the stability of the resulting models was vastly superior to the latent Dirichlet allocation models. Also, and more importantly, the interpretability of vector-based models is often more convincing: Qualitative evaluation of a topic model is a key analytical step, and in comparison, vector models are often considered more immediately sensible to human analysts (Egger & Yu, 2022).

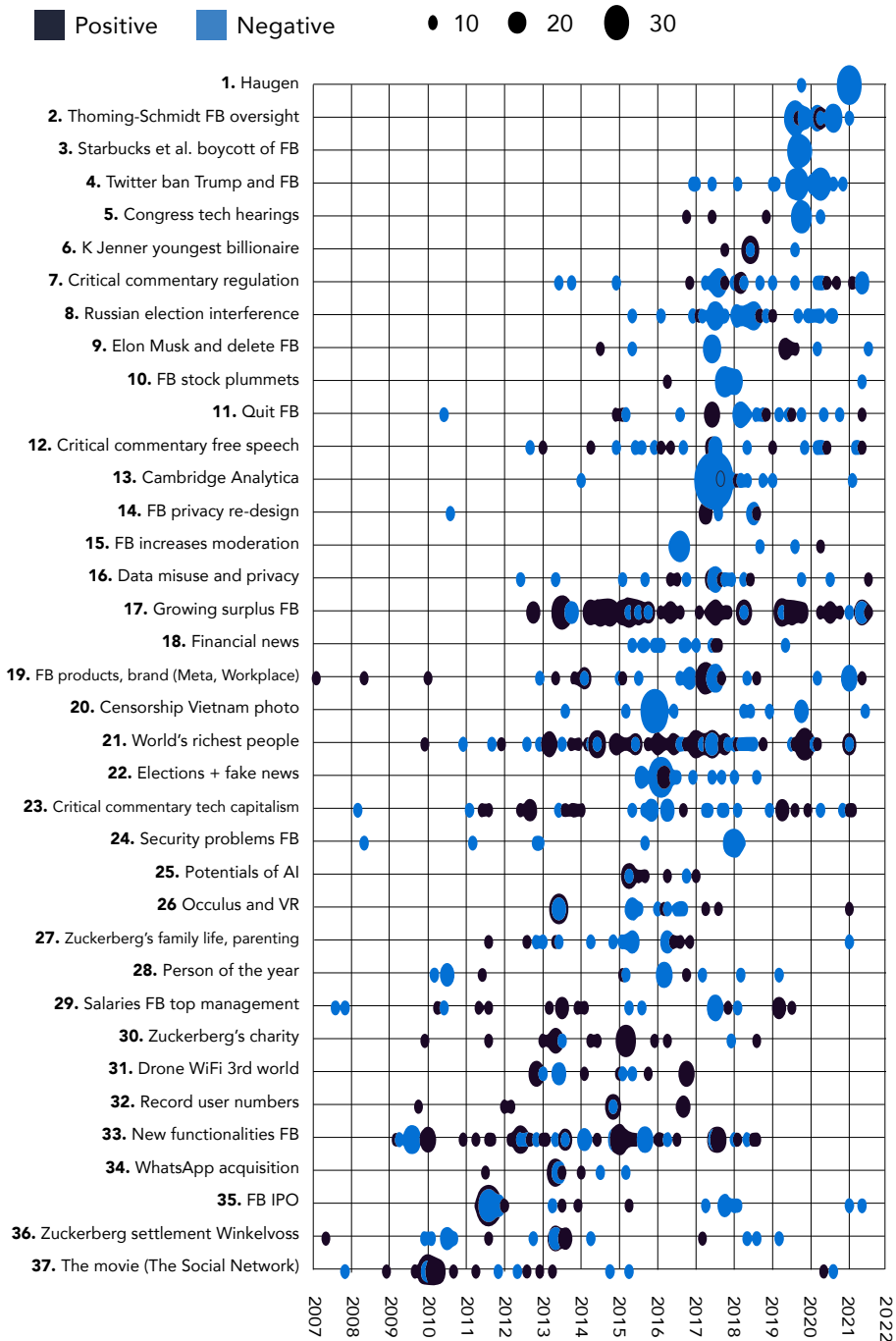
In the topic model that we developed for the corpus² of texts mentioning Zuckerberg, we identified a total of 38 types (clusters), of which 37 contain a total of 65.8 per cent of the stories in the corpus. The remaining 34.2 per cent belong to a noise cluster with little internal coherence. While the noise cluster is large, all clustering approaches involve a trade-off between the number of clusters and the limit to clustering. Other versions of our model classify more texts into clusters, but most of these additional clusters are small (fewer than five stories), providing little additional information beyond the chosen model.

Topics and time

Figure 2.3 organises the clusters along the vertical axis. It shows how they manifest in the news coverage corpus over time. The clusters are sorted after recency with the newest clusters at the top and the oldest at the bottom, based on the average age of the stories comprising each cluster. The stories are grouped into monthly intervals, and the size of each dot indicates how many stories of each cluster were published in that particular month. The colour of the dots represents the average sentiment of the stories of a particular month in relation to all stories in the corpus: red indicating more positive (above average) and blue indicating more negative (below average).

In the following sections, we provide summary descriptions of a range of different story groups. The summaries reflect both the contents of the individual groups, but also an aspect of the method that incorporates thousands of stories in a single analysis: It is the tectonic shifts in the patterns of coverage, rather than the discursive details of individual stories, that are central to the analysis. The only exception we make is in the identification of the tipping point in story sentiment, where we provide some textual context.

FIGURE 2.3 News story clusters and sentiments, 2007–2021



Comments: $N = 1,208$ (noise cluster excluded).

The honeymoon years

At first glance, the developments charted in Figure 2.3 reinforce the global trend in sentiment displayed in Figure 2.2: Stories grow more negative over time. The stories in the top-right corner of Figure 2.3 are clearly more negative than those in the bottom-left corner.

An inspection of the sentiment composition of the different clusters also reveals that there are clearly more negative than positive clusters, and that most clusters combine negative and positive stories (note that some dots represent more than one story). The most prevalent and predominantly positive clusters are those that deal with Zuckerberg as one of the World's richest people (#21) and news about the quarterly financial reports from Facebook and the astronomical surpluses they document (#17). Closer inspection of the financial news cluster (#17) also shows the repetitive nature of this kind of journalism, since the spacing between the stories is remarkably even, most likely reflecting the routine publication of these stories in conjunction with the publication of Facebook's quarterly financial statements. The overall positive sentiment in nearly all these stories also reflects a basic celebratory reporting on the quarterly reports' display of Facebook's tremendous financial accumulation. It is remarkable that one of the only unambiguously positive story types about Zuckerberg and Facebook is one that is not primarily driven by core criteria of newsworthiness: Neither the sentiment nor the timing of the stories suggest that they are anything but a routine form of reporting, repeating the common criticism that business journalism is often unnecessarily celebratory (Butterick, 2015; Kjær & Slaatta, 2007). By the same token, the repeated reporting of the year's richest person includes Zuckerberg several times, not because he is the richest person each year, but because these stories frequently reiterate the previous top-scorers on the list. Taken together, the two aforementioned story clusters represent the lion's share of unequivocally positive coverage of Zuckerberg and Facebook, at least insofar as they can be said to deal with them as actors that are presented in some form of social capacity that renders them comparable to other parts of society. The same is true of a minor (in terms of story volume) cluster, namely the one reporting on Zuckerberg's personal philanthropy and charity (#30). Prior to mid-2015, several stories detailed Zuckerberg's spending on charities aimed at eradicating diseases, and his pledge (in late 2015) to give away 99 per cent of his stake in Facebook to charity during his lifetime. The positive tone of these stories, also after 2015, suggests the reluctance of reporters to link Zuckerberg's mounting problems to the pledge, despite the dramatic turn towards negative coverage in the same media during the same period.

It is noteworthy that Zuckerberg as a person has been met with mixed coverage from the beginning, and that most of the early negative coverage stems from clusters of stories that deal with his personal qualities. The two earliest clusters deal with the film *The Social Network* (Fincher, 2010), which

did not portray Zuckerberg particularly positively. In the corpus, the stories about the film have mixed sentiments, which reflects that they combine largely negative references to the real-world Zuckerberg with positive evaluations of the film itself. Temporally, the film discussion coincides with stories about the real-world conflict between Zuckerberg and former fellow students, who claimed that they had made material contributions to the early development of Facebook at Harvard, and therefore had a stake in the company, which Zuckerberg had illegitimately claimed for himself.

Emerging problems

Figure 2.3 also helps bring out in more detail what drives the initial turn against Facebook and the tech industry. Two clusters have concentrations of stories in the second half of 2015, namely stories about the American presidential election and fake news (#22) and stories about censorship (#20), particularly of photographs. Central to the latter group are a series of stories from 2016, which report on Facebook's decision to take down a post by Norwegian writer Tom Egeland, in which he included Tom Ut's classic picture *The Terror of War* from 1972, showing the naked girl Kim Phuc running away from an American napalm attack during the Vietnam War. This provoked sharp rebukes from the Norwegian press, echoed by Danish newspapers, which were compounded when a posting by the Norwegian prime minister at the time, Erna Solberg, was also removed.

While the two topics are clearly of separate origin, their temporal coincidence invited a double criticism, since the refusal to censor obvious false news on the one hand, and the willingness to censor historical fact on the other, was considered an untenable double standard. Furthermore, their combined effect is to locate Zuckerberg and Facebook as recognisable political actors in the public sphere: The (in-)action documented in the two clusters of stories activates registers of public debate and critical news coverage, which are difficult or impossible to escape via the kinds of corporate communication strategies that Facebook tried to use. One of the stories in the cluster about the Vietnam War photograph is a comment by the Danish politician Ida Auken (2016: n.p.), and begins like this:

The world's most powerful editor refuses to be an editor. How do we guarantee the right to a free and open debate, when a giant corporation can edit the conversation, without reference to the ordinary rules of democratic debate? Facebook founder Mark Zuckerberg tries to wiggle his way out of responsibility, but that is not how things work.

The quote clearly shows how the censoring of the photo and the complications following in its wake allows others to posit Zuckerberg and Facebook in the discursive domain of politics, including the allusion that Zuckerberg's attempt to escape responsibility is strategic manoeuvring ("wiggle") rather

than a genuine position about the novel role of a social media platform with respect to freedom of speech and censorship.

The two streams of stories about censorship and fake news also coincide with a change in sentiment in one of the longest-running clusters of stories in the corpus, namely the critical commentary on the nature of tech entrepreneurs as members of an ultra-rich class of global capitalists (#23). This stream of articles is made up of discussion pieces by journalists and initially foregrounds the global elite, and thus deals with Zuckerberg in that capacity. This changes after 2015, where the coverage also becomes more consistently negative. The previous commentary combines many different perspectives on wealth and redistribution, but Zuckerberg and Facebook clearly enter the discussion in a more coherent way after the changes in 2015. Later examples from the cluster clearly show how the wealth of tech moguls gets linked to the fate of ordinary people in a more direct way:

Super billionaires laugh all the way to the bank, while millions are pushed into poverty. The world needs more international cooperation if something is to be done about inequality, says Professor [...]. This [is the conclusion] in a report by Ibis Oxfam. (Ritzau, 2021: n.p.)

This quote also shows how relationships between the tech entrepreneurs is linked to new discursive domains, here the adverse effects of the lockdowns in connection with the Covid-19 pandemic. The link from money to redistribution is made by a nongovernmental organisation, but it is notable that while the story is brought by *Politiken*, it is a reproduction from the news agency Ritzau: Despite its very overt political charge, the role of the tech giants appears to have changed sufficiently to allow it.

The repositioning of Zuckerberg and Facebook as political actors is compounded by the Cambridge Analytical scandal (cluster #13), which exploded into Danish (and global) news in 2018, when whistleblower Christopher Wylie made his public statements and revelations. The scandal combines problems from the initial scandal about Zuckerberg's hesitation to sanction Trump's spreading of fake news on Facebook with privacy concerns for the 87 million Facebook users, whose data were harvested by Cambridge Analytica and the researcher Alexandr Korgan. The data that Cambridge Analytica appropriated was used to fuel the election campaign of Donald Trump, and it was speculated that it might have helped him win the election. While Zuckerberg and Facebook had clearly already become part of the political domain earlier, the Cambridge Analytica scandal further elaborated that role, since an immediate consequence was that Zuckerberg had to appear in congressional hearings about his company.

Coverage of the Cambridge Analytica scandal all but died out as a topic in the news once Wylie's revelations ended (see topic #13 in Figure 2.3). Yet, a range of new clusters of stories emerges in the corpus, just as some preexisting clusters increase in publication intensity. The most immediate successor to the stories about Cambridge Analytica were stories about Russian interference

in the election that saw Trump become president (#8), which also coincides with an intensification of stories about the possibilities of regulating social media and platforms (#7). While the stories of election interference died out in the latter part of the period under study, the stories of regulation persist, remaining active during the period covered in our analysis. Similarly, a cluster of stories deal with the perceived error of Facebook not banning Trump when Twitter did (#4), which persists till the end of the period covered in the data.

Moreover, in the wake of the Cambridge Analytica scandal, there is a range of stories which describe actions by other social actors, undertaken in reaction to the changed landscape of public opinion that manifested after the Cambridge Analytica scandal. Two groups of these stories have to do with boycotts: one initiated by Elon Musk (#9), and one led by Starbucks as part of a pressure campaign (#3), linked directly to the failure to ban Trump from Facebook when Twitter did.

Perhaps unique to the Danish coverage is a strong (negative) emphasis on the inclusion of the former prime minister, Helle Thorning-Schmidt, in Facebook's Oversight Board (#2). This was largely perceived as an attempt to divert attention from the problems raised by the two main scandals, which clearly drowned out the interest in a Dane getting an international position.

Goodbye Zuckerberg

Once Zuckerberg and Facebook manifest as political actors, it is also noteworthy that the role of Zuckerberg becomes much more limited in the news coverage. He is mentioned in all the stories in the corpus, but at the level of the clusters, it becomes clear that he figures much less as a person and much more in the capacity of the owner and top manager of Facebook. Prior to the problems relating to the Trump campaign and fake news and the Cambridge Analytica scandal, there were several clusters of stories that had Zuckerberg as the explicit focus. One was the above-mentioned cluster about his philanthropy (#30), and another is the stream of stories about Zuckerberg's family life (#27). The latter group largely relate strategic disclosures about Zuckerberg's personal life, which are clearly designed to humanise his image, such as him opting to take parental leave when his child was born, and before that about his marriage and difficulties in life. These stories are mixed with regard to sentiment, which both stems from the fact that some of them relate stories about the couple's problems with having a child, and from the fact that some of the topics of the stories are interpreted through the different cultural and social values of Danish society; for example, Zuckerberg's decision to take parental leave (which is common among Danish fathers) was not understood as a progressive choice. These groups of stories stop, and so does the interest in depicting Zuckerberg as anything but a corporate representative. Even the mentions of his astronomical wealth, which as mentioned was a core element in the early part of the corpus, seem to dry up in the later parts.

This can also be seen from the fact that many of the other senior executives at Facebook begin to appear much more regularly as names in the clusters that are characteristic of the latter part of the period. Where Zuckerberg was previously synonymous with the company, and Facebook routinely put out material that formed the basis of some of the early clusters, this has now stopped (or has stopped being reported). Instead, other figures, such as Sheryl Sandberg and Sundar Pichai, become more prominent in the stories, while Zuckerberg's human persona retreats.

Concluding discussion

Our analysis can be read as a historical narrative of the digital backlash as expressed through the case of public debate about Facebook. As we have seen, seeds were sown in news coverage throughout the studied period to raise critical concerns about Facebook and its role in matters of freedom of speech, censorship, misinformation, global inequalities, privacy, and data security, but also simply the consequences of seemingly minimal changes to the interface for mundane communication and overcoming alleged Facebook addiction through disconnection, and so on. These concerns gained strength over time, but have been part of the story all along, underlining the idea of slow and gradual change in public opinion about tech, where ambivalences may turn into full-blown outrage in the face of scandals.

Speaking to the notion of techlash, it is, however, with the Cambridge Analytica scandal that Facebook became recognisable as a political actor, rather than a neutral platform, to the public. As we have seen, critical – and politically contested – topics flourished more widely in the aftermath of the scandal, and the critical voices, of political as well as business executives and ordinary citizens, figured more forcefully in the news coverage from 2018 and onwards. Hence, arguably, the empirical material speaks beyond the case at hand to illustrate the moment where Big Tech became identifiably political. As Creech and Maddox (2022) argued, media coverage plays a part in legitimising or challenging the power of Zuckerberg and Facebook. The gradual shift in media coverage, and the persistence of some of the positive business news categories, perhaps suggests how actors such as Zuckerberg and Facebook, who are both perfectly aligned with core tenets of neoliberalism concerning the benefits of unregulated markets and consumption, are especially hard to wear down; the varnish of novelty and innovation, in combination with a new and unfamiliar technology use case, has escaped political scrutiny for a surprisingly long time.

Furthermore, the analysis testifies to the relationship between the tech CEO and his company, as it develops over time. As we have observed, Zuckerberg himself played a core role across topics in the Danish news coverage before 2018, but largely disappeared from public view as a person as the coverage became more critical. The differential attribution of blame and agency between

Facebook and its CEO Mark Zuckerberg indicated in the analysis of changes in sentiment before and after the Cambridge Analytica scandal shows that the consequences of the techlash are unevenly distributed. The preference for blaming companies rather than CEOs and owners has been found in other studies. In particular, a study by González and colleagues (2019), which found differences in the attribution of blame between Zuckerberg and Facebook in tweets relating to the Cambridge Analytica scandal, seems to offer a degree of corroboration. They found that while concerns were shared between most commenters, Spanish-speaking Twitter users were more prone to assign blame to Zuckerberg, while English speakers followed a pattern similar to what our analysis finds.

The reluctance to assign blame more directly to Zuckerberg is relevant to several different debates. In the specific context of news coverage, it seems that the preparedness of the Danish press to adequately cover the kinds of power that are intrinsic to global power brokers such as Mark Zuckerberg is insufficient: Modelling Zuckerberg as a company owner finding himself in a bad situation is not likely to be adequately addressed through coverage of congressional hearings.

We argue that our findings of semantic connections in the media coverage of Zuckerberg and Facebook can usefully be seen as a shift from stories rooted in the cultural domain of the public sphere towards the political domain, and argue that this gradual change was in part a reason why the scandal broke so forcefully: While the overall coverage of the executives remained stable until the scandal, the gradual change in the news coverage had prepared the ground for a comprehensive reorientation in the national conversation about the status of the tech giants. By extension, this has paved the way for the current forceful attempts at regulatory action, such as those underway at the European Union level.

Serving as a case in point, our mapping of the specific coverage of a central pair, Zuckerberg and Facebook, further suggests we need to consider the digital backlash in a longitudinal perspective to see how shifts in public opinion come about, starting with perhaps a vague sense of unease to full-blown rage in public debate and possibly to disconnection, public resignation, or pushes for regulation of tech giants, such as those we are currently witnessing in Denmark. Moreover, while certainly amplified by public scandals, the digital backlash cannot be reduced to the immediate public responses to them. In accounting for critical attitudes and practices towards all things digital, we might be best served by taking interest in the *longue durée* (or, at least, longer *durée*) of debates about media in society to learn about both continuity and change – whether sudden or gradual (for a similar argument about digital disconnection, see Vanden Abeele & Mohr, 2021).

Finally, our analysis and the resulting story of techlash, or tech change, narrated through the case of the perhaps most prominent Silicon Valley

executive, can be read as an initial take on what might be gained for media and communication scholars from full-scale studies of media coverage using machine-learning methods. We have demonstrated how such methods may speak to both the big picture (i.e., the negative sentiment trend over time) and the details (i.e., the specific topics that form around Zuckerberg and Facebook as the storyline unfolds). As such, our methodology and analysis may help ignite new research questions to deepen our understanding of the digital backlash in society, and the role of media coverage therein.

Acknowledgements

The project was conducted as part of the Platform Intelligence in News project, funded by the Innovation Fund Denmark.

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Endnotes

1. We conducted the sentiment analysis using the R package ‘Sentida’ v. 1.1.
2. The model was developed using R version 4.2.1 and the R package ‘doc2vec’ v. 0.20.0 by Jan Wijffels et al.