# The Supply of Conspiracy Theories in State-Controlled Media\*

Gabriel Koehler-Derrick<sup>†</sup> Richard A. Nielsen<sup>‡</sup> David Romney<sup>§</sup>

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Abstract

When, and why, do governments engage in conspiracism, promoting conspiracy theories and using conspiratorial language? We build on claims that autocrats use misinformation for diversionary purposes by showing how the level of threat a regime faces affects conspiracism. Governments facing threats may attempt to stave them off by promoting conspiracy theories in state media. By contrast, secure governments are not as prone to conspiracism because it can be politically costly in the long-term. We test our arguments by examining conspiracism in Egypt's print media between 2005 and 2018. When the government faced threats, the statecontrolled newspaper prints more conspiracy theories than its independent counterpart. This relationship is moderated by changes in Egypt's government: the state newspaper supplied fewer conspiracy theories during a brief period following relatively free and fair Presidential elections.

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<sup>&</sup>lt;sup>†</sup>Assistant Professor, New York University, Abu Dhabi, gkd225@nyu.edu

<sup>&</sup>lt;sup>‡</sup>Associate Professor, Massachusetts Institute of Technology, rnielsen@mit.edu.

<sup>&</sup>lt;sup>§</sup>Assistant Professor, Brigham Young University, david.romney@byu.edu

## **1** Introduction

On August 27, 2013, Egypt's most prominent state-run newspaper, *Al-Ahram*, published shocking allegations on its front page: "New Conspiracy to Undermine Stability: Politicians, Journalists, and Businessmen Involved."<sup>1</sup> Citing unnamed official sources, the article outlined a plot organized by unlikely conspirators—United States Ambassador to Egypt, Anne Patterson, and Muslim Brotherhood leader, Khayrat al-Shater—to smuggle "300 armed men from Gaza to Egypt through tunnels, to spread chaos throughout Cairo and storm numerous prisons." The article prompted a stern response from Ambassador Patterson in which she rebuked the Egyptian government for spreading misinformation. <sup>2</sup> Did the conspiracy theory appear at the behest of the government? It seems likely, based on evidence from the subsequent trial of former President Morsi, which included transcriptions of testimony given by former President Hosni Mubarak alleging a plot by Hamas and Hizbullah to break into prison to free Mohammed Morsi and other members of the Muslim Brotherhood (El-Ghobashy, 2021, 231). While the former President Mubarak made no mention of Ambassador Patterson, his claim otherwise mirrors those published in *Al-Ahram*.

This blatant government promotion of a conspiracy theory angering an important ally is puzzling. The key to understanding this puzzle lies in the domestic threats confronting the Egyptian government. Two months earlier, Abdel Fatah al-Sisi ousted Egypt's first democraticallyelected President, Mohamed Morsi. On August 14th, 2013, security forces violently repressed those protesting the takeover, killing 1,000 demonstrators in Cairo's Raba'a square and roiling the Egyptian public further. Against this backdrop of threat, the al-Sisi government turned to conspiracy theories in the hopes of distracting angry Egyptian citizens. The costs of any long-term damage to the US-Egypt relationship paled in comparison to the immediate domestic threat of revolution.

In this paper, we offer theory and evidence to advance our understanding of *conspiracism* in official news media. We use the term "conspiracy theory" for ease of exposition, but acknowledge

<sup>&</sup>lt;sup>1</sup>https://gate.ahram.org.eg/daily/News/228698.aspx, accessed 3/22/2021.

<sup>&</sup>lt;sup>2</sup>Patterson's response is no longer on the US Embassy website so we reproduce it in full in Appendix A.

that many are not full-fledged theories, but rather vague allegations better described as conspiratorial language. There is little consensus about why states promote conspiracy theories. While some point to the psychology of individual political leaders or political culture (Gray, 2010*b*), the prevailing hypothesis is that autocratic regimes supply more (Gray, 2010*a*), in part to divert attention from potential challenges to the regime (Alrababa'h and Blaydes, 2020). We build on this insight by specifying when threats create these diversionary incentives, and propose that variation in threat, interacted with regime type, is an important cause of state conspiricism.

We first develop the concept of government supply of conspiracism: when a government intentionally alters the quantity or quality of conspiracy theories circulating in society. Past studies have typically assumed that any conspiracy theories that appear in state-controlled media appear at the behest of the state, but we argue that journalists and editors have agency, even at state-run media, and sometimes promote conspiracy theories for reasons apart from state intervention. To account for this, we conceptualize situations where a government intentionally increases the supply of conspiracy theories as *oversupply*, and situations where a government intentionally decreases the supply of conspiracy theories as *undersupply*. While the possibility of oversupply is the main focus of previous studies, we argue that undersupply can be just as strategic and important.

We develop theory and evidence about the oversupply and undersupply of conspiracy theories in state-controlled media. We build on the idea that autocratic governments face incentives to circulate conspiracy theories to divert from poor performance (Rozenas and Stukal, 2019) and manipulate domestic politics (Alrababa'h and Blaydes, 2020), but incorporate recent findings showing that state propaganda and information manipulation can backfire in the short-term (Hobbs and Roberts, 2018) and degrade public perceptions and trust in the long-term (Huang, 2018). We argue that these side-effects raise the cost of promoting conspiracy theories for governments. In the absence of threats, the costs of conspiracism are likely to outweigh the benefits, leading official media to undersupply conspiracy theories relative to independent media when the regime feels secure. However, as threats increase, regime elites are likely to oversupply conspiracy theories, prioritizing short-term gains over potential long-term costs. Regime type matters: more democratic governments have less media control and may pay higher costs for promoting conspiracism.

We test these arguments by examining the state supply of conspiracy theories in Egypt between 1998 and 2018. We collect all of the articles in Egypt's main state-controlled newspaper, *Al-Ahram* and examine the prevalence, timing, and content of conspiricism using qualitative coding and automated text analysis methods (Lucas et al., 2015). We compare *Al-Ahram* to the independent newspaper *Al-Masry Al-Youm*, which experts on Egyptian media agree is the most comparable privately-owned newspaper to *Al-Ahram* (Elmasry, 2012*a*). This comparison allows us to determine when journalists at the state-controlled newspaper are oversupplying and undersupplying conspiricism relative to journalists at a comparable newspaper without heavy government influence (although *Al-Masry Al-Youm* still faces some constraints operating under authoritarianism (Cooper, 2008)).

Dramatic, unexpected developments in Egyptian politics over the last two decades offer an opportunity to estimate the effects of political threat on the state supply of conspiracy theories using observational data. We cannot experimentally manipulate Egypt's threats or institutions, but events in Egypt have proven unpredictable to both its rulers and outside observers, giving us some confidence that events and institutional change are driving conspiracism and not the reverse. Readers skeptical of our causal interpretation may nevertheless be interested in our comprehensive description of conspiracy theory promotion by the Egyptian government over the last twenty years.

We find that the state-controlled newspaper undersupplies conspiracy theories relative to the independent newspaper when regime stability is not threatened. As destabilizing events increase, the regime oversupplies conspiracy theories. The degree of oversupply varies even as autocracy remains constant—most of the oversupply of conspiracies occurred under the autocratic Abdel Fatah al-Sisi regime, while the autocratic government of Hosni Mubarak undersupplied conspiracy theories most of the time because it faced fewer threats. The democratically-elected Morsi government also undersupplied conspiracy theories which aligns with our expectations about regime type, but our conclusions are tentative because the depth and quality of democracy was limited, and other

characteristics of the Morsi government could explain this undersupply as well.

After examining state conspiricisim quantitatively, we analyze it qualitatively using a nested analysis (Lieberman, 2005). We sample thirty days when our regression model predicts that the Egyptian government oversupplied conspiracy theories and find that, more often than not, conspiracy theories in the official newspaper are vague. When they do identify specific perpetrators, victims, or incidents, these references are often only tenuously connected to recent events. Conspiracism seems designed to increase a sense of threat and foreboding, portraying the state as the only defense against chaos and division.

Beyond Egypt, our theory offers a possible explanation for the supply of conspiracy theories by other states, both autocratic and democratic, though future research is needed to test and refine our arguments in other contexts. Our approach opens new possibilities for measuring and predicting the supply of conspiracy theories by various actors in other countries and contexts.

## **2** Propaganda and Conspiracy Theories

Following Oliver and Wood (2014), we define conspiracism as political discourse with three key features: (1) "locat[ing] the source of unusual social and political phenomena in unseen, intentional, and malevolent forces," (2) interpreting events "in terms of a Manichean struggle between good and evil," and (3) asserting that "mainstream accounts of political events are a ruse" (953). In line with prior studies, our definition does not rely on whether a particular conspiracy theory is true.

Conspiracism is a form of information manipulation, alongside flooding, distraction, censorship, and misinformation (Lorentzen, 2014; Cirone and Hobbs, 2023; Roberts, 2018; Alrababa'h and Blaydes, 2020; Peisakhin and Rozenas, 2018; Wang and Huang, 2021). All can be considered propaganda: "the management of collective attitudes by the manipulation of significant signals" (Lasswell, 1927, 627). A growing body of literature examines the strategic use of propaganda in authoritarian contexts (Peisakhin and Rozenas, 2018; Rozenas and Stukal, 2019; Wang and Huang, 2021), but we argue that conspiracism presents opportunities and challenges that are distinct from other strategies in a regime's misinformation toolkit (Keremoğlu and Weidmann, 2020).

In contrast to positive propaganda, such as fabricating good economic news (Rozenas and Stukal, 2019) or a leader's extraordinary abilities (Wedeen, 2019), conspiracy theories are typically negative and invoke a threat. This makes them riskier for governments to deploy, because promulgating narratives that a regime is susceptible to conspiracies might suggest weakness. Yet conspiracism in the media has advantages over other forms of information manipulation. Media can sustain authoritarian rule by supporting regime priorities with content that caters to the interests of readers (Stockmann and Gallagher, 2011), and given the prevalence of belief in conspiracy theories (Oliver and Wood, 2014; Nyhan and Zeitzoff, 2018), readers are likely to find them interesting. Conspiracism appears more organic than other forms of hard propaganda, and may spread more easily through word of mouth, websites, and social media, much like political rumor (Berinsky, 2017; Huang, 2015b; Schon, 2020). Because of this seeming "bottom-up" quality, citizens who can recognize blatant misinformation may struggle to tell whether conspiracy theories are crafted by the government or not. When other forms of propaganda are unbelievable (Wedeen, 2019), conspiracy theories may garner belief because of the human desire to make sense of complex events (Oliver and Wood, 2014). In contrast to distraction or flooding, conspiracy theories can better shape citizens beliefs to match a regime's desired narratives, creating desired actions instead of mere passivity. Thus, conspiracism has unique benefits and challenges for a regime and may follow a different strategic logic than other propaganda strategies.

We organize our discussion around three main motivations states might supply conspiracy theories: genuine belief, symbolic power, and diversion. Some heads of state genuinely believe they are being conspired against (Gray, 2010*b*, 32). In the Middle East, the long list of leaders who have lost power at the hands of foreign and domestic conspirators suggests that this belief is not always irrational. Autocrats may use state-controlled media to publicize their fears to build support and justify heavy-handed responses.

Alternatively, regimes might cynically promote conspiracy theories to craft narratives that en-

hance the state's symbolic power (Gray, 2010*a*, 133-134). State-promoted conspiracy theories do not need to be convincing in order sustain symbolic state power. Wedeen (2019) argues that the Syrian government's conspiracy theories are not convincing to regular Syrians but are instead symbols "specifying the form and content of civic obedience" (Wedeen, 2019, viii). Conspiracism can also communicate political priorities that assist coordination among political elites (Radnitz, 2016).

Finally, manufactured conspiracy theories may be a diversionary tactic: a cynical but rational response of autocrats when "calls for reform or democratization need to be silenced" (Gray, 2010*a*, 120, 130). Facing threatening circumstances at home, the state may promote conspiracy theories to explain its failings and direct rage away from the government and toward an alternative source, creating a "channel for popular disquiet or mistrust" (121). Examples abound. Rozenas and Stukal (2019) conclude from daily news reports on Russia's largest state-owned television network that "bad news is not censored, but it is systematically blamed on external factors, whereas good news is systematically attributed to domestic politicians." Alrababa'h and Blaydes (2020) examine the Syrian state-controlled media to show that "the Assad regime long sought to focus public attention on forces external to the regime, consistent with a logic of diversionary threat" (2). If governments justify repression by citing threats of conspiracy, then the diversionary use of conspiracy theories might follow the logic explained by Carter and Carter (2022, 671) who "expect propaganda-based threats of repression to be used sparingly: when the regime is most concerned about mass protests."

There is reason to believe that this diversionary conspiracism might work in the short term. Experimental evidence shows that support for the Egyptian government's repressive policies increases when it accuses its opponents of conspiring to commit violence (Williamson and Malik, 2020). Violent political rhetoric has been shown in other contexts to increase support for political violence (Kalmoe, 2014). Even when diversionary conspiracy theories are not believed, they prop up authoritarian governments by sowing fear. Huang (2015*a*) shows that Chinese students exposed to state propaganda remain dissatisfied with the government but become unwilling to openly dissent because they believe the regime is strong. Wedeen (2019, Chapter 4) similarly argues that the

conspiracy theories circulating during the 2011 Syrian uprising and civil war bolstered the regime.

Autocratic diversion is the most prevalent explanation for conspiracy theory supply, but it faces theoretical challenges. Research suggests that even autocrats pay a price when they indulge in too much conspiracy promotion (Huang, 2018). Conspiracy theories may bolster the government in the short-term but make it look weak in the long-term. And blaming foreign conspirators can backfire diplomatically. What is missing from the existing literature is a clearer picture of when the threats facing a regime will outweigh the costs.

## **3** Costs, Threats, and Supply of Conspiracy Theories

Before we can theorize how the costs and benefits of conspiracism affect government strategies, we first refine our concept of conspiracy theory supply to isolate conspiracism that is a result of government strategy. Differentiating conspiracy theories supplied by the state from those supplied by other actors is important because they potentially have very different causes.

#### **Oversupply and Undersupply of Conspiracy Theories**

Assuming that any conspiracism in state-controlled media appears at the behest of the government ignores the agency of editors and journalists. Journalists report on complex, destabilizing events and, like other people, may turn to conspiricism to make sense of them. Secretive or violent political events heighten uncertainty and anxiety, making journalists (and readers) especially prone to conspiracism when straightforward explanations are elusive. Thus, we expect the news media, both state-controlled and independent, to sometimes supply conspiracy theories in response to unexplained events even without government manipulation.

We conceptually differentiate conspiracy theories that are supplied by the state from those that are supplied by other actors, even when they appear in state-owned media. To guide this differentiation, we consider the counterfactual question: how would the supply of conspiracy theories in the state-controlled media be different if it were not state-controlled? This difference can be quantitative, affecting the amount of conspiracism, or qualitative, affecting the content of the conspiracism.

States can artificially increase or decrease the amount of conspiracism in the news media, and both may be strategically useful. If the state circulates quantitatively more conspiracy theories than independent media, we call this *oversupply*. Conversely, if state-controlled media circulate fewer, this is *undersupply*. Conceptualizing the oversupply and undersupply of conspiracism helps us avoid assuming that all conspiracism is a result of the same causal process and alerts us to the possibility that possibility that governments might strategically undersupply conspiracism in official media outlets to avoid costs. It is to these costs that we now turn.

#### **Costs of Promoting Conspiracy Theories**

Previous scholarship tends to suggests that governments, especially autocratic ones, supply conspiracy theories because of their effectiveness at neutralizing dissent and distracting citizens from poor political performance. Neutralizing dissent, both from citizens and from competing elites, is the central challenge of authoritarian rulers. Although "violence is an ever present and ultimate arbiter of conflicts in authoritarian politics," (Svolik, 2013, 2), regimes often struggle to know who to repress (Gandhi and Przeworski, 2007; Gandhi, 2010), so non-violent ways of neutralizing opposition are an attractive alternative. The puzzle, then, is if the primary effect of spreading conspiracy theories is to increase support for government policies among some citizens and neutralize dissent among others, why wouldn't governments just go back to the well over and over again?

We argue that existing theories do not incorporate the costs of conspiracism. While the upfront costs may be low — conspiracy theories are easy to produce, easy to disseminate, and do not need to be logically coherent to be effective (Wood, Douglas and Sutton, 2012) — the long term costs are high. Hard propaganda can worsen citizens' opinions of the government, even when quelling open dissent. Over time, Huang (2018) argues, "by eroding the legitimacy of the state and public satisfaction, it may aggravate the regime's long-term prospects" (1038). An over-reliance on conspiracism makes a government less credible about real threats. Wang and Huang (2021) show that when governments deny unfavorable information by labeling it "fake news," citizens reduce their belief in future denials by the government if the unfavorable information is revealed to be true. They conclude that "false denials have both immediate and lasting effects on government credibility and can erode citizen satisfaction with the government."

Information manipulation can backfire by encouraging citizens to seek out true information (Hobbs and Roberts, 2018; Gläßel and Paula, 2020), and obvious conspiricism might encourage citizens to seek alternatives to state media. For example, the Syrian government's promotion of outlandish claims means "[s]tate-controlled newspapers in Syria are widely considered to be functional tablecloths, rather than respected records of current events" Wedeen (1999, 2). Other information manipulation can similarly backfire. Most broadly, although sowing confusion and paranoia among citizens can be a short-term ploy, it is not a recipe for long-term economic growth or effective public policy. And outside of a state's borders, promoting conspiracy theories invites international criticism and complicates diplomatic relationships (Alrababa'h and Blaydes, 2020).

These costs vary by regime type. While they apply in some respect to all regimes, we argue that they are especially costly as governments become more democratic. Political elites in democracies face incentives to satisfy relatively large portions of their populations to stay in office, which encourages greater custodianship of public goods (Bueno de Mesquita et al., 2003). For a government attempting to retain office with good policies, promoting conspiracy theories is of limited use as a general strategy and has substantial risks. In democracies with strong political parties, parties have longer time horizons than individual politicians, making them less likely to incur long-term costs for short term gains. Politicians and bureaucrats in democracies also face greater international opprobrium for promoting misinformation because freedom of the press is a democratic norm.

#### **Threats to Government Survival**

The factor that makes governments turn to promoting conspiracy theories in the face of these costs is the perception that their rule is threatened. This perception of threat is most commonly in response to events that are reasonably seen as threatening. Leaders fear that their rule will end because of war, armed attacks, coups, popular uprisings, protests, and strikes, and the political conditions that lead into these events, such as poor economic performance and underprovision of public goods (Bueno De Mesquita and Smith, 2023). Perception of threat does not need to be rational, and some leaders maybe more paranoid than others. Our simplifying assumption is that there are certain events and conditions that make all leaders fearful, and our argument is that these explain a great deal of the variation in conspiracy theory oversupply.

When deciding to undersupply or oversupply conspiracy theories, a government weighs the costs against the benefits. When a government feels secure, the costs of conspiracy promotion generally outweigh the benefits, and the government will undersupply. We argue that this calculus holds even in authoritarian regimes. Secure autocrats seeking to project an image of control and assurance are unlikely to promote conspiracy theories that undermine this image and provide little benefit. While even the strongest autocrat faces some opposition, if the threat of overthrow is not acute, it is not worth promoting conspiracy theories. Promulgating conspiracy theories when they are not needed undermines their effectiveness when they are.

As threats become more frequent and acute, the government faces incentives to promote conspiracy theories to aid survival in the short term, even if there are long-term consequences. As noted in the literature, the short-term benefits of oversupplying conspiracy theories can be large, and might make the difference to regime survival. As events become especially complex and uncertainty grows, the government may also get away with more far-fetched claims, because they may be more credible to both domestic and international audiences.

While short-term variation in threat is most important, government threat perceptions may shape the supply of conspiracy theories in the long term as well. When leaders face relatively few threatening events over long periods of time, they may conclude that threats to their rule are low. This low baseline of threat perception may make some leaders slower to promote conspiracy theories even when they do face severe threats to their rule. In contrast, leaders that have faced many threatening events in the past, or come to power during tumultuous times, will likely maintain a higher baseline feeling of threat, even as threatening events subside.

While our theory predicts the quantity and timing of conspiracy theories, we have less to say about the content of these conspiracy theories. We expect governments to promote conspiracy theories that they think will be most effective at strengthening support and neutralizing opposition, and these strategies can vary over time even within the same state and regime (Alrababa'h and Blaydes, 2020). The literature suggests two broad strategies: messaging and misdirection. In a messaging strategy, governments might promote conspiracy theories with coherent content aimed to craft a particular narrative of events that promotes national cohesion Gray (2010*a*, 126). Alternatively, a government following a misdirection strategy might promote incoherent content designed to divert attention from events that present the regime in an unflattering light (1999; 2020). Without a strong expectation about the content of the conspiracy theories that state-controlled media oversupplies, we will examine them deductively for evidence of messaging and/or misdirection.

Democracies face many of the same threats as autocracies, but we argue that they are less likely to respond by oversupplying conspiracy theories. The costs of conspiracism are likely higher for democracies, and this pushes the threshold higher for how threatened a democratic leader must feel before turning to conspiracy theories. Institutional features of democracy also make democrats less likely to promote conspiracy theories. Accountability to a large selectorate should incentivize leaders to provide more public goods (Bueno de Mesquita et al., 2003), including a media environment that is not dominated by government misinformation. In most instances, the costs of losing office are less dire than those of autocrats, so events that threaten removal from office are less existentially threatening. Democracy also may reduce the control that a leader can have over the media, especially in established democracies, though elites can still communicate in ways that are not state-sanctioned. And using propaganda to entrench domestic power may be less attractive to leaders who have internalized democratic norms of deliberation and majority rule. Of course politicians in democracies may still turn to promoting conspiracy theories for short term political gain, for all the same reasons as autocrats. Our prediction is that they will do so less than autocrats when facing similar threats, not that they won't do it at all.

Hybrid regimes, new democracies, and incomplete transitions to democracy present a variety of conditions that may make conspiracism more or less attractive to a regime. To the extent that the conditions of democracy we have just described hold, then we expect governments in these categories to also face higher costs for conspiracism, and thus generally turn to conspiracism less. Conversely, a new democratic regime that finds itself inheriting an official state media apparatus may face the temptation to use that media for its benefit, especially if democratic norms of media freedom have not yet been internalized and democratic institutions are not entrenched. We expect the state supply of conspiracy theories in these settings to follow the logic of costs and benefits we have outlined, but given the variety of institutional arrangements and incentives, whether the costs or benefits will dominate depends on the case.

Thus, regime type helps explains broad tendencies in conspiracy theory supply, but is not a complete explanation by itself. In addition to regime type, the degree of threat perceived by the government will impact the supply of conspiracy theories by the government. We expect to find variation in the promotion of conspiracy theories by autocracies: autocracies that feel secure will tend to undersupply conspiracy theories, while autocracies that feel threatened will oversupply. Others have recognized the importance of threats. For example, Rozenas and Stukal (2019) finds that deflection in Russia's state-controlled media "is used more intensely in politically sensitive times (elections and protests)" (982). What we add is a clearer sense of how threats stack up against the costs of promoting conspiracies and how costs and benefits interact with regime type.

## 4 Government Supply of Conspiracy Theories in Egypt

We test how threats and changes to institutions affect the supply of conspiracy theories in statecontrolled media by turning to data from Egypt. Despite the generality of our theoretical arguments, we follow the majority of previous studies in this area that draw on just one or two countries for empirical evidence (Peisakhin and Rozenas, 2018; Hobbs and Roberts, 2018; Rozenas and Stukal, 2019; Alrababa'h and Blaydes, 2020). Investigating a single country presents trade-offs: we gain the ability to understand conspiracy theories deeply in their context at the expense of uncertainty about how our findings might extend elsewhere. Like others, we choose this approach because conspiracy theories are rich in contextual meaning and getting that right is a first-order concern. Future research might extend elements of our approach to multiple countries.

We select Egypt for scientific and practical reasons. In order to test the effects of threat and regime type on state supply of conspiracy theories, we need variation in both key variables. During the time period we examine, Egypt experienced significant variation in both threat levels and regime type, including an unexpected and rapid period of democratization followed by an equally sudden return to autocracy. Egypt is also intrinsically important as the largest media market in the Arab world, and the home of some of the most important newspapers in the region. More practically, the digitization of key Egyptian newspapers facilitates our data collection and our language skills and fieldwork experience allow us to analyze these materials quantitatively and qualitatively.

We measure the prevalence and content of conspiracy theories published by the main stateowned newspaper, *al-Ahram*, from 1998 to 2018. We focus on print media because it is stable over the twenty-year period we investigate and the lines of government influence are clear. Conspiracy theories also circulate on television and social media in contemporary Egypt (Armbrust, 2019, Chapter 9), but rapid changes to these platforms make it impossible to make meaningful comparisons across the multiple regime transitions of Egypt's last twenty years. We leave an investigation of conspiracy theories in Egyptian social media for future research.

Our goal is to explain variation in the conspiracy theories printed in *al-Ahram* that appear at the behest of the state, rather than for other reasons. Attributing conspiracy theories to government intervention requires either intimate knowledge of the process through which a government pressures journalists to publish conspiracy theories, or comparison to other media that are not state-controlled. We cannot directly assess how each conspiracy theory appears in the newspaper, so we compare

conspiracy theories in *al-Ahram* to those appearing in Egypt's main independent newspaper, *Al-Masry Al-Youm*. When more conspiracy theories appear in *al-Ahram* than *Al-Masry Al-Youm*, we consider this to be oversupply by the Egyptian government. Conversely, when more conspiracy theories appear in *Al-Masry Al-Youm*, we infer that the government is undersupplying conspiracy theories. At a high level, our research strategy is to use a statistical text analysis model to detect conspiracy theories in each newspaper and then estimate regression models predicting the supply of conspiracy theories in each, which we interrogate qualitatively with nested analysis.

Because our inferences rely crucially on these newspapers, the next subsection considers the degree to which they match our concepts of state-controlled and independent media.

## Al-Ahram and Al-Masry Al-Youm in the Egyptian Media Space

*Al-Ahram* is Egypt's flagship newspaper. Founded in 1875, *Al-Ahram* was independent until 1960 when it was nationalized by Gamal Abdel Nasser. It is not the only state-owned newspaper, and there is heterogeneity among the others, as in other contexts (Stockmann, 2012), but *Al-Ahram* is unique because of its broad circulation and influence. *Al-Ahram*'s editor-in-chief is directly appointed by the Egyptian government serves as a regime mouthpiece, with a majority of domestic stories citing government officials as their main source (Cooper, 2008, 5). Numerous accounts allege direct intervention in *Al-Ahram*'s editorial process (Hammond, 2005, and see Appendix B). There are allegations that it promotes conspiracy theories from "informed sources" and anonymous security sector officials, especially in the wake of events that challenge the regime.<sup>3</sup>

*Al-Ahram's* status as the most important daily newspaper in Egypt was uncontested until the emergence of *Al-Masry Al-Youm* in 2004. *Al-Masry Al-Youm* derives relative independence from its financial backing by Salah Diab, a powerful businessman with a background in oil (Al-Azm, 2015). *Al-Masry Al-Youm's* editors are independently appointed and change fairly frequently, and

<sup>&</sup>lt;sup>3</sup>https://dailynewsegypt.com/2016/10/02/al-ahram-blindly-parrots-governments-forces-evil-claim/ and https://dailynewsegypt.com/2016/09/19/548755/, Accessed 3/21/2021.

we have not uncovered accounts of direct government intervention in its editorial process. Still, it has faced constraints in authoritarian Egypt. *Al-Masry Al-Youm* and its owner have occasionally come under government pressure (Peterson, 2011), and the pressure has become more acute in the aftermath of the 2013 coup which brought Egypt's current president Abdel Fatah al-Sisi to power.

Our direct comparison of Al-Ahram and Al-Masry Al-Youm follows the precedent set by more than a decade of research. Since Al-Masry Al-Youm's founding in 2004, studies of print media in Egypt, whether quantitative or qualitative, have directly compared the two newspapers to gain insights on censorship, editorial autonomy, and public support for independent media (Black, 2008; Cooper, 2008; Elmasry, 2012*a*; Peterson, 2011). The basis for this comparison is straightforward: no other daily in Egypt compares to either paper in terms of circulation, audience, or reputation (Badr, 2021, 225). Subscriber and circulation data are not available for either newspaper, but data from Google suggests that online searches for the newcomer exceeded searches for *Al-Ahram* by 2007. The relative ranking of these competitor papers has fluctuated since but both remain prominent: as of March 2021, the web analysis service Alexa rated Al-Masry Al-Youm as the 44th most popular website in Egypt while *Al-Ahram* was 31st. While there are also other official newspapers in Egypt, *al-Ahram* is considered the "flagship" of the official press. *Al-Masry Al-Youm* has been described as "Egypt's largest and most reliable private newspaper" (Ketchley and El-Rayyes, 2021, 294). As one ethnographic study argued the two newspapers are, "leaders in their respective ownership categories and, to a considerable extent, representative of the ownership categories to which they belonged" (Elmasry, 2012b, 122). Still, to alleviate concerns that our results are reliant on just two data sources, we include data from two other Egyptian newspapers, one state-owned and one independent, in a robustness check.

While *al-Masry al-Youm* provides the most plausible counterfactual for what *Al-Ahram* might publish without government intervention, we can hardly claim that it is free from political constraints (Cooper, 2008, 8). This does not necessarily mean it is not independent. After all, the pressure on *al-Masry al-Youm* is a result of the paper's willingness to defy the regime. Still, in

autocracies, it is rare that any media outlet is truly beyond any state influence, so empirically, we must make do with the most independent media there is. While this may lead to some bias when measuring oversupply and undersupply, the bias is likely conservative: if there are gaps between state-controlled media and partially independent media, we would expect even larger gaps with fully independent media. If *Al-Masry Al-Youm* were no more independent than *Al-Ahram*, then we would presumably see no differences between the supply of conspiracy theories.

#### **Detecting Conspiracy Theories in Arabic Newspaper Text**

We collect all of *Al-Ahram* since 1998 and all of *Al-Masry Al-Youm* since 2005, up until 2018 (comprising 826,765 articles in *Al-Ahram* and 484,100 in *Al-Masry Al-Youm*). Reading over a million articles would take at least 20 years, so we turn to statistical text classification. Our approach is a simple application of supervised learning: we labeled a small number of texts by hand and then train an algorithm to mimic the hand-coding. Our process was complicated by the fact that conspiracy theories are much rarer than prior studies relying on anecdotes suggested. We initially began coding a simple random sample of articles, but we stopped because the training set had so few conspiracy theories that subsequent classification algorithm would have failed. Instead, we turned to a key word approach because our reading revealed that articles promoting conspiracism are forthright, almost always employing some variant of the word "conspiracy." We selected 18 key words that our initial reading revealed were frequently used to introduce conspiracy theories (forms of "conspiracy," "plot," "machinations," "collude," "collusion," and "intrigue") and concentrated our hand-coding efforts in the 32,596 articles (2.5% of all articles) containing these terms.<sup>4</sup>

Because key words are crucial to our classification, we have interrogated our key word list in multiple ways. To be confident that we were not ommitting important terms that signify conspiracy theories, we considered much longer lists of words. We generated these lists in multiple ways,

AThe 18 key words in Arabic are: مكاند ;مكيدات ;مكيدت ;مكيده ;مكيدة ;تآمر ;مؤامرات ;مؤامرة ;موامرة ;موامرة ;مؤامرة ;موامرة ;موامرة ;موامرة ;مكاند ;مكيدات ;مكيدات ;مكيده ;رمكيده ;رموامرات ;مؤامرات ;موامره ;موامرة ;موامرة ;موامرة ;موامرة ;موامرة ;موامرة ;موامرة ;موامرة ;موامل ; تواطئ ;تواطئ ;

but perhaps the most important is that we leveraged word embeddings (Mikolov et al., 2013) to identify terms that are used similarly to our 18 key words and then evaluated each alternative term suggested by the embedding similarity for possible inclusion. Word embeddings characterize each word in a corpus using a relatively low-dimensional vector that summarizes how a word is typically used. We use the Aravec embeddings for Arabic (Soliman, Eissa and El-Beltagy, 2017), trained on Arabic Wikipedia and Twitter, and conclude that our key word list contains all the terms we believe are most important for identifying conspiracy theories while omitting some that introduce too many false positives. To be sure that pretrained embeddings were not missing important words because of context differences, we retrained embeddings for each word on the corpus itself, but again uncovered no additional words similar enough to these to warrant inclusion.

We sampled 1,500 articles containing our key words and hand-coded each paragraph; individual sentences proved too short and full articles were too wide-ranging. After developing coding rules during our own reading, we hired two native Arabic-speakers from North Africa to code each article, noting which contained conspiracy theories and, when mentioned, who the perpetrators and victims were. Our coders agreed 95.9% on which paragraphs contained conspiracy theories and we adjudicated discrepancies. We then use this training set to identify conspiracy theories in the remaining articles using a random forest classifier (Breiman, 2001) which we trained to predict the labels of the hand-coded set using the 1,990 most frequently occurring terms and indicator variables for the broad type of article: news, opinion, culture, or sports. We held out 10% of the hand-coded data to assess accuracy; we correctly identify conspiracy theory paragraphs 78% of the time, and correctly identify non-conspiracy theory paragraphs 99% of the time, for an overall accuracy of 97.5% (specificity = .990, sensitivity = .787, F1 = .877). We then apply the trained model to classify conspiracy theories in the remaining 449,297 paragraphs in articles that contain our key words, resulting in a total of 30,473 conspiracy theory paragraphs across the two newspapers.

To validate our measure, we returned to close reading. First, we read a random sample of 500 paragraphs from all articles, looking for conspiracy theories our key word approach might have

missed. Our close reading found just one conspiracy theory in these 500 paragraphs, one that was also successfully identified using our key word classification approach. We also read a number of conspiracy theories in our qualitative analysis below, which provided an additional opportunity to evaluate the quality of the automated classification. We find no significant classifier errors.

To further alleviate our concerns that we were missing conspiracy theories that did not contain one of our 18 key words, we undertook an additional classification task in the spirit of King, Lam and Roberts (2017) seeking to identify other paragraphs that ought to have been included. Although our classifier is trained on articles with key words, the approach of King, Lam and Roberts (2017) suggests that we could grow our list of key words and indeed identify misclassified conspiracy theories by iteratively applying our classifier to additional texts that do not contain our key words. Paragraphs that are scored highly by the classifier are worth considering for inclusion in our count of conspiracy theories, even if they don't contain our key words. We applied our classifier to the 1.2 million articles without our key words and identified just a few hundred additional conspiracy theories which make no difference to our estimates below (see Appendix F.4).

We also consider that newspapers might report conspiracy theories to criticize, rather than promote them. The effects on readers may be same; Berinsky (2017, 241) finds that "attempting to quash rumors through direct refutation may facilitate their diffusion." Moreover, mentioning a conspiracy theory neutrally, or even critically, can be a strategy for promoting it while maintaining plausible deniability. Still, we asked our coders to evaluate how each conspiracy theory in the training set was framed and find that 54% are endorsed by the author, 17% criticized, and 29% presented neutrally. Our results are robust to including only the conspiracy theory paragraphs that we estimate are endorsed by the author. Taken together, these results build our confidence that there is no significant set of false negatives or false positives lurking in our data.

Several facts about the nature of conspiracism in Egyptian news media emerge from closely reading our training set. First, Egypt is the victim in about half of conspiracy theories; many high-light Egypt at an institutional level (e.g. "the Egyptian state," "the Egyptian economy," and "the

Egyptian national character") while others emphasize Egyptians themselves (e.g. "the Egyptian people" or "the sons of Egypt"). Second, conspiracy theories that clearly specify alleged perpetrators, victims, and actions constitute approximately 42%, while the rest are vague. Third, when perpetrators are mentioned, they are most often the United States (25%) and/or Israel (20%).

## **Measuring Threats and Regime Type**

Our argument is that both undersupply and oversupply of conspiracism by the Egyptian government can be explained by the level of threat it faces and whether its institutions are more or less autocratic. Both variables present challenges for measurement.

If we could measure the degree of threat perceived by the Egyptian government, this would be our ideal variable for predicting government supply of conspiracy theories. Elite perceptions of threat are, for the most part, unobservable, and inferring them from public statements is prohibitively difficult, at least with any granularity and accuracy. Instead, we assume that leaders feel threatened when they face destabilizing political events, which are more readily observable. Theories of authoritarian rule highlight two main categories of threat: the risk of overthrow from sustained protests or attack and the risk of coups (Svolik, 2013, 4). Protest may not be universally threatening to all authoritarian regimes (Lorentzen, 2013), but observers agree that it has been a major source of threat in Egypt (El-Ghobashy, 2021). To measure the intensity of these threats to the Egyptian government, we use counts of significant attacks, battles, and protests in Egypt, as reported in the ACLED data set (Raleigh et al., 2010).

During the 20-year period from 1998 to 2018, ACLED reports 3,883 protests, 1,811 riots, 1,909 battles, 1,718 explosions or remote violence, 1,058 instances of violence against civilians, and 661 "strategic developments." We treat these counts with some caution. Clarke (2021) shows that ACLED undercounts peaceful, localized, and rural protest events in Egypt between 2012-2013. There are also concerns that ACLED might miss more protests in Egypt prior to 2011. If our study were focused on protest dynamics instead of threat, these biases might make ACLED unusable.

For the purpose of measuring threat to the government, however, the fact that ACLED is primarily accurate for larger, more violent events of all types makes it useful. We find similar results with other measures of threat, including Clarke's improved measure of protest, and terrorism threats from Global Terrorism Database (LaFree and Dugan, 2007).

For the most part, measuring Egypt's degree of autocracy is straightforward: all governments between 1998 and 2018 have been autocratic, with the exception of Muhamad Morsi's presidency from 2012–2013. Autocracy under al-Sisi, whether ruling through interim president Adly Mansour (2013–2014) or directly, (2014 onward) is seen by many as more repressive than Mubarak's last years (until 2011), or the period from 2011-2012 when the Supreme Council of the Armed Forces (SCAF) ruled. Yet despite variation, all of these regimes fit standard definitions of autocracy.

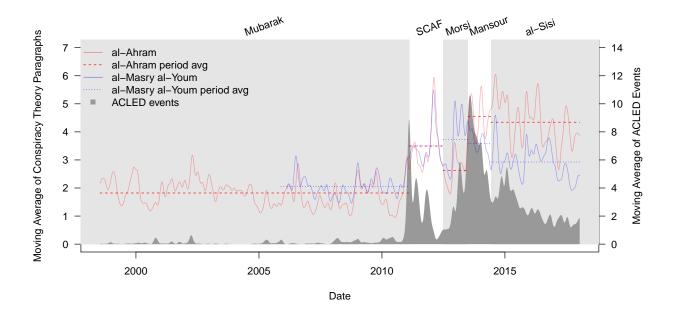
Classifying the Morsi government is more difficult. Morsi was democratically elected in an election that was widely declared to be relatively free and fair. There was more press freedom during Morsi's rule. While *Al-Ahram* remained under state ownership, the Morsi government had less informal control because the newspaper remained staffed with supporters of the former regime (see Appendix B), and Morsi did not forcibly replace them as an autocrat might. Yet some are uncertain whether the administration should be viewed as democratic because the Muslim Brotherhood, Morsi's party, had questionable ideological attachments to the principles of democracy. In any case, democracy was hardly consolidated during Morsi's rule. Norms of democratic powersharing were not established, and unlike most democracies, Morsi faced imprisonment and death when he lost power. Anticipating this possibility likely heightened the threats he felt in office.

On balance, we consider Egypt to be more democratic under Morsi than at any other time, but the ambiguities make our findings about the effects of regime type frustratingly uncertain. Alternative research designs offer few remedies. Cross-national comparisons with other countries are unavoidably confounded by country-specific factors, and instances of staunch autocracies transitioning to full-fledged democracy in a short amount of time are rare. With these limitations in mind, the sudden transition of Egypt to holding relatively free elections in 2012 after decades of autocracy is about the best case for analysis we can hope to get in the real world.

### The Quantitative Supply of Conspiracy Theories in Response to Threats

We turn first to explaining variation in the quantity of conspiracism supplied by the Egyptian government between 1998 and 2018. We examine the content qualitatively in the next section.

We seek to explain the variation in conspiracy theory paragraphs over time, which we plot in Figure 1 for *Al-Ahram* (red) and *Al-Masry Al-Youm* (blue). We show both the (smoothed) moving average in solid lines, and the average for each government in dashed lines. We also plot our key theoretical variables: dark gray shading indicates the moving average of significant contentious political events and alternating light gray and white shading indicates the timing of transitions from one government to the next, with text labels denoting the head of state.



**Figure 1:** Average counts of conspiracy theories in each newspaper. The solid lines indicate the moving average. Dashed lines indicate the average during each administration.

Figure 1 visually displays several correlations that persist in our regression results. First, as more protests, attacks, and battles occur in Egypt, there are more conspiracy theories in both news-

papers. Second, Mubarak faced very few threatening events relative to other administrations, suggesting that he may have perceived a lower level of threat than his successors. Third, the supply of conspiracy theories in *Al-Ahram* changes dramatically with regime changes and appears broadly correlated with the number of threatening events.

We estimate these correlations more formally with regression. Our outcome is the count of conspiracy theory paragraphs in each newspaper on each day, so we use a generalized linear model with a negative binomial link appropriate for (potentially over-dispersed) counts. We proxy threat to the government using the sum of all violent political events in ACLED over the previous 7 days. We interact this variable with an indicator variable for each newspaper, expecting that *Al-Ahram* will be more responsive to increases in ACLED event counts than *Al-Masry Al-Youm*.

Without the ability to manipulate threatening events, we adopt a strategy of conditioning on likely confounders to make inferences about the effect of threatening events on conspiracy theory supply. The unexpected and timing of these threatening events makes it plausible that they caught Egypt's government by surprise; we argue that they are plausibly exogenous after we condition on just a small number of potential confounders. We include several control variables that might confound the relationship between the events-newspaper interaction and conspiracy theories. Some articles in both newspapers are drawn from international news agencies which are unlikely to promote conspiracy theories, so we control for the count of paragraphs and articles from these sources. We also control the total number of paragraphs and articles in each issue of the newspaper, regardless of source, because both newspapers get longer over time. Finally, we control for the day of the week, expecting that journalistic practices might vary day by day. In some models, we add year-month fixed effects, which are indicator variables for each calendar month between 2005 and 2018. These models restrict the variation to one-month periods, showing that government supply is responsive to daily events. These fixed effects also address concerns that ACLED is not comparable over long time frames; it is at least comparable in the time-frame of a month.

Rather than including changes of regime in our primary specification, we instead estimate over-

supply and undersupply in response to threats and these controls, and then observe qualitatively how periods of oversupply align with changes in regime. This is largely for convenience — interacting regime changes with the event-newspaper interaction results in a triple interaction that is complicated to interpret. The results are substantively the same when we fit that more complex model. We cannot claim that changes in regime or regime type are plausibly exogenous, because governments likely use conspiracy theories to try to prevent regime change when facing unexpected threats.

We present our main regression results graphically in Figure 2, with a table in Appendix E. The model coefficients are not directly intepretable, so we plot changes in predicted counts of conspiracy theories. Figure 2 shows our main result: *Al-Ahram* supplies more conspiracy theories than *Al-Masry Al-Youm* in response to the same events. We graphically present predicted counts of conspiracy theories in each newspaper as ACLED events increase from zero to the maximum of 151, along with the histogram of ACLED events on the x-axis. The left panel, corresponding with the numerical results reported in Table 2 of the Supplement, shows that when there are no threatening events, the state-controlled newspaper supplies fewer conspiracy theory paragraphs: 2.2 per day for *Al-Ahram* and 2.7 per day for *Al-Masry Al-Youm*. The predicted values cross when there have been 28 ACLED events in the last week. When ACLED records 150 events, *Al-Ahram* prints 17.9 conspiracy theory paragraphs per day, 2.3 times as many as *Al-Masry Al-Youm*.

The right panel shows predicted conspiracy theory counts with year-month fixed effects. *Al-Ahram* is still responsive to threatening events, even within a single month; we choose July 2013 for presentation, but changing the month just moves the baseline up or down. As the count of events increases, conspiracy theories in *Al-Ahram* increase from from 4.4 to 7.8 when there have been 150 events in the last 7 days. In contrast, the predicted number of conspiracy theories in *Al-Masry Al-Youm* remains constant or declines slightly as the number of events increases. Figure 2 shows that *Al-Ahram* diverges most from *Al-Masry Al-Youm* when ACLED records at least 50 events in the past week, which is true for 226 out of 4,429 days, or 5.1%.

To better understand the timing of oversupply by Al-Ahram, we generate estimates from model 1.

**Conspiracy Theories and Threatening Events** 

Conspiracy Theories and Threatening Events, With Year–Month Fixed Effects

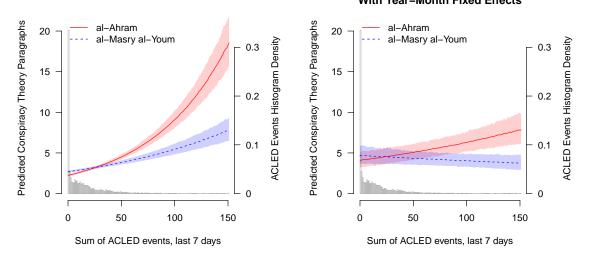
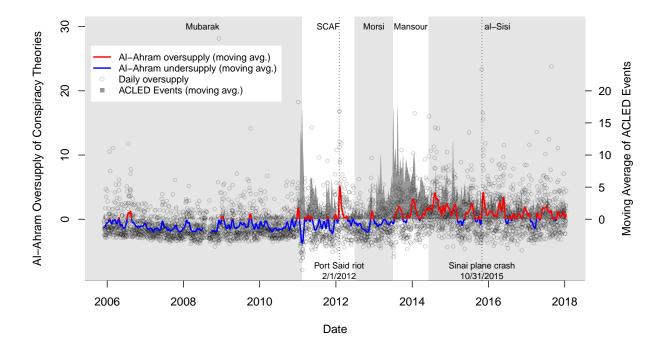


Figure 2: Al-Ahram oversupplies conspiracy theories relative to Al-Masry Al-Youm, given the same events.

We calculate the daily undersupply or oversupply in *Al-Ahram* by calculating predicted values from the model using the covariate values for *Al-Ahram* on a given day but setting the *Al-Ahram* indicator variable to zero, as if it were the independent newspaper. We then subtract the observed value of conspiracy theories in *Al-Ahram* that day from the predicted value if *Al-Ahram* were independent and use this as our daily estimate. We plot these values in Figure 3, with the x-axis indicating the date and the y-axis indicating the estimated undersupply (negative values) or oversupply (positive values) by *Al-Ahram*. We show a moving average of the under/oversupply estimates, using blue for periods of undersupply and red for periods of oversupply.

The state-controlled newspaper consistently undersupplied conspiracy theories under Mubarak. One exception is that *Al-Ahram* begins to oversupply conspiracy theories just at the onset of the 2011 revolution, but then flips back to the most extreme undersupply that we observe in the entire time period right after Mubarak is deposed. This oversupply was Mubarak's last-ditch effort to divert attention as his grip on power weakened, and the undersupply reflects attempts by *Al-Ahram's* journalists to cover revolutionary events impartially after Mubarak's departure temporarily decreased government influence over the newspaper (see Appendix B). Undersupply remains



**Figure 3:** Oversupply of conspiracy theories in Al-Ahram, based on counterfactual estimates from a negative binomial regression model of how many conspiracy theory paragraphs would have appeared if Al-Ahram had been Al-Masry Al-Youm on each day.

the norm under the SCAF, except for a period of dramatic oversupply after the Port Said soccer riot, an embarrassing event for the interim regime. The democratically-elected Morsi government undersupplied conspiracism despite facing increasing numbers of threatening events. This is consistent with the argument that more democratic governments supply fewer conspiracy theories, but this result could also be the result of factors idiosyncratic to the Morsi administration.

*Al-Ahram* has consistently oversupplied conspiracy theories under the Mansour and al-Sisi governments. Large upticks follow particularly threatening events, such as the downing of a Russian airliner in the Sinai by terrorists. Our data suggest that the government mobilizes a particular set of *Al-Ahram* authors to promote conspiracy theories after threatening events. Most newspaper articles list one or more authors; we observe that a relatively small number of authors — approximately 175 — produce the vast majority of conspiricism, and these authors are statistically more likely to write when the number of ACLED events was high the previous day. These results show that regime type alone is not sufficient to explain variation in state conspiracism, which we confirm by by re-estimating the same specification in model 1 separately for the tenure of each executive. Although Mubarak, the SCAF, and Monsour/Al-Sisi governments were all autocratic, the general approach of Mubarak was to undersupply conspiracy theories, while the general approach of Al-Sisi (who effectively controlled Mansour) is to oversupply them. This supports our argument that unthreatened autocrats are likely to undersupply conspiracy theories.

Our results are robust to a large number of other modeling and measurement alternatives: Poisson regression; linear regression; aggregating conspiracy theories at the article level; counting only conspiracy theories that are endorsed by the journalist; including the data from *Al-Ahram* back to 1998; estimating separate regressions for each type of the ACLED event individually; using the count of ACLED events on the same day only; using the one-day lag of ACLED events; using the logged ACLED events in the last 7 days to account for skewness; using the logged count of ACLED events on the same day only; proxying threat with ACLED death counts instead of event counts; using a dichotomous variable "ACLED crisis" defined as 1 if ACLED events are in the top 75th percentile and 0 otherwise; a dichotomous variable "ACLED crisis 2" defined as 1 if ACLED events are in the top 90th percentile and 0 otherwise; omitting combinations of control variables; adding indicator variables for each regime; and a few more. Details are in Appendix F.

Additionally, we consider the possibility that our results are spurious because of limitations or biases in the ACLED data. One alternative is to focus on terrorism, which is a subset of the events we think might be threatening that is highly observable, and for which alternative data sources are available. We measure terror threats in Egypt using event counts from the Global Terrorism Database (LaFree and Dugan, 2007), which have a 0.52 correlation with our ACLED measure. Our results are robust to this alternative measure of threat (see Appendix F).

New protest data hand-coded by Clarke (2021) from *Al-Masry Al-Youm* offers a significant improvement over ACLED for measuring protests in Egypt between January 2012 and July 2013. Several measures of protest can be constructed from these data; we prefer a measure that counts the

sum of ongoing anti-regime protests as this best captures protests that threaten the government. Our analysis with ACLED finds that *Al-Ahram* generally undersupplies conspiracy theories in 2012-2013, and we find similar evidence of undersupply using Clarke's measure (see Appendix F). We cannot test whether our findings from the Mubarak, Mansour and al-Sisi governments hold because of the temporal limits of Clarke's data.

One other robustness check deserves mention. To allay concerns that our findings might be dependent on idiosyncrasies of the two newspapers, we collected 775,126 articles (from 3,230 days) from another independent newspaper *Al-Shuruq*, and 75,196 articles (from 878 days) from a less-prominent state-controlled newspaper, *Al-Gomhuria* (see the Appendix F). Our results remain substantively similar with these additional newspapers.

Our conclusions from these models are as follows. We find evidence that both newspapers print more conspiracy theories in response to threatening events, but differentially so. The official paper, *Al-Ahram*, is far more responsive to threatening events than the independent *Al-Masry Al-Youm*. These differences are substantively large; when the count of events changes from its minimum to its maximum, *Al-Ahram* increases its supply of conspiracy theory paragraphs approximately sevenfold, from 2.5 to 18 per day. The oversupply in *Al-Ahram* responds to day-to-day changes in threatening events, suggesting government intent. This oversupply of conspiracy theories is concentrated in times when autocratic Egyptian governments faced larged numbers of threatening events, and is strongest since the 2013 coup. By contrast, the authoritarian government of Mubarak preferred to undersupply conspiracy theories from the mid-aughts until it faced extreme crisis at the end of 2010. Neither threat nor authoritarianism alone is a sufficient explanation. Rather, when authoritarian governments feel threatened, they are more likely to print conspiracy theories.

#### **Qualitative Analysis of Oversupplied Conspiracy Theories**

To infer more about the Egyptian government's goals, we qualitatively examine some periods of oversupply. Our goal is to inductively learn what types of conspiracy theories the state-controlled

newspaper promotes when it oversupplies, so we identify the days on which predicted oversupply by *Al-Ahram* is above the 80th percentile and select a random sample of thirty days from that set of 881. This sampling strategy, in which our cases depend intimately on our regression model, leverages the strengths of nested analysis (Lieberman, 2005) and the integrative mixed-methods tradition (Seawright, 2016). With these thirty randomly selected days, two of us evaluated every *Al-Ahram* article with a conspiracy theory, summarizing the alleged conspiracy and noting incidents or actors matching those recorded by ACLED in the previous two weeks.

In the 141 articles we examined, references to perpetrators, victims, and incidents from the prior two weeks of ACLED were present only 13% of the time for the perpetrator, 6% of the time for the victim, and 9% of the time for the incident. The vast majority of *Al-Ahram's* conspiracy theories on these days have little connection to recent events, suggesting that the state intends to misdirect rather than send a message about what is happening.

State-controlled media does reference recent events in conspiracy theories following some pivotal events. Our sample included October 12, 2011, immediately following the "Maspero Massacre," in which several dozen peaceful protesters, primarily Coptic Christians, were killed and hundreds wounded when security forces attacked them in front of the Maspero television building. Four of the seven articles with conspiracy theories referred to the incident, but primarily allege the presence of evil forces threatening the Egyptian people without providing a detailed account or naming a specific plot or perpetrator. For example, one article quotes a religious figure who "confirmed the existence of collusion by domestic and foreign elements, that aims to push Egypt toward a state of anarchy" and "called on all Egyptian people, both Muslim and Christian, to exercise self restraint, stay calm, and not participate in any demonstrations or sit-ins."

At least half of the conspiracy theories in *Al-Ahram* we randomly selected for close reading appear formulated to promote unity by invoking vague fears. The formula consists of (1) vague references to domestic or foreign perpetrators, (2) an undefined plot to divide the Egyptian people by sowing chaos, and (3) a call for unity, calm, and fortitude. *Al-Ahram* casts the Egyptian gov-

ernment as the only protection from these plots, portraying leaders as stalwart in the face of these nefarious threats.<sup>5</sup> They also describe Egypt's leaders as astute, vigilant to threats that others are too naive to see. Lastly, these articles often explicitly criticize dissenters, especially those who are skeptical of the regime's conspiracism. For instance, on February 24, 2016, two years after the coup that brought al-Sisi to power, an article notes that "those who see al-Sisi's words merely as a method to stay in power or to strengthen the grip of the security apparatus—respond with disregard and contempt to his talk of conspiracies and plots, when in actuality the facts of the matter demonstrate that 99% of what happens on the ground in Egypt is not a coincidence at all, and those who deny the existence of a conspiracy against Egypt and the region are either naive, ignorant, or themselves a participant in the conspiracy, perhaps without even being aware."

## 5 Conclusion

When and why do states promote conspiracy theories? In this paper, we have offered new concepts, theory, and evidence to answer this question. We introduce the concepts of oversupply and undersupply of conspiracy theories by governments. Conspiracy theory oversupply happens when state-controlled media spreads more conspiracy theories than if it were independent; undersupply happens when state-controlled media spreads fewer. Several important studies have examined changes in the number of conspiracy theories in state-controlled media over time, but none, to our knowledge, have considered counterfactually what state-controlled media would produce if it were not state-controlled. If we are correct that independent media also promote conspiracy theories, than it is not merely the appearance of conspiracy theories in state-controlled media that needs explanation. Rather, our goal is to explain why state-controlled media sometimes promote more or fewer conspiracy theories than we would expect from independent media.

To explain the over- and undersupply of conspiracy theories by states, we take two theoretical factors that are considered separately in the literature—regime type and diversionary incentives—

<sup>&</sup>lt;sup>5</sup>This is resonant with efforts to restore the "prestige of the state," documented by El-Ghobashy (2021, Chapter 6).

and bring them together. We agree with previous studies that states face diversionary incentives to promote conspiracy theories when they are under threat, but these incentives are offset by the risk that doing so will backfire. We argue that official media will undersupply conspiracy theories in the absence of threats. As threats increase, the official media is much more likely to oversupply conspiracy theories. Our argument applies to some democracies as well as autocracies—regime elites in democracies can feel threatened as well—but autocrats are more likely to control a media outlet and face fewer incentives to preserve the integrity of the media.

Most empirical studies of state conspiracy theory promotion focus solely on the dynamics of autocratic politics, often under a single stable regime. We test our argument in Egypt where rapid shifts in regime type allow us to test whether political institutions matter while holding the media market constant. We measure the supply of conspiracy theories in more than one million Egyptian newspaper articles over twenty years, which allows us to make comparisons across time and between newspapers that were not previously possible.

In line with our theory, we find that state-controlled media begins to oversupply conspiracy theories as events threaten the regime; most of this oversupply has happened during Egypt's most recent autocratic administrations. Our qualitative examination of these conspiracy theories reveals that they typically encourage societal solidarity and stability in the face of vague threats rather than crafting a narrative about specific recent events or actors. During Egypt's brief period of democratic rule, from 2012–2013, we find the opposite pattern: the state-owned newspaper undersupplies conspiracy theories despite high numbers of threatening events. This suggests that democracies may undersupply, but our inferences are necessarily tentative.

The tentative nature of our findings about regime type point to an important limitation of our study. While our use of observational data has many strengths, we are unable to vary the timing or values of any of the key causal variables in our theory. We cannot manipulate either regime threat or regime type, so the statistical correlations between these factors and conspiracism could be due to confounding factors. Manipulating either of these variables strikes us as impossible, but

perhaps future scholars will find situations where threat or regime type have varied randomly to allow causal inference with less threat of confounding.

Our theoretical and conceptual contributions suggest several avenues for future exploration. For scholars of political communication, our approach could be extended to study the supply of conspiracy theories by states across the Arab World and beyond. A weakness of our study is that data limitations force us to analyze data from a single country; future studies could compare state-controlled and independent media in other countries, within and outside the Middle East region. In places like the United States where media independence is strong, our methods suggest new ways to analyze the supply of conspiracy theories by non-state actors across the political spectrum. Considering applications to established democracies reveals a conceptual shortcoming of our work: that our notions of over- and undersupply are premised on the presence of some form of state-controlled media. Analyzing over- and under-supply of conspiracism in countries without state-controlled media will require modifications to our approach, but we argue that the general framework still applies in countries such as the United States where public officials sometimes spread conspiracy theories through other means.

Our study also has implications for scholars of political psychology. To date, most experimental studies do not consider variation in the supply of conspiracy theories, and those that note this variation work to control it away (Ryan and Aziz, 2021). We can imagine a research agenda that more closely mimics the wide variation in supply in the real world and experimentally varies timing and intensity to learn how conspiracy theory supply affects demand.

Beyond questions of conspiracy theories, the study of Arabic-language news media in political science is in its infancy, and exciting new research shows the promise of a text-as-data approach (Alrababa'h, 2021). We encourage scholars of political communication to consider what we can learn about politics in the Arab world with the new data and tools our study provides.

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