The Supply of Conspiracy Theories in State-Controlled Media*

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Abstract

When, and why, do governments promote conspiracy theories? We build on claims that autocrats use misinformation for diversionary purposes by showing how the level of threat a regime faces affects the promotion of conspiracy theories. Governments facing threats may attempt to stave them off by oversupplying conspiracy theories. Secure governments undersupply conspiracy theories relative to independent media because promoting conspiracy theories is politically costly. Our arguments apply to both autocracies and democracies, though threatened democrats supply fewer conspiracy theories than threatened autocrats because they are more sensitive to the costs of promoting conspiracies. We test our arguments by examining conspiracy theories in Egypt's print media between 2005 and 2018. When the government faced threats, the state-controlled newspaper published more conspiracy theories than its independent counterpart. This relationship is moderated by changes in regime: the government promoted fewer conspiracy theories during a brief period of democracy despite facing significant threats.

Abstract word count: 150

1 Introduction

On August 27th, 2013, Egypt's most prominent state-run newspaper published shocking allegations on its front page: a "New Conspiracy to Undermine Stability: Politicians, Journalists, and Businessmen Involved."[1] Citing unnamed official sources, the article outlined a plot organized by unlikely conspirators—United States Ambassador to Egypt, Anne Peterson, 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." No independent evidence of such a plot ever surfaced, and it seems to have been entirely fabricated. Given the Egyptian government's heavy reliance on the United States for support, this blatant government promotion of a conspiracy theory that could anger an important ally is puzzling.

The key to understanding this puzzle lies in the domestic threats the Egyptian government was facing. Abdel Fatah al-Sisi had ousted Egypt's first democratically-elected President, Mohamed Morsi, two months earlier, and on August 14th, 2013, his new regime had moved violently against those protesting the takeover, killing approximately 1,000 demonstrators in Cairo's Raba'a square. The massacre roiled the Egyptian public further. Against this backdrop of threat, the al-Sisi government turned to promoting wild 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 the supply of conspiracy theories in official news media. A surge of recent scholarship examines the politics of conspiracy theories, but most of it focuses on the demand for conspiracy theories by individuals, rather than the suppliers. This "demand-side" literature emphasizes that conspiracy theories serve as heuristics to cope with uncertainty (Oliver and Wood, 2014) and that psychological traits such as mistrust, belief in unseen forces, and propensity to see patterns in randomness largely explain

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[1] https://gate.ahram.org.eg/daily/News/228698.aspx, accessed 3/22/2021.

individuals' predisposition to conspiricism (Radnitz and Underwood, 2017; van Prooijen, Douglas and De Inocencio, 2018). Belief in conspiracy theories varies from country to country (Bruder et al., 2013), but we suspect that this is not because of large cross-national variation in the common psychological traits that predict demand for conspiracy theories. Instead, variation in the supply of conspiracy theories by various actors, including the state, is essential to understand why they are more salient in some places and times than others.

The supply of political misinformation by states has also received scholarly attention (Peisakhin and Rozenas, 2018; Rozenas and Stukal, 2019), but there is less consensus about why states promote conspiracies. While some point to the psychology of individual political leaders (Gray, 2010*b*) or political culture (Hofstadter, 1965), the prevailing hypothesis is that autocratic regimes supply more (Gray, 2010*a*), in part because of diversionary incentives (Alrababa'h and Blaydes, 2020). We agree with this, and build on these important studies by specifying when threats create these diversionary incentives. We offer an important modification to the regime type hypothesis by showing that regime type alone does not explain the supply of conspiracy theories in the Egyptian case. Variation in threat, interacting with regime type, better explains the patterns in the data.

Prior studies tend to examine state-controlled media without direct comparison to non-state media, but within this approach lurks a significant threat to inference. A correlation between events and conspiracy theories in state-controlled media should not, by itself, convince us that the government is promoting these theories for its benefit. After all, dramatic political events invite explanation, and it is plausible that reporters are merely providing conspiratorial explanations of their own volition. Our approach is to reveal manipulation of state-controlled media by comparing it to independent media that face the same incentives to explain dramatic events but fewer incentives to promote regime priorities. Independent media in autocracies may face some political pressure to promote the regime's conspiracy theories, but this pressure is not as strong as for journalists at state-owned newspapers, and if it were, we would find no differences between state-controlled and independent newspapers in our analysis below. Using the rate of conspiracy theorizing in in-

dependent media, we can quantify government conspiracy theory *oversupply*: when state media supply more conspiracy theories than independent media. This suggests a mirror-image concept of government *undersupply* of conspiracy theories — printing fewer than independent media — a possibility that the literature has largely ignored and that we show is 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 conspiracy theory promotion 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 likely moderates the effect of threats on conspiracy theory supply. While democratic governments also face short-term incentives to manipulate public opinion to remain in office, they may pay higher costs for promoting conspiracy theories and have fewer opportunities to control the media.

We test these arguments by examining 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 compare the prevalence, timing, and content of conspiracy theories to Egypt's most prominent independent newspaper, *Al-Masry Al-Youm*. Identifying conspiracy theories in over one million newspaper articles is a formidable challenge that we overcome by combining qualitative coding with automated text analysis methods (Lucas et al., 2015). 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 experimen-

tally 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 conspiracy theories and not the reverse. Still, our results rely on far stronger assumptions than in experimental studies. 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 by administration—most of the oversupply of conspiracies occurred under the autocratic Abdel Fatah al-Sisi regime. By contrast, the autocratic government of Hosni Mubarak undersupplied conspiracy theories most of the time, supporting our argument that even autocrats are likely to undersupply conspiracy theories when they face no appreciable threats. The democratically-elected Morsi government also undersupplies conspiracy theories which aligns with our expectations about democracy, but our conclusions are tentative because the depth and quality of democracy was limited.

After examining the quantity of conspiracy theories that the state supplies, we examine them qualitatively following a nested analysis approach (Lieberman, 2005). We sample thirty days when our regression model predicts that the Egyptian government oversupplied conspiracy theories for closer investigation. We find that conspiracies in the official newspaper rarely identify specific perpetrators, victims, or incidents, and when they do, they are often only tenuously connected to recent events. These conspiracies seem 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. Our approach opens new possibilities for measuring and predicting the supply of conspiracy theories by various actors in other countries and contexts.

2 Conspiracy Theories: Supply and Demand

Longstanding scholarly interest in conspiracy theories (Popper, 1945; Hofstadter, 1965), has been reinvigorated by recent studies of political misinformation (Berinsky, 2017) and "fake news" (Lazer et al., 2018). One contribution of this recent literature is a definition of conspiracy theories that we adopt from Oliver and Wood (2014). We consider conspiracy theories to be a form of political discourse with three key features: (1) a propensity to "locate the source of unusual social and political phenomena in unseen, intentional, and malevolent forces," (2) a propensity to interpret events "in terms of a Manichean struggle between good and evil," and (3) the implication that "mainstream accounts of political events are a ruse" (953).

Scholars in a range of disciplines have studied the causes and effects of individual belief in conspiracy theories using surveys and experiments. Some focus on individual characteristics that make some people more or less receptive to conspiracy theories (Wood, Douglas and Sutton, 2012), while others examine the impact of conspiracy theories on beliefs and attitudes (Dixon and Jones, 2015) or behavior (Einstein and Glick, 2014). Together, these studies suggest that some individuals are attracted to conspiracy theories for psychological reasons. There is still debate about the individual traits that correlate with a greater receptiveness to conspiracy theories, but psychological traits (Radnitz and Underwood, 2017; van Prooijen, Douglas and De Inocencio, 2018), partisanship (Enders, Smallpage and Lupton, 2020; Ryan and Aziz, 2021), and gender (Bruder et al., 2013; Cassese, Farhart and Miller, 2020) feature prominently in the literature. Despite disagreements, scholars agree that conspiracy theories provide a mechanism for establishing a sense of order and purpose in the face of complex events that are difficult to understand (Oliver and Wood, 2014).

The Demand for Conspiracy Theories

Belief in conspiracy theories is widespread. According to survey results reported by Oliver and Wood (2014), "half of the American public consistently endorses at least one conspiracy theory."

Egypt, the country we study, is no exception. Nyhan and Zeitzoff (2018) find that "adherence to conspiracy theories is widespread" in their sample of 2,015 respondents in Egypt and Saudi Arabia, with more than 80 percent of respondents believing at least two conspiracy theories. Given their popularity, one common explanation for the prevalence of conspiracy theories in the region is that the supply of conspiracy theories in Middle East news media is simply a function of demand. If Arabs, or Muslims, or Middle Easterners are particularly prone to conspiracy theorizing, the story goes, then it is no surprise to find conspiracy theories widely circulating in the press.

We see scant evidence for the claim that Middle Eastern culture is particularly prone to conspiricism. Belief in conspiracy theories is high in some countries in the region (Bruder et al., 2013; Nyhan and Zeitzoff, 2018), but it is also high elsewhere (Oliver and Wood, 2014). We expect that the supply of conspiracy theories in the Middle East is due to politics, not merely cultural demand.

The Supply of Conspiracy Theories

The surge in scholarship on conspiracy theories has focused primarily on demand, but important studies also examine their supply, especially by states promoting misinformation to their own citizens. The literature broadly agrees that regime type matters; autocratic governments are more likely to manipulate the media environment generally (Black, 2008; Peterson, 2011), and to use state-controlled media to promote propaganda (Peisakhin and Rozenas, 2018; Rozenas and Stukal, 2019). Following Gray (2010*a*, Chapter 4), we organize our discussion around three main reasons for state supply of conspiracy theories: genuine belief, national narratives, 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 as a way of crafting national narratives that enhance the state's symbolic power (Gray, 2010*a*, 133-134). For example,

(Yablokov, 2015) argues that Russia's media conglomerate, Russia Today, is a tool of public diplomacy used to convince audiences of anti-Western and pro-Russian ideas. 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). Conspiracy theories can also communicate political priorities to elites, as well as the masses, and may 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).

There is reason to believe that this diversionary rhetoric 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). Even when diversionary conspiracy theories are not believed, they prop up authoritarian governments by sowing fear. Huang (2015) 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 by making citizens ambivalent. Conspiracy theories provided "evidence" for contradictory narratives of the war, leav-

ing open the possibility that the regime deserved support, even as repression mounted.

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 render citizens passive, but they also spread narratives that the regime is beset on all sides by powerful conspirators, which may undermine regime goals of projecting strength. And blaming foreign conspirators can potentially backfire diplomatically. What is missing from the existing literature is a clearer picture of when the threats facing a regime will outweigh these costs.

3   Oversupply and Undersupply of Conspiracy Theories

To better understand when and why governments supply conspiracy theories, we first refine the concept of supply. It may seem natural to assume that any conspiracy theories in state-controlled media appear at behest of the government and are thus properly thought of as part of government supply. This is wrong; there are other reasons why conspiracy theories might appear without government intervention.

Humans turn to conspiracy theories to make sense of the world. When complex, destabilizing events happen, they invite explanation. News organizations report on these events in real time, and they are likely to turn to conspiracy theories at least occasionally. Secretive or violent political events are especially likely to prompt conspiracy theories because they heighten anxiety and uncertainty, making journalists and readers more likely to entertain conspiracy theories to retain a sense of control if straightforward explanations are elusive. Thus, we expect the media to supply conspiracy theories in response to unexplained events. The natural number of conspiracy theories in news media may not be zero, even with no government manipulation.

The goal of the literature, and of our study, is to explain the portion of conspiracy theories that *are* the result of government manipulation. This requires separating out "naturally occurring" conspiracy theories from state-supplied conspiracy theories, both conceptually and empirically.

We refine the concept of supply by considering a counterfactual question that isolates the role of the state: how would the supply of conspiracy theories in the state-controlled media be different if it were not state-controlled? If state-controlled media supply more, we call this *oversupply*. Conversely, if state-controlled media circulate fewer, this is *undersupply*.

Our refinement to the concept of conspiracy theory supply is an important contribution to the literature. Prior studies have potentially conflated state-promoted conspiracy theories with naturally occurring ones. Previous studies have also not recognized that governments have the theoretical possibility of undersupplying conspiracy theories — suppressing them in official media outlets — even when events might lead journalists and readers to naturally turn to conspiricism. Yet if conspiracy theories impose costs on governments, then there are good reasons why governments might want to keep them artificially low. It is to these costs that we now turn.

4   Costs, Threats, and Supply of 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. The puzzle, then, is why governments would ever *not* promote conspiracy theories. 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 conspiracy theory well over and over again?

Costs of Promoting Conspiracy Theories

We argue that existing theories have not fully appreciated the significant costs of promoting conspiracy theories. While the up-front 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 if it helps to keep

citizens in line for the short term. 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 conspiracy theories might make the government less able to communicate credibly about real threats and conspiracies. 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."

Obvious government intervention in the media may have citizens seeking alternative media sources to avoid regime propaganda. For example, Wedeen (1999, Chapter 4) documents how the Syrian government's reliance on outlandish claims during the rule of Hafez al-Assad (1971-2000) undermined its credibility with both elites and the public. "State-controlled newspapers in Syria are widely considered to be functional tablecloths, rather than respected records of current events." (2). Censorship and other government manipulations of information can have similarly backfire (Hobbs and Roberts, 2018; Gläßel and Paula, 2020).

Most broadly, conspiracy theories pollute the media commons by cluttering the minds of media consumers (Wedeen, 2019). Although sowing confusion and paranoia among citizens can be a short-term ploy, it is not a recipe for long-term national success and stability. Outside of a state's borders, promoting conspiracy theories invites international criticism and ridicule because it violates norms and complicates diplomatic relationships, especially with alleged foreign perpetrators of conspiracies (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 in democracies. 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), including media commons. 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 viewed as 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. 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. Unthreatened autocrats seeking to project an image of control and assurance will be unlikely to promote conspiracy theories because they potentially 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 con-spiracy 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 conspiricism 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. 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 reduces 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. 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.

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.

5   Government Supply of Conspiracy Theories in Egypt

We test how threats and changes to institutions affect the supply of conspiracy theories in state-controlled 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 state-owned 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

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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. Its influence within Egypt was largely uncontested until the emergence of *Al-Masry Al-Youm* in 2004. We do not have reliable statistics on subscribers or circulation 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 now-deprecated web analysis service *Alexa* rated *Al-Masry Al-Youm* as the 44th most popular website in Egypt while *Al-Ahram* was 31st.

Al-Ahram fits the concept of state-controlled media well. *Al-Ahram*'s editor-in-chief is directly appointed by the Egyptian government, and there are numerous accounts of direct intervention in *Al-Ahram's* editorial process (Hammond, 2005). *Al-Ahram* is accused by independent Egyptian journalists of promoting conspiracy theories at the behest of the government, especially in the wake of violent events that challenge the regime, an accusation that we will confirm with our data below.[2] Conspiracy theories in *Al-Ahram* are often attributed to "informed sources" and anonymous security sector officials, though these sources are viewed with skepticism.[3]

Al-Masry Al-Youm derives its 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 we have not uncovered accounts of direct

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[2]https://dailynewsegypt.com/2016/10/02/al-ahram-blindly-parrots-governments-forces-evil-claim/, Accessed 3/21/2021.

[3]https://dailynewsegypt.com/2016/09/19/548755/, Accessed 3/21/2021.

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. For example, Diab and his son were arrested in 2015 for an unlicensed handgun, a charge observers described as political.[4]

Thus, 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. 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 control, 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 1 million articles would take at least 20 years straight. Instead, to comprehensively identify all of the conspiracy theories in these articles, we turn to a statistical methods for classifying text (Grimmer and Stewart, 2013), adapted for Arabic (Nielsen, 2017).

At a high level, our classification 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

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[4]http://www.atlanticcouncil.org/blogs/menasource/the-motives-behind-salah-diab-s-arrest-and-release, Accessed 8/25/2021

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 keyword approach because our reading revealed that articles promoting conspiracy theories 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 containing these terms (comprising 2.5% of the all articles).[5]

Because these key words are crucial to our classification, we have interrogated our 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, 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 our corpus 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

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[5]The 18 key words in Arabic are: مؤامرة ;مؤامرة ;موامرة ;مؤامره ;موامره ;مؤامرت ;مؤامرات ;تآمر ;مكيدة ;مكيده, ;مكيدت ;مكيدات ;مكائد ;مكايد; تواطؤ ;تواطأ ;تواطئ ;تواطى ;دسيسة ;دسائس and.

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%. We then apply the trained random forest 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 Supplement, p. 9).

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.

Measuring Threats and Regime Type

Our argument is that both undersupply and oversupply of conspiracy theories by the Egyptian government can be explained by the level of threat it faces and whether it is autocratic or democractic. Both of these 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 threatening political events, which are more readily observable. For our primary measure, we use counts of significant contentious political events in Egypt reported in the ACLED data set (Raleigh et al., 2010). While threats to the Egyptian government came in many forms, concerns about sovereignty and military prestige meant that all of Egypt's leaders were par-

ticularly threatened by violent, contentious political events. We use ACLED's counts of events –
attacks, battles, and protests—to proxy for regime perceptions of threat that we cannot observe.

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 regime type is straightforward: all governments between
1998 and 2018 have been autocratic, with the exception of Muhammad 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.[6] 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. The Polity project denotes this period as a "transi-

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[6]V-Dem's "clean election index" scores 2012 as the best in Egypt's history since 1900 https://www.v-dem.net,
accessed 10/19/2021.

tion,"[7] Norms of democratic power-sharing were not established, and unlike leaders in most democracies, Morsi faced imprisonment and ultimately death when he lost power. Anticipation of this possibility likely heightened the sense of threat he felt as President. Of special importance for our analysis is that *Al-Ahram* remained under state ownership and control, so unlike many democratic rulers, Morsi had a state-controlled newspaper at his disposal. We ultimately consider Egypt to be a democracy under Morsi, but with caveats that our findings should not be extrapolated to established democracies.

Predicting the Supply of Conspiracy Theories with Regression

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 the two variables that we argue are important predictors of conspiracy theories. First, we indicate changes to Egypt's regime using alternating shading, with text labels for the head of state. All are autocratic, with the exception of Muhammad Morsi's presidency from 2012-2013. Second, we plot the moving average of significant contentious political events in Egypt reported in the ACLED data set (Raleigh et al., 2010).

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 newspapers. Second, different regimes in Egypt have faced different levels of threatening events, with Mubarak facing very few, and the other administrations facing far more. In broad strokes, this suggests that Mubarak 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. *Al-Ahram* prints fewer conspiracy theories than *Al-Masry Al-Youm* during the Mubarak and Morsi eras, and more during the Mansour and al-Sisi eras.

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[7]https://www.systemicpeace.org/polity/egy2.htm, accessed 10/19/2021.
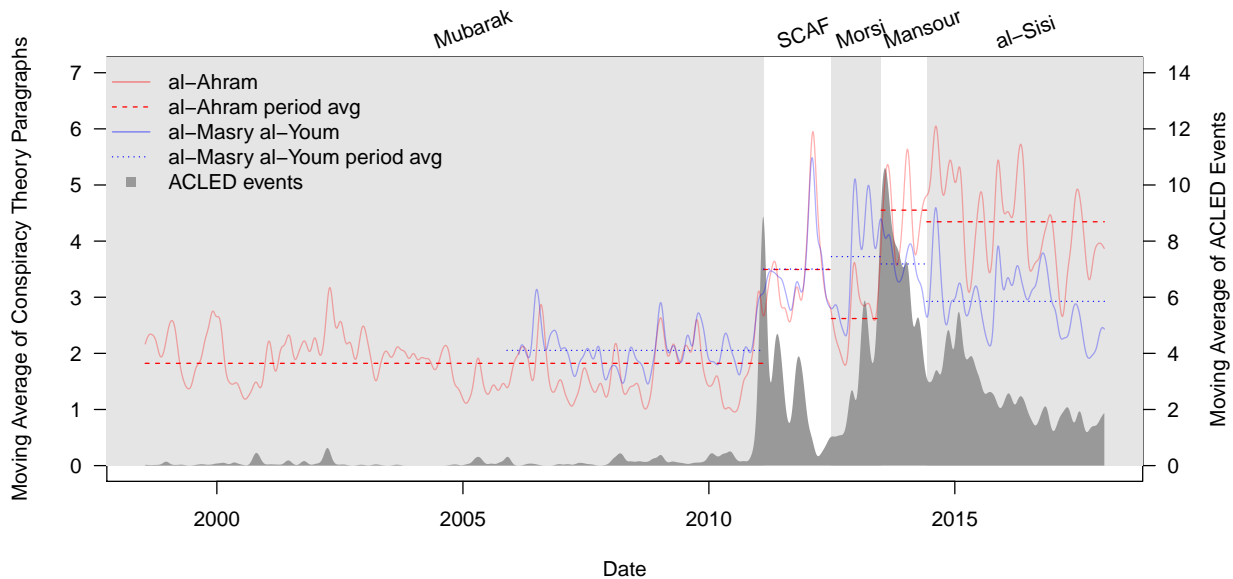
Figure 1: *Average counts of conspiracy theories in each newspaper. The solid lines indicate the moving average. Dashed lines indicate the average during each administration.*

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 through the week. 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 our argument is that governments 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 the Supplement. 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*.
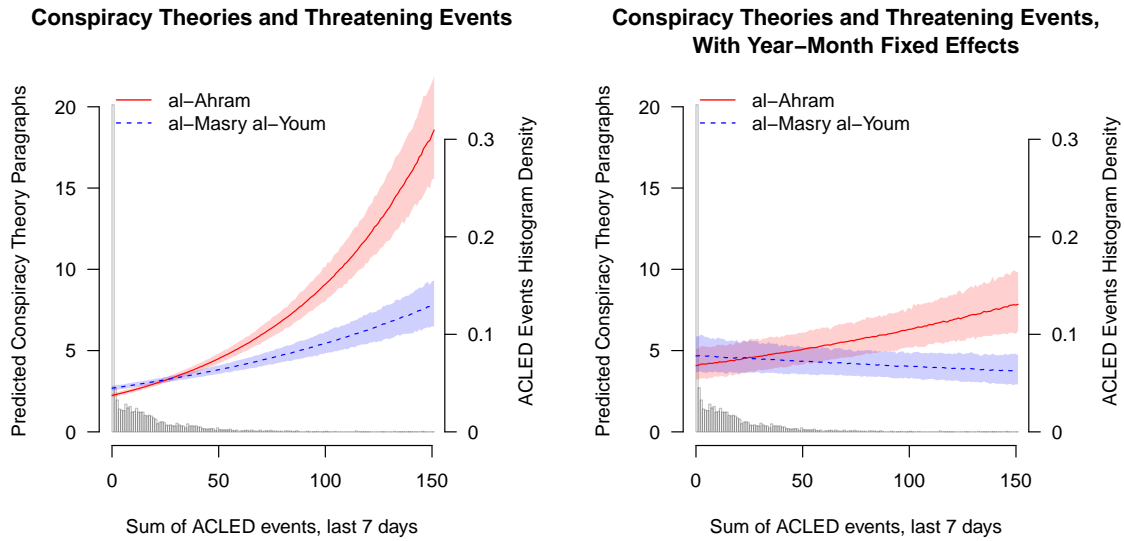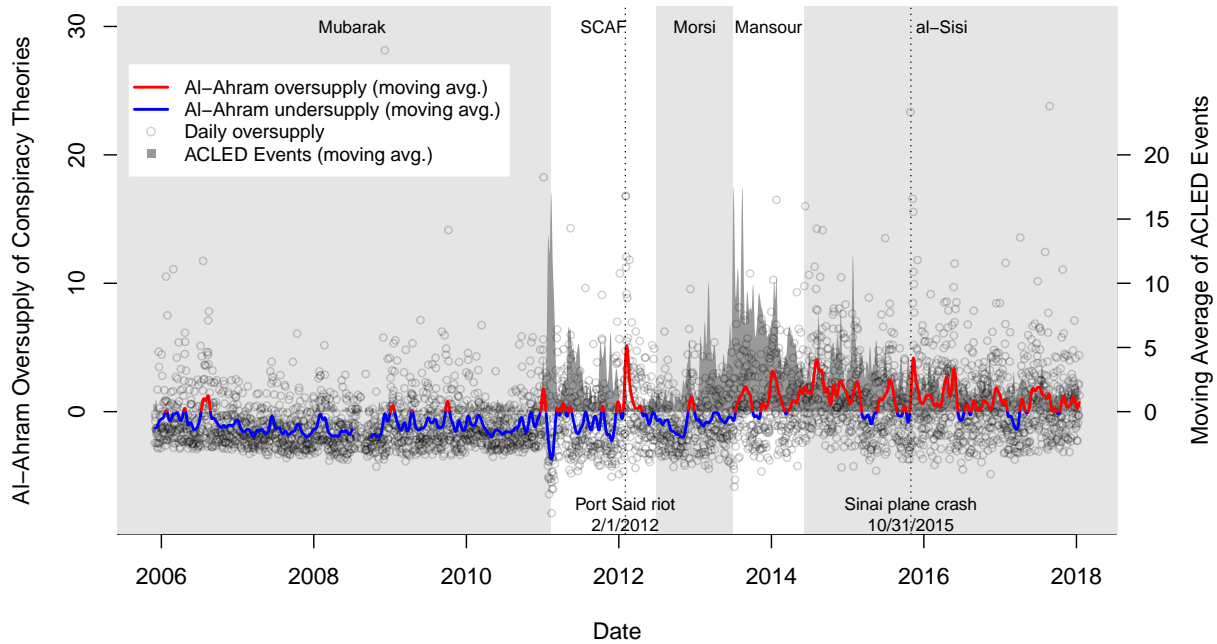

Figure 2: *Al-Ahram oversupplies conspiracy theories relative to Al-Masry Al-Youm, given the same events.*

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. 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.

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 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. We take this oversupply to be Mubarak's last-ditch effort to divert attention as his grip on power weakened. Undersupply remains the norm under the SCAF, except for a period of oversupply after the Port Said soccer riot, an embarrassing event for the regime. Undersupply continues after Morsi's election which is consistent with the argument that democracy decreases government supply of conspiracy theories. This result is especially striking

because the Morsi regime undersupplied conspiracy theories despite facing significant numbers of threatening events. However, given that democracy was not consolidated, and we observe only one democratic administration, we cannot rule out that this undersupply might be the result of factors idiosyncratic to the Morsi government.

Al-Ahram has oversupplied conspiracy theories in almost every month under the Mansour and al-Sisi governments. We observe especially large upticks around 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 write conspiracy theories quite frequently, while the rest write them very rarely. We identify 175 authors who use conspiracy theories in at least 10 percent of their articles and find that these authors are statistically more likely to write when the number of ACLED events was high the previous day.

These results suggest that conspiracy theory promotion differs substantially by regime, not just by regime type. We confirm this by re-estimating the same specification in model 1 but for only the dates corresponding to the tenure of each executive. These models corroborate that the oversupply dynamic is primarily a feature of *Al-Ahram* after the regime change in 2013, and that the general approach of the Mubarak, SCAF, and Morsi governments was to undersupply conspiracy theories. This supports our hypothesis that unthreatened autocrats, along with democrats, are likely to undersupply conspiracy theories.

Our results are robust to a very 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. For brevity, details on these alternatives are in the Supplement, pp. 7-16.

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 Supplement p. 12).

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 Supplement p. 13). 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 Supplement, pp. 15-16). We were unable to collect either of these newspapers completely, but our results remain substantively similar with these additional data.

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-90s 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 government as the only protection from these plots, portraying leaders as stalwart in the face of these nefarious threats.[8] 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 conspiricism. 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

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[8]This is resonant with arguments about attempts to restore the "prestige of the state," during this period documented by El-Ghobashy (2021, Chapter 6).

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."

6 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—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 fourth estate.

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.

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. More studies could compare state-controlled and independent media in places where both operate. 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.

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 (Alrababa'h, 2019), and exciting new developments are in the works that show 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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