Supplemental Information
for
The Supply of Conspiracism in State-controlled Media

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Abstract

This online appendix provides supplemental information about the analysis in "The Supply of Conspiracism in State-controlled Media"

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A Ambassador Anne Patterson's Response to al-Ahram Article

The original letter sent by Ambassador Patterson is no longer available on the US Embassy in Cairo's website. We reproduce the text of the original letter below based on the version available via the Embassy's Facebook page which remains active.[1]

> Mr. Abdel Nasser Salama Editor in Chief Al Ahram Newspaper
>
> Dear Mr. Salama:
>
> I am writing to adamantly deny the outrageous, fictitious, and thoroughly unprofessional headline article that appeared in your paper on August 27. Your article's claim that I personally am involved in a conspiracy to divide and destabilize Egypt is absolutely absurd and dangerous.
>
> The irresponsibility of this article only serves to further misinform and misguide your readership, and to further raise tensions in an already perilously tense environment. Make no mistake – false articles such as this one are a real threat to Egypt and to prospects for Egypt's democratic transition. I call on you to use your position of leadership and responsibility to stop this spread of inciting misinformation, and to instead work to inform and educate your readership on real, not make-believe, events. I am also surprised that you would have violated a fundamental principle of journalistic ethics by failing to contact the U.S. Embassy to check the veracity of the (invented) information you received from your sources. In this regard, I reiterate that the staff of my press section is always at your disposal for fact-checking.
>
> I am particularly disturbed to think that Al Ahram, as the flagship state-run paper in Egypt, is regarded as a representative of the government's viewpoint. We will, therefore, raise this article at the highest levels of the government to protest its publication and the irresponsible behavior that led to it.
>
> Good journalism checks facts, scrutinizes sources, and offers viewpoints. This article isn't bad journalism; it isn't journalism at all. It is fiction, serving only to deliberately misinform the Egyptian public. Such articles make a successful future for Egypt all the harder to achieve through the propagation of lies and fear.
>
> I call on you to act responsibly and to work to make your country a stronger one, not a more fearful and misinformed one.
>
> Sincerely,
> Anne W. Patterson

B Background Information on Print Media in Egypt

This section provides background on the politics of newspaper publishing over the last twenty years in Egypt. We draw on secondary sources to illustrate why we selected *al-Ahram* and *Al-Masry al-*

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[1] https://www.facebook.com/USEmbassyCairo/

Youm as our key cases of comparison, then present evidence on how media regulations governing print media generally changed after the fall of former President Hosni Mubarak in 2011. Using evidence from ethnographic research and first person accounts in English and Arabic, we illustrate how the Egyptian government shaped press coverage across the two newspapers, and demonstrate the fundamental changes to this process following the election of Mohammed Morsi in 2012 and the coup that forced him from power in 2013.

B.1   News Production & Government Regulation in Egypt Before 2011

One concern about the comparison between *al-Ahram* and *Al-Masry al-Youm* stems from the fact that in an authoritarian context like Egypt, even an "independent" newspaper like *Al-Masry al-Youm* did not enjoy total editorial autonomy. The qualitative evidence supports this concern: Egypt's emergency law, periodically renewed since 1981 (Amin, 2002, 130), facilitated government control over funding for major publishing houses and media licensing (Amin, 2002, 131), and a restrictive press law passed in 1996 (Black, 2008, 6), provided numerous avenues through which officials could influence even independent media entities. These twin pieces of legislation gave bureaucrats at the Ministry of Information, the Army, and the Ministry of Interior, a wide range of tools, both formal and informal, to pressure journalists and editors (Badr, 2021; Cooper, 2008; Peterson, 2011). Additionally, because of laws protecting the "prestige" of the Presidential office and the Egyptian state, public citizens, often in coordination with MPs, could bring cases against editors or journalists based on their writing or media appearances. While these cases were less likely to result in imprisonment, they could tie up significant amounts of time and resources, especially for independent journalists who were often subject to multiple court cases in a single year (Black, 2008).

Despite this concern, and as we emphasize in the main text, there is no question that *Al-Masry al-Youm* enjoyed much greater editorial freedom than *al-Ahram*, and that its journalists and editors exploited their relative autonomy to pursue a range of topics that were simply off-limits to their peers at *al-Ahram* (Elmasry, 2012*a*). These fundamental differences in editorial autonomy became more pronounced following demonstrations in downtown Cairo in 2011 (Peterson, 2011; Rayman, 2013).

How did the Egyptian government shape content at the two newspapers prior to 2011? As we note in the main paper, so-called, "red lines" (*khtoot hamra*), a form of self-censorship played a crucial role in both newspapers. While never officially defined, most scholars argue that in Egypt red lines extended to the Office of the President, some government ministers, and select issues of national security including inter-religious tensions (Cooper, 2008, 1) (Elmasry, 2012*b*, 129). Ethnographic research on coverage of the Egyptian military vividly illustrates how these red lines worked in practice, as well as similarities and differences between the two papers. As an *al-Masry al-Youm* editor related, "anything involving the armed forces which may have painted them in a negative light – and thus project weakness – had to be avoided." (Elmasry, 2012*b*, 131). Or as a senior editor at *al-Ahram* candidly admitted, "Nothing about the army gets published except that it comes from them" (Elmasry, 2012*b*, 131).

When red-lines were insufficient to shift coverage in the desired direction, the same ethnography notes that editors at both paper recalled receiving phone-calls from officials within the se-

curity forces offering "advice" about how to cover certain events (Elmasry, 2012*b*, 131). This type of more direct intervention was particularly common in response to sporadic protests or incidents of domestic unrest. As one expert noted, one of the key responses by the state to greater contestation was "Controlling media outlets and creating media content for political propaganda," (El-Ghobashy, 2021, 82). However, just because editors at both *al-Ahram* and *al-Masry al-Youm* faced comparable pressures via red lines and unsolicited guidance from officials when covering politically sensitive topics, is not to suggest that reporters and editors at both papers responded similarly to these constraints. This fundamental difference between the two papers is vividly illustrated by an anecdote from 2008, as recalled by an *al-Ahram* editor who received an official phone call following a fire in downtown Cairo,

> *Al-Ahram* initially reported, accurately, that important government documents had been consumed in the fire. The officials did not want such information published because it might imply negligence or weakness on the part of the government. So *Al-Ahram* was compelled to run a 'correction' of their initial report, despite the fact that it contained no inaccuracies. *Al-Masry Al-Yom, Al-Wafd* and other non-government papers published the same information about the fire, but did not issue corrections (Elmasry, 2012*b*, 132).

Furthermore there is evidence of significant differences in how journalists at the two different newspapers saw themselves and their work. As one *al-Ahram* journalist acknowledged, "We are the tongue of... the government. What the government wants to say it says through the newspapers it owns" (Elmasry, 2012*b*, 134). While some journalists at *al-Masry al-Youm* discussed concerns about the newspaper's coverage of the paper's wealthy owners and their business interests (Elmasry, 2012*b*, 135), there was no comparable pressure to slavishly echo government messaging, and reporters and editors often found creative ways around red lines to avoid overt government censorship.

B.2 News Production & Government Regulation in Egypt After 2011

The fundamental differences between the two newspapers were further illustrated following massive demonstrations in 2011. From the first major protest, journalists at *al-Masry al-Youm* provided unstinting coverage from downtown Cairo and across the Egyptian countryside, often at considerable personal risk (Peterson, 2011; Rayman, 2013). At the same time, coverage in *al-Ahram* initially stated that demonstrators had gathered in Tahrir Square *in support of* President Mubarak (Peterson, 2011). It was not until February 7th, 2011, almost two weeks after major protests broke out that *al-Ahram* would formally acknowledge the crowds demanding Mubarak's ouster.

An "insider's account" by a former *al-Ahram* journalist vividly describes the countervailing forces during these dramatic two weeks as at least some *al-Ahram* journalists struggled with their editors to allow them to cover events impartially (Hammou, 2012, 237-278). However, the success of this bottom up pressure from front-line journalists was ultimately unsuccessful. As the same account notes, "Mubarak went but his system stayed. Similarly at *al-Ahram* Osama Saraya [the former editor in chief] (little Mubarak as he was called by the Wall Street Journal) went but the system and men of Osama Saraya stayed" (Hammou, 2012, 275).

This pessimism about the ability of *al-Ahram* to transform itself was well warranted. Following Mubarak's resignation a military commission known as the Supreme Command of the Armed Forces (SCAF) seized power. The SCAF's relationship with the Egyptian press was in many ways more contentious than under the Mubarak government, although heightened uncertainty following the Revolution appeared to have somewhat lessened the military's ability to directly influence media coverage, especially for independent entities like *al-Masry al-Youm* (Badr, 2021, 223).

The relatively free and fair elections that brought Mohammed Morsy to power in 2012, brought another shift in the media politics landscape (Badr, 2021, 223). One particular feature of this period was that for the first time in Egyptian history, there was divided government. This had direct implications for the institutions governing media coverage and enforcing red lines. The same institutions that had so diligently guarded the office of the President under former President Mubarak, seemed much more reticent to proactively censor media coverage critical of President Morsi (Abdulla, 2014, 18-19). This meant that President's Morsi's supporters were much more reliant on filing legal cases against their antagonists in the press, mostly under charges of "insulting the Presidency," albeit with mixed success (Abdulla, 2014, 18). As one observer noted comparing the Morsy government to what followed, "the damage Morsy did to freedom was a drop in the bucket compared to what Sisi did once he came to power. Certainly freedom to openly criticize the executive branch of government was never greater than in the Morsy year, whether or not this is what he intended" (Armbrust, 2019, 207). Or as one scholar noted, despite "repeated trials to intimidate journalists" Morsi's election in 2012 was the period with "the highest potential for a transformation of Egyptian journalism" (Badr, 2021, 223).

The claim that that divided government following Morsi's election facilitated freedom of expression is not just anecdotal. The Varieties of Democracy dataset, which averages expert opinion to provide a yearly panel dataset of key indicators for countries all over the globe similarly indicate that in Egypt "Government Censorship" was lowest and the autonomy of the print media to criticize the government highest in 2012, the year Morsi was elected (Coppedge et al., 2021). Of the relevant indicators of press freedom, only "Media Self-Censorship" was judged to have fallen slightly from it high watermark in 2011 under Morsi, although this slight decline was nothing compared to the precipitous decline following the coup in 2013.

The coup that forced former President Morsi from power ushered in a new period of particularly heavy-handed censorship and media manipulation by the Egyptian State (Armbrust, 2019, Chapter 10). As we demonstrate in Figure 1 in the article, this coincided with a significant increase in *oversupply* of conspiracism in *al-Ahram*. President Sisi himself, before coming to power, explicitly acknowledged the importance of State media in shaping perceptions and behavior. In an interview with two prominent television stations he noted that, "the state should contribute in 'correcting' people's ethics through using mechanisms such as the media, the family and religious institutions" quoted in (Harb, 2019, 112).

Given the crackdown on press freedoms and the polarization of Egyptian society following the coup, it is perhaps not surprising that we have less direct evidence about conspiracism following the coup in 2013. In the current political climate, shadowing editors or surveying journalists is no longer feasible, as it was in the last years of the Mubarak government. The threat of prosecution makes it difficult for journalists in Egypt to speak candidly about their reporting or how editorial

decisions are made in the current political climate.

But ethnographic research generally supports the claim that under President Sisi there was a concerted effort to actively promote conspiracism throughout the Egyptian media. Given its popularity, much of the regime's efforts focused on television (Armbrust, 2019, Chapter 9), but as the anecdote that we used to motivate our article, suggests the official press also had a significant role to play. From articles highlighting the government's successful thwarting of "nefarious attempts at sabotage" (El-Ghobashy, 2021, 206), to printing the official press release following the death of Mohammed Morsi, which failed to mention the fact that he had been elected president (El-Ghobashy, 2021, 232), the Egyptian official press, particularly *al-Ahram*, featured prominently in the government's campaign to influence press coverage.

B.3 Background on al-Ahram and al-Masry al-Youm

The changes in the media environment outlined in sections B.1 and B.2 are reflected in the two newspapers used in our analysis. To aid in the discussion of these newspapers, we provide Table 1, collecting relevant background information on both newspapers (i.e. Year established, Editor-in-chief, and various measures of website ranking) as well as providing information on the data available to us in our corpus (i.e. Corpus date range, Total articles, Total paragraphs, and % news agency articles). Both newspapers have relatively little turnover for the position of editor-in-chief during the period up to 2011 and 2012. After 2011, pressures during the brief period with Mohammed Morsy and the Muslim Brotherhood in power and then during the coup in 2013 created a period of much higher turnover rate for the position of editor-in-chief at both newspapers. Some of this is driven by the Muslim Brotherhood—specifically, the Shura council appoints Salama as editor-in-chief of *al-Ahram* in 2012 and their dismissal of Yasser Rizk from the same position at the newspaper *al-Akhbar* leads to his appointment as editor-in-chief of *al-Masry al-Youm*. The turnover in appointments that come later, in 2014 and onward, is driven by the increasing pressures during the Mansour and Sisi periods.

While the literature on Egyptian news media illustrates that both *al-Ahram* and *al-Masry al-Youm* enjoy positions of prominence in the country, readers may be interested in relative ranking of their websites. We offer a few rankings in rows 3–5 of Table 1. First, we have the Egypt and global Alexa rank, which we recorded while completing this project in March 2021. Additionally, to try to provide a ranking that is closer to the time period of our data, we use the oldest historical ranking from Tranco (Pochat et al., 2018), whose methodology can be found at this page. Though there is some variation here, we think it is safe to assert that both newspapers' websites are in the top 50 visited websites in Egypt and the top 15,000 globally.

We additionally provide summary statistics on the corpus for each newspaper in the final four rows of Table 1. We have just over 800,000 articles over a period of almost 20 years for *al-Ahram* (approximately 115 articles per day) and just under 500,000 articles over a period of just over 12 years for *al-Masry al-Youm* (approximately 110 articles per day).

Sources for background information on al-Ahram:

Sakr (2013) pp. xv (founding date) and 57–58 (Nafie replaced by Saraya in 2005); Saraya sacked in 2011; Hamas appointed in 2011; Salama appointed in 2012; Salama dismissed in 2014; Thabet replaces Allam in 2017.

Sources for background information on al-Masry al-Youm:

Sakr (2013) p. vxi (founding date); Mehanna as founding editor-in-chief (in Arabic); Hawari takes over from Mehanna quickly, followed by Galad (from interview with Galad, in Arabic); Samir takes Galad's post (in Arabic); Sakr (2013) p. 61 (Yasser Rizk becomes editor-in-chief in 2012); announcement that Salmawy will take over after Rizk; Al Sayed coming after Salmawy; Al Sayed as editor-in-chief in 2014; Musallam becomes editor-in-chief in 2015 (in Arabic); Musallam resigns 2015; Saleh becomes editor-in-chief in 2015 (in Arabic); Hamdi Rizk takes over from Saleh in 2018.

	al-Ahram	al-Masry al-Youm
Year established	1876 (state-run since 1960)	2004
Editor-in-chief	Ibrahim Nafie: Up to 2005 Osama Saraya: 2005–2011 Abdel Azim Hamas: 2011–2012 Abdel Nasser Salama: 2012–2014 Mohammed Abdel Hadi Allam: 2014–2017 Alaa Thabet: 2017 and after	Magdi Mehanna: 2004 Anwar El Hawari: 2004 Magdi El Galad: 2005–2012 Mohamad Samir: 2012 Yasser Rizk: 2012–2014 Mohammed Salmawy: 2014 Ali Al Sayed: 2014–2015 Mahmoud Musallam: 2015 Muhamed al-Sayed Saleh: 2015–2018 Hamdi Rizk: 2018 and after
Website rank in Egypt (Alexa, March 2021)	31	44
Website global rank (Alexa, March 2021)	1,751	2,975
Website global rank (Tranco, February 2019)	6,661	14,980
Corpus date range	1998-07-18 to 2018-01-15	2005-11-24 to 2018-01-14
Total articles	826,765	484,100
Total paragraphs	6,655,061	3,885,803
% news agency articles	8.33%	6.96%

Table 1: *Summary of Newspapers*

C Measuring Threat

Previous literature on durable authoritarianism shapes our approach theoretically and conceptually. Theoretically it suggests that authoritarian regimes face two kinds of threats: externally, in the form of sustained political protests, and internally in the form of coups (Bueno De Mesquita and Smith, 2023). Any measure of "threat" in an authoritarian context like Egypt needs to consider both internal and external forces.

We employ as our measurement of threats the ACLED dataset which measures both political protests and incidents of political violence: including terrorism, which often targets the military and security forces and is therefore especially likely to be perceived as a threat. The ACLED dataset includes three categories of events that meet this criteria: "Battles" defined as "violent interactions between two organized armed groups;" "Explosions/Remote violence" defined as "an event involving one side using remote weapons" and "violence against civilians" defined as "violent events where an organized armed group deliberately inflicts violence upon unarmed non-combatants."

Authoritarian regimes are particularly vulnerable to sustained protests because they serve as a direct challenge to the official narrative.[2] When protests spread throughout the country, stalling or slowing crucial economic and political functions, authoritarian governments in particular may be tempted to use force to disperse protesters. When these attempts are unsuccessful, especially if they fail publicly, these failures can increase international political pressure on the regime, as well as internal divisions. Especially if these failures increase dissatisfaction within the military, then the risk of a coup could increase. This dynamic is particularly relevant in Egypt, where both former presidents Mubarak and Morsi were forced from power in military coups that followed massive and sustained protests (Armbrust, 2019; El-Ghobashy, 2021). The ACLED dataset includes two categories of incidents, consistent with this type of threat: "protests" defines as "public demonstrations in which the participants are not violent," and "riots" define as "violent events where demonstrators or mobs engage in destructive acts against property and/or disorganized acts of violence against people."

C.1 Anecdotal Evidence of Threat

Ethnographic accounts vividly illustrate the sustained campaign by the Egyptian military to reassert control over the media (Armbrust, 2019, Chapter 10) as part of a broader campaign to restore "regime prestige" (*haybat al-dawla*) (El-Ghobashy, 2021, 208), which had been degraded by two years of protests and unrest. This campaign was characterized by an emphasis on a dizzying array of alleged threats to Egypt, both internal and external (El-Ghobashy, 2021, 210). Given the enormity of challenges confronting Egypt, only the State, and more specifically the military, was capable of protecting the safety and well-being of the Egyptian people (El-Ghobashy, 2021). Given these difficult circumstances, complete and total unity between the Egyptian people and the military were essential. As one editorial in *al-Ahram* put it, "the people must have access to the majesty of the state, their hearts filled with its love and sublimity," (El-Ghobashy, 2021, 209). Under these

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[2]While this is an area of active scholarly debate, there is at least some evidence that permitting protests might be useful for authoritarian governments as a way of overcoming the preference falsification problem and discerning where local bureaucrats are least popular (Lorentzen, 2013).

extraordinary circumstances, protests and other continued forms of dissent, were condemned in the strongest possible terms, critiques of the military were often censored directly, and those who transgressed the new status quo were prosecuted in the thousands (El-Ghobashy, 2021, 227).

D   Automated Conspiracist Paragraph Detection

In this section, we discuss additional details about how we classify conspiracist paragraphs.

Paragraph-level classification: The default unit in most text analysis settings is each natural text, which in our case, might reasonably be each news article as a whole. However, we found that conspiracist language is typically a relatively small part of any single article, so classifying entire articles as conspiracist or not resulted in substantial measurement error. We improved our classification accuracy by instead breaking articles into paragraphs.

Keyword-assisted classification approach: Conspiracist paragraphs are relatively rare in our data. Based on our close reading, our best estimate is that to obtain 50 examples of conspiracist paragraphs using standard approaches, we would have to sample and code at least 15,000 paragraphs by hand. Training our model with such an imbalanced training set would have resulted in very low classification accuracy.

We turned to key words because our reading uncovered that find that Egyptian journalists reliably use these words when discussing conspiracy theories. We identified a list of 18 key words that are conspiracy-related including variants of: "conspiracy" (e.g. المؤامرة, التآمر, etc.); "trick" or "machination" (e.g. مكيدة, دسيسة, etc.) and "collusion" (e.g. التواطؤ, متواطئ). Our review of a range of media materials confirms that these phrases are commonly used when conspiracism is discussed in the Arabic media, and are only sometimes associated with the discussion of other topics, because of other meanings or connotations. For example, we considered using other key words, such as variants of "plan" (خطط) and "interference" (التدخل), but an examination of the paragraphs in which these words were used showed that they were more often unrelated to conspiracism.

Hand-coding process: We sampled 1,500 articles that contain these key words and had two research assistants separately code these articles, paragraph by paragraph. We developed coding criteria for our coders by reading hundreds of examples of conspiracism in both newspapers ourselves. We started from definitions of conspiracy theories from previous scholarship. We looked for text that alleged the role of "unseen and malevolent forces," providing an interpretation of events using "Manichean" language, and discredited "mainstream" explanations (Oliver and Wood, 2014). However, a single paragraph need not describe each of these components in full to be coded as conspiricist, because authors often leave some aspects implicit. We instead identify what might be called conspiratorial language, based on our understanding that the politics of conspiracies may not necessarily require the author to explicitly provide a comprehensive "theory."

We trained our coders to classify paragraphs in articles as conspiracist or not conspiracist, based on this definition of a conspiracy theory. Where present, we asked them to identify the perpetrator and victims in each conspiracy theory, including several terms for vaguely specified entities. We also asked the coders to code the "frame" of each individual article taking into consideration whether the article appeared to endorse the conspiracy theory, whether the author presented the conspiracy theory in a neutral way, often through a direct quotation, or whether the author was

critical of the conspiracy theory. We do not evaluate the truth of these theories. We instructed our coders to include any paragraph that fit our definition whether they considered the claim of conspiracy to be true or false.

While developing our coding rules, we observed some conspiracist content in contexts that were not immediately relevant to contemporary politics: movies, art, and books, sports, and in discussions of historical events, particularly religious discussions about the early Muslim community. We had our research assistants generally exclude references to conspiracy theories in the context of the arts, sports, and historical events prior to the 1900s, unless they also related to contemporary Egyptian politics.

Our coders agreed in their top-level coding of "conspiracy theory" or "non-conspiracy theory" in 95.9% of paragraphs in these 1,500 articles. We reconciled the disagreements in this variable by having two of the authors read and adjudicate every paragraph for which our coders disagreed. We did not reconcile the other variables coded by the research assistants because they were not essential for our classification task.

Examples: A clear example of a conspiracist paragraph is the following:

…the restoration of the standing of the state is the most important of recent achievements, even if it [required] the use of force. We are facing a conspiracy and an enemy whose composition we do not yet know. Defense is a legitimate right in the face of a nebulous enemy…	...ان استعادة هيبة الدولة كان اهم منجزات الفترة الأخيرة حتى وان استخدمت القوة لأننا امام امام مؤامرة وعدو لم نعرف بعد كل اطرافه وهنا يصبح الدفاع حقا مشروعا امام عدو غامض...

A more difficult case, because of undetermined endorsement, was the following:

Many of my colleagues here (in Canada) explain this simply through conspiracy theory claims: For example, that the Brotherhood were (and still are) lackeys of foreign parties, and that there is an understanding between them and the US to resolve the Palestinian situation at the expense of Egypt through giving up a piece of the Sinai	بعض زملائي وزميلاتي هنا (في كندا) يشرحون هذا ببساطة بنظرية المؤامرة، مثلا أن الإخوان كانوا ولايزالون عملاء الخارج وأن هناك تفاهما بينهم وبين واشنطن مثلا على حل القضية الفلسطينية على حساب مصر والتنازل عن جزء من سيناء.

Classifier details: We train our classifier on 22,190 paragraphs from the 1,500 articles that our research assistants coded by hand. Of these, 1,647 paragraphs were coded as conspiracist, and 20,543 were coded as not. We removed stop words and punctuation, and then stemmed the Arabic text before training the classifier. Using the Caret package (Kuhn et al., 2014), we partitioned the labeled data into an 80/20 split of training set (17,753 paragraphs) and test set (4,437). We used out-of-bag resampling with 10 resamples and 1,000 trees. After running the classifier on the identical training/test set over a range of possible parameter values (the number of trees, the number of out-of-bag resamples and the number of variables randomly sampled at each split), we choose the

specification that performed best on overall accuracy, sensitivity, and specificity. Our final model yielded an accuracy of 0.977, with a sensitivity of 0.79 (accuracy at correctly identifying conspiracy theories) and a specificity of 0.99 (accuracy at correctly identifying non-conspiracy theories).

		Actual	
		conspiracist	not
Predicted	conspiracist	260	31
	not	69	4,077

Table 2: *Confusion matrix showing classifier accuracy in the held-out portion of the training set.*

With this labeled set in hand, we then used a random forest classifier to classify the remaining 449,297 paragraphs in the 31,096 articles that contained our key words but are not in the 1,500 article training set. Of these paragraphs, 52,412 (from 23,514 articles) are classified as conspiracist. Combining our hand-labeled set (1,647 paragraphs) with the set predicted by the classifier (52,412 paragraphs), results in 54,059 conspiracy theory paragraphs, from 24,806 articles. With 6,360,805 total paragraphs in *Al-Ahram* and 3,708,572 in *Al-Masry Al-Youm*, the percentage of conspiracy theory paragraphs in *Al-Ahram* is 0.52% and the percentage in *Al-Masry Al-Youm* is 0.51%.

E   Regression Table for Main Models

Table 3 shows the full regression results corresponding to Figure 2 in the paper.

	Model 1 Outcome: Conspiracist paragraphs	Model 2 Outcome: Conspiracist paragraphs
Intercept	0.04	-0.49*
	0.067	0.14
ACLED Events	0.007*	-0.002
	0.0007	0.001
Al-Ahram	-0.18*	-0.14*
	0.027	0.027
ACLED Events × Al-Ahram	0.007*	0.006*
	0.0009	0.0009
Paragraphs	-0.0001	0.0006*
	0.00007	0.00007
Articles	0.008*	0.002*
	0.0007	0.0007
News Agency Paragraphs	-0.0009	-0.001*
	0.0005	0.0005
News Agency Articles	-0.004	0.012*
	0.004	0.004
Saturday	0.25*	0.23*
	0.036	0.033
Sunday	0.099*	0.17*
	0.037	0.034
Monday	0.15*	0.23*
	0.036	0.034
Tuesday	0.16*	0.24*
	0.036	0.034
Wednesday	0.13*	0.23*
	0.037	0.034
Thursday	0.13*	0.21*
	0.036	0.034
Year-Month Fixed Effects	No	Yes
N	8,805	8,805

Table 3: *Negative Binomial regression models showing that Al-Ahram oversupplies conspiracist paragraphs relative to Al-Masry Al-Youm in response to the same events. * indicates $p < 0.05$.*

F   Robustness Checks

This section demonstrates that the main finding presented in Table 3 is robust to a number of alternative modeling choices, measurement strategies, controls, and extends to the inclusion of two additional newspapers, one official and one independent. For brevity, we sometimes abbreviate "conspiracy theories" as "CTs."

F.1   Model Specifications: Poisson Regression, OLS

Our main specifications use a generalized linear model with a negative binomial link that is appropriate for modeling (potentially over-dispersed) counts. To demonstrate that our results are not dependent on this modeling choice, Figure 1 shows the results of our same specification but utilizing a Poisson regression, typically used for count data, as well as a standard linear regression specification. In both cases we can see a clear difference in the supply of conspiracist paragraphs between *Al-Ahram* and *Al-Masry Al-Youm* as the ACLED event count variable increases.
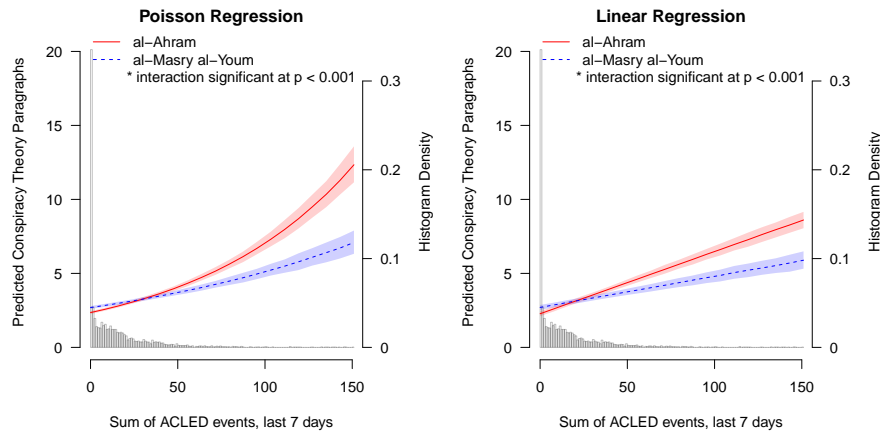
Figure 1: *Main results robust to using Poisson or OLS regression.*

F.2   Measurement: Aggregating to Article

An important measurement decision was to determine our unit of analysis — the level of text at which we think conspiracy theory language will be most detectable. The default unit in most text analysis settings is each natural text, in this case, each news article. However, based on manual examination of conspiracy theory-related articles, conspiracy theory language composed a relatively small portion of such articles. As noted in Section A, we attempt to improve classification accuracy by instead breaking articles into paragraphs, a decision we made before conducting any analysis. Figure 2 shows that our main result holds even if we use the article, instead of the paragraph as our unit of analysis.
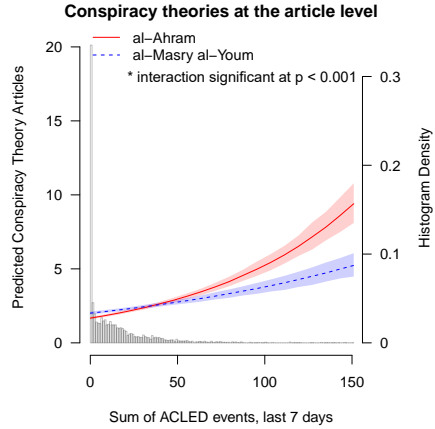
Figure 2: *Main results robust to collapsing to article*

F.3 Conspiracy Theory Framing: Only Endorsed

Our coders evaluated the framing of each article to distinguish between articles that endorsed a conspiracy theory, those that presented a conspiracy theory using neutral language, often in the context of a direct quote from a third party, or those that presented a conspiracy theory in a critical way, often through the use of sarcasm and humor. This is a difficult coding task and as we note in our paper there was less agreement between our coders on these three categories. Our purpose in coding the frame of each conspiracy theory was to avoid mistakenly counting criticism of conspiracism. Our coders largely agreed when identifying conspiracist paragraphs (95.9% agreement), but struggled to agree when coding the framing (58.6% agreement). Figure 3 shows that our main result holds if we focus only on these "endorsing" articles.
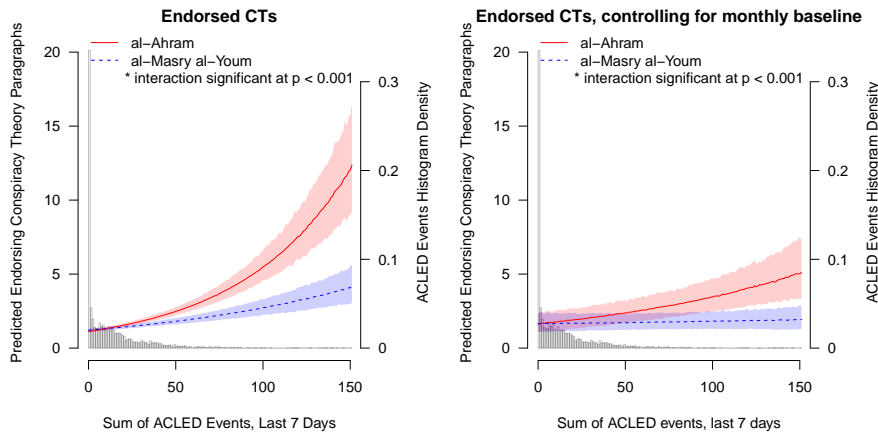
Figure 3: *Main results robust to using only articles that "endorse" conspiracy theories*

Our accuracy at predicting the framing of each conspiracist paragraph is lower, in large part because this is a more subtle task with greater fundamental uncertainty. We first attempted to predict all three categories — endorsing, neutral, and critical. The overall accuracy was 69.7 percent, but

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our accuracy at identifying critical framing was only 3.5 percent. Our theoretical reason for classifying conspiracy theory framing is to be sure that our results are not mistakenly driven by articles that do not promote conspiracism, so we collapsed our coding into two categories — endorsing versus critical/neutral — and achieved the same 69.7 percent accuracy (75 percent accuracy for the endorsement 63 percent accuracy for neutral/critical framing). We believe the difficulty of classifying whether conspiracy theories are endorsed may be intentional; the state may want to spread some theories while retaining plausible deniability.

F.4 Classifying articles without key words

We were concerned that perhaps our key word approach missed a significant number of conspiracist paragraphs in articles that did not happen to use one of those key words. To allay our concerns, we apply both classifiers to the articles without key words in a second stage. The error rates above no longer apply for this set; the models will *overpredict* the prevalence of conspiracist paragraphs in the non-keyword set because the model is trained on articles with a higher base rate of conspiracist paragraphs. This second stage classification turned up only 315 additional conspiracist paragraphs in *Al-Ahram* and only 59 in *Al-Masry Al-Youm*. These numbers are small compared to 30,473 conspiracist paragraphs we identify in articles with our key words. Our hand inspection of these confirms that the model over-predicts conspiracy theories in this set, so we omit them from our main analysis. Including them has no substantive effect on the results reported in 3.

F.5 Including *Al-Ahram* from 1998

As we note in the main text *Al-Masry Al-Youm* began publication in 2004 and became available online in 2005. Because we are interested in a direct comparison between the two papers our main specifications include only the years in which we have data available for both newspapers (2005-2018). Figure 4 demonstrates that our main result is not dependent on excluding the years between 1998 and 2005 when we have data from *Al-Ahram* but not *Al-Masry Al-Youm*.
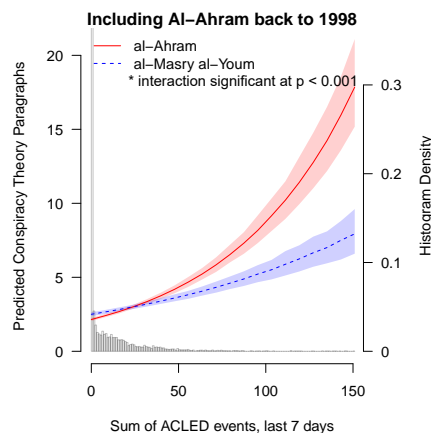

Figure 4: *Main results robust to including full data from Al-Ahram*

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F.6 Individual ACLED Event Categories

The ACLED database reports its event data using six categories: battles, violence against civilians, explosions, protests, riots, and strategic events. Our main specification uses a total count of each of these categories. Figure 5 shows that our main result holds for each of these categories individually.
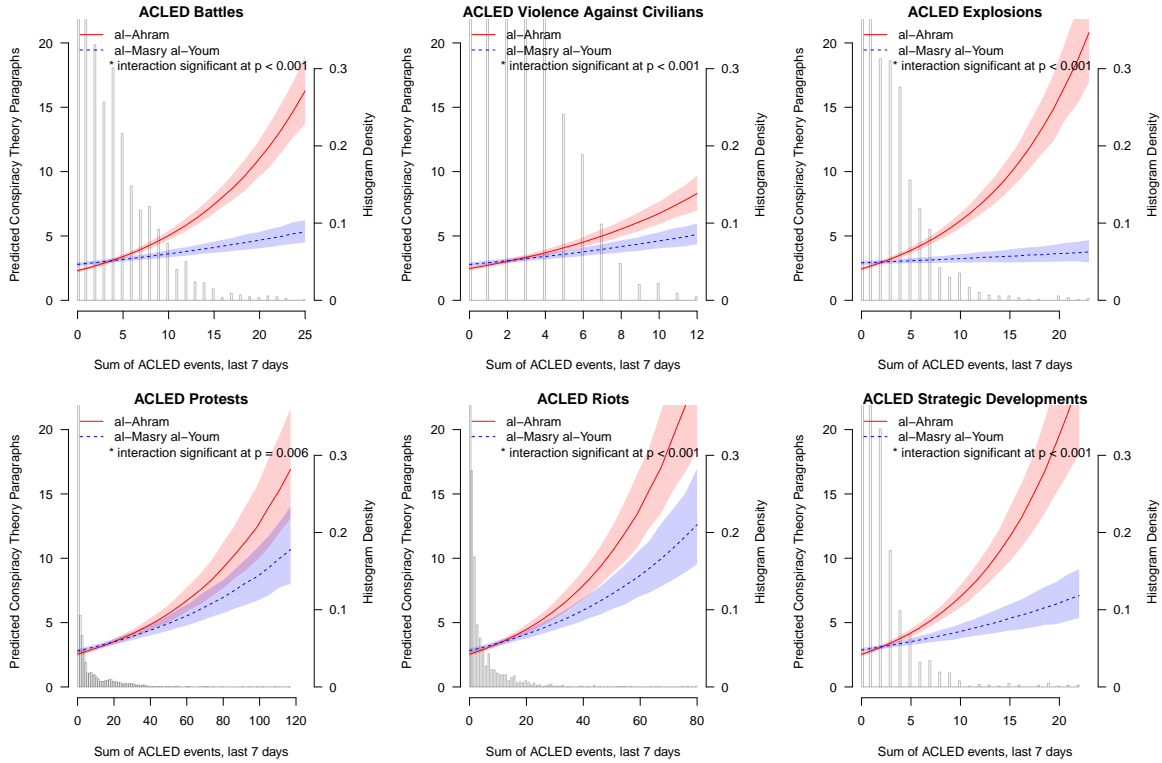

Figure 5: *Main results robust different ACLED event types. The difference between Al-Ahram and Al-Masry Al-Youm is smaller for protests, but still statistically signficant.*

F.7 Logged ACLED Events

There is a wide variation in the count of ACLED events over the nearly twenty year period under examination. One concern is that skewness in the counts might be driving our result. To address this concern Figure 6 shows that our main result holds using a natural log $+1$ transformation of the ACLED event data.
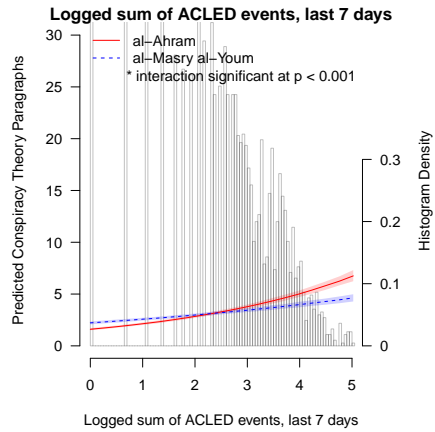
17

Figure 6: *Main results robust to logging ACLED counts*

F.8 Alternative Measure: ACLED death count

The ACLED data reports the total number of casualties for each event recorded in the dataset. It could be the case that government perception of threat differs in response to the number of casualties not the events themselves. Figure 7 shows that our main results hold if we use the ACLED data on casualties as an alternate measure of threat.
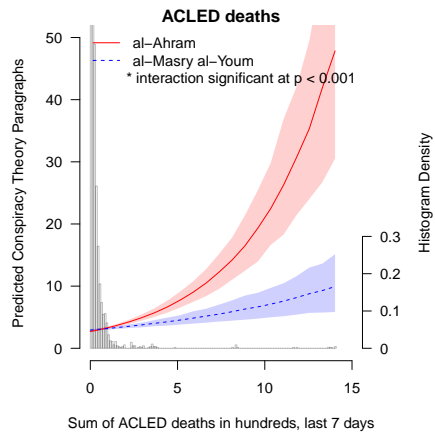

Figure 7: *Main results robust to using ACLED death counts*

F.9 ACLED crisis measure, 75th and 90th percentile

We consider the possibility that government perception of threat is perceived bluntly, as either low- or high-threat. Figure 8 shows that our main result is robust to an alternative measure of the ACLED event counts variable where we create a dummy variable to indicate if ACLED events are in the top 75th or top 90th percentiles.
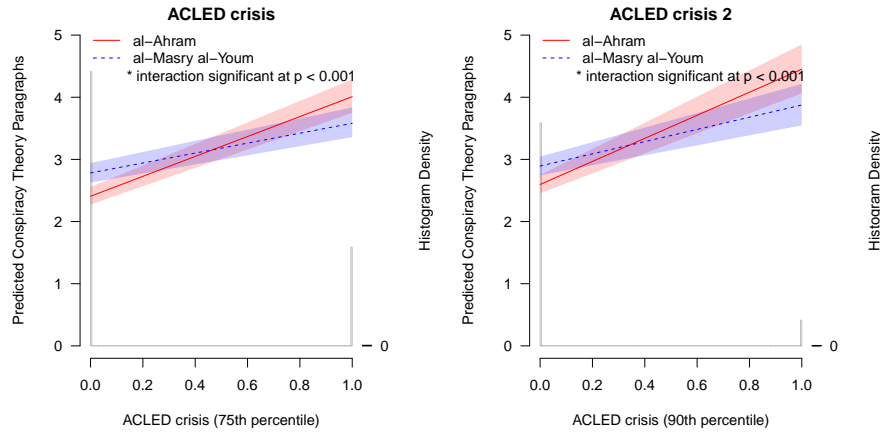
Figure 8: *Main results robust to using ACLED "crisis" measure. The differences in slopes between Al-Ahram and Al-Masry Al-Youm are smaller using these blunt measure, but they are still statistically signficant.*

F.10 Alternative Measure: START data

We might be concerned that because the ACLED data relies on public reporting that it systematically undercounts or overcounts certain kinds of events. To address this concern we turn to the Global Terrorism Database, maintained by the START program at the University of Maryland (LaFree and Dugan, 2007). This provides an alternative measure of threat, albeit for a narrow category of events. Figure 10 shows that our main result holds using either the count of terrorist attacks or the casualty data recorded in the GTD.
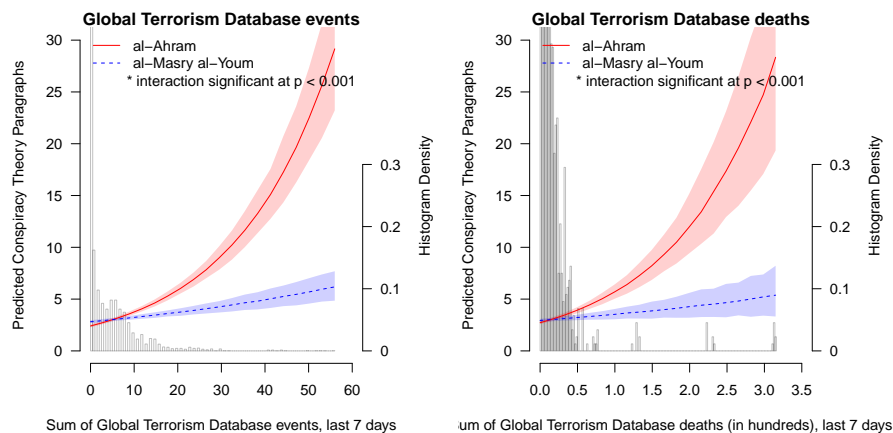

Figure 9: *Main results robust to using START's Global Terrorism Dataset count data*

F.11 Alternative Measure: Clarke Anti-Regime Protest data, January 2012-June 2013

Clarke (2021) shows that ACLED undercounts peaceful, localized, and rural protest events in Egypt between 2012-2013. Clarke develops an improved data set of protest activity in Egypt between January 2012 and June 2013. He constructs this data set by coding articles from *Al-Masry Al-Youm* by hand, with a team of research assistants. The data are thus of very high quality, but limited to protests, not other threatening events, and limited in temporal coverage. To compare whether our results might change if we used Clarke's measure of protest as our proxy for threat, we fit a model substituting the sum of ongoing anti-regime protests in hist data set for the ACLED event counts (which are correlated at 0.6). To make the results comparable, we re-estimate our main model with ACLED event counts using data for only the time in 2012-2013 covered by Clarke's data. This is a period in which our model predicts consistent undersupply by *Al-Ahram*, and the results reflect this. The undersupply is evident with either Clarke's protest data or the ACLED event counts. However, we cannot test whether our more interesting oversupply result holds from July 2013 onward because Clarke's data do not cover this time period.
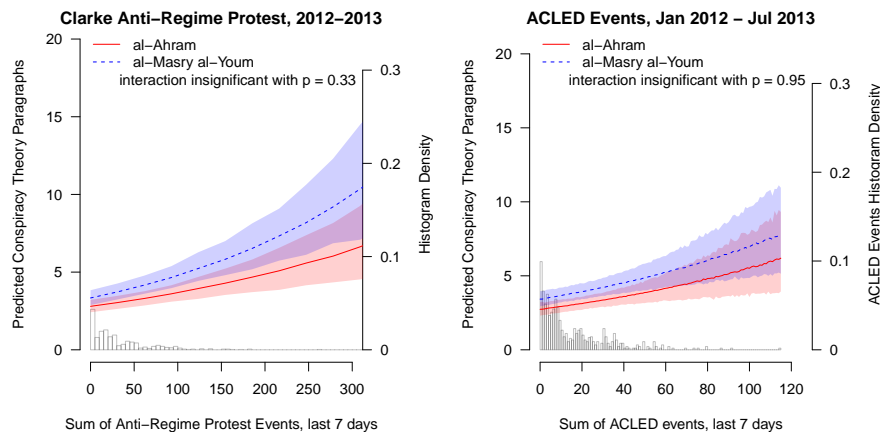

Figure 10: *An improved measure of anti-regime protest from Clarke (2021) produces similar results to the ACLED event counts in the time period for which Clarke's data are available. **Note that the statistically insignificant interaction during this time-period is consistent with our theory and results reported in the paper.***

F.12 Omitting Combination of control variables

Our main regression employs two different kinds of controls to account for differences in the length of the paper across each day of the week. These include individual fixed effects for each day of the week, as well as count variables of the total number of articles and paragraphs for each day. Figure 11 shows that our main result holds if we include only these day of the week controls, or alternatively, the count variables.
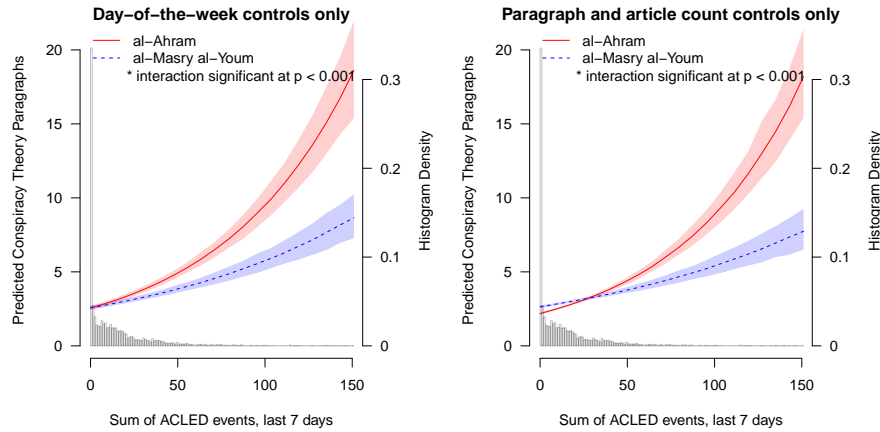
20

Figure 11: *Main results robust to including different temporal and corpora controls*

F.13   Administration fixed effects

We note in the paper that there we observe five different executives in our dataset: Hosni Mubarak, the SCAF, Mohamed Morsi, Adly Mansour, and Egypt's current president Abdel Fatah al-Sisi. We might be concerned that our result is driven by the distinct political objectives of these executives and their administrations, especially given the power of the President in an authoritarian context like Egypt. Figure 12 shows that our main result holds when we include a fixed effect for each of these distinct administrations.
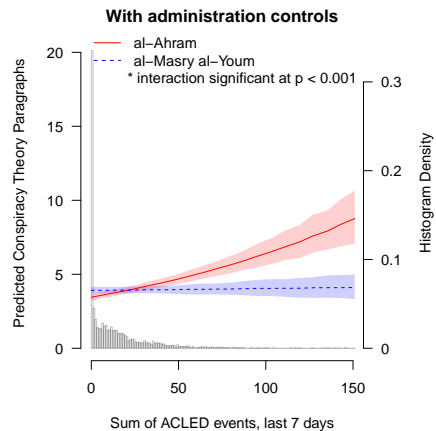

Figure 12: *Main results robust to including controls for each administration in the dataset*

F.14   ACLED Same day and Day lag

Our main specifications in the paper use a seven day moving average of ACLED events. We might be concerned that the government's perception of threat is driven not by events over the entirety of the last week but rather that day or the previous day before publication. Figure 13 shows that our

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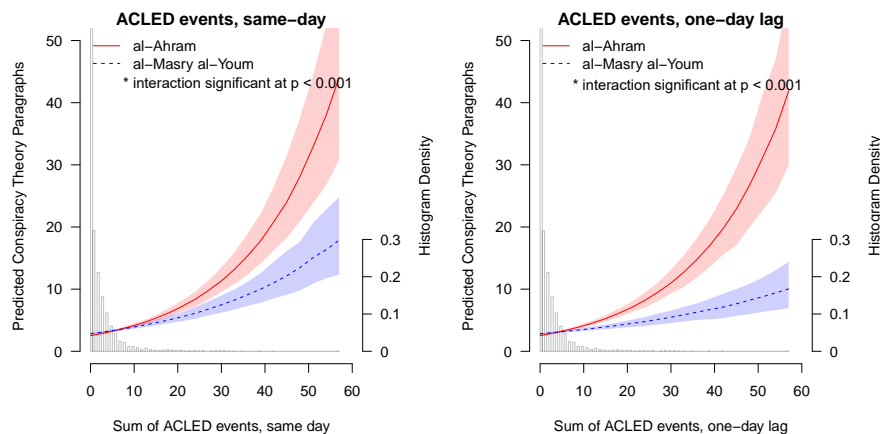main result holds if we use the ACLED event count the same day the newspaper was online or the day before.

Figure 13: *Main results robust to same day or one day lag of ACLED Events*

F.15 Including *Al-Shuruq* and *Al-Gomhuria* Newspapers

Our analysis relies on two prominent papers one independent, *Al-Masry Al-Youm* and one government run, *Al-Ahram*. The literature on Egyptian print media agrees that these are the most important state-owned and independent newspapers during the period from 2005-2018. However, feedback from colleagues raised the reasonable concern that our findings might be due to some ideosyncrasy of either *Al-Ahram* or *Al-Masry Al-Youm*. There are other newspapers in the Egyptian media market, including a few other state-owned newspapers, so we decided to collect additional data and see whether our results were robust to including an additional state-owned and independent newspaper.

This section briefly introduces two additional newspapers, *Al-Shuruq* (independent) and *Al-Gomhuria* (official), and presents our main specification including an additional 800,000 articles scraped and classified using the same procedure outlined in the main text.

Founded in 2009 by Ibrahim al-Moallem, son of a prominent publisher, *Al-Shuruq* is by most measures the 2nd most influential independent daily newspaper in Egypt. Its reputation was forged in the aftermath of the 2011 revolution when its professionalism and relatively liberal politics, especially concerning domestic issues, led to a surge in web-traffic and circulation (Diab, 2011). Despite its independence, like all private newspapers in Egypt *Al-Shuruq* faces many of the same constraints as *Al-Masry Al-Youm* (Peterson, 2011). We thank colleagues at a text-as-data workshop at Cairo University in 2019 for suggesting *Al-Shuruq* as the most comparable newspaper to *Al-Masry Al-Youm* in terms of prominence and independence.

Al-Gomhuria was created in the aftermath of the 1952 coup led by the Free Officers which finally forced the British from power in Egypt. Prior to 1952, most of Egypt's independent newspapers, like *Al-Ahram*, were foreign owned. *Al-Gomhuria* was explicitly created to counterbalance independent print media. *Al-Gomhuria's* first editor-in-chief was future president Anwar Sadat, and the paper rapidly developed a reputation as the mouthpiece of the Free Officers. As a national

paper *Al-Gomhuria*, like *Al-Ahram*, is overseen by the National Press Authority. Unlike *Al-Ahram* whose regional prominence and importance endured even after it was nationalized by the Egyptian government, *Al-Gomhuria* has never enjoyed significant influence outside of Egypt.

Both of these newspapers were difficult to collect. We were unable to collect a comprehensive archive of articles for either from their public websites. We turned instead to the news aggregator masress.com. For *Al-Shuruq*, we were able to collect 1,194,820 articles between 1/23/2009 and 3/28/2021 (the founding to the date of our collection). The coverage is fairly comprehensive. We are able to collect articles from 95.7 percent of the potential 4,448 days on which the newspaper could have published articles. The 188 days from which we do not get articles are almost all after 2018, so they do not affect our analysis.

We were able to collect 87,651 articles from *Al-Gomhuria* between 11/18/2010 and 6/23/2019. This is more limited coverage, and makes our conclusions about this newspaper less certain. Only 35.6 percent of the possible dates have news articles in our data set, and we are not able to entirely tell whether this is due to sparse publishing, or sparse collecting by the aggregation site. We suspect the latter because there are whole months for which we obtain no articles. However, we expect that the inclusion of articles from *Al-Gomhuria* is unrelated to article content, so we do not think this incomplete coverage biases our findings.

We apply the same classification approach to the articles from these newspapers as in our earlier analysis and cobine the new data with the old to refit our key analysis models.

Figure 16 shows that our main result is robust to including classified articles from the two additional newspapers: *Al-Shuruq* and *Al-Gomhuria*. In combination, the state-owned newspapers supply more conspiricist paragraphs as the count of threatening events increases.
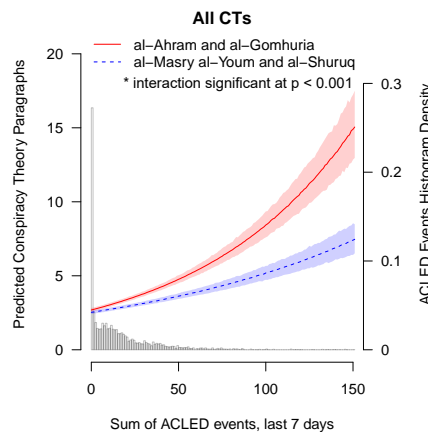

Figure 14: *Main results robust to adding additional newspapers: Al-Shuruq (independent) and Al-Gomhuria (official)*

F.16   Continuous Measure of Democracy: V-Dem Polyarchy Scale

Our analysis treats the regime type of the Egyptian government categorically, but we also consider whether the results remain substantively similar when we measure regime type using a continuous

measure of democracy. We use the V-Dem "Polyarchy" measure, which has limited variation in Egypt, but shows a noticeable uptick in at the time of Egypt's 2011-2012 political opening, and a return to harsher authoritarianism than before in 2014.
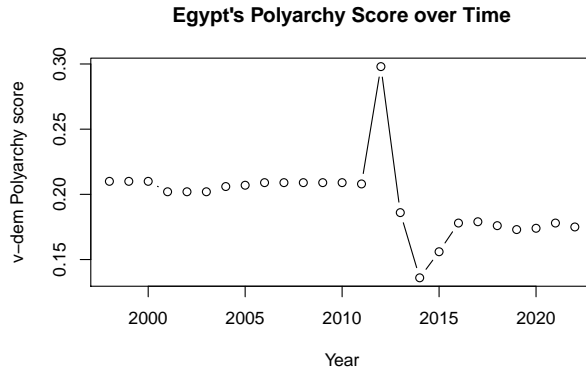

Figure 15: *The V-Dem project's Polyarchy measure of democracy for Egypt from 1998 to 2020.*

We estimate how this continuous measure of democracy interacts with the count of ACLED events and each newspaper in three ways. First, we fit a three-way interaction between Polarchy, ACLED events, and the indicator for al-Ahram using our generalized linear model. Second, we fit two generalized linear models, one for each newspaper, with a two-way interaction term between Polarchy and ACLED events, which is approximately equivalent. Third, we fit the same two models with a linear probability model for simplicity. We present the results of this latter model because visualizing the two-way interaction in a linear model is much easier than the three-way interaction in a nonlinear. The results of each approach are substantively similar and align with our results in the paper.
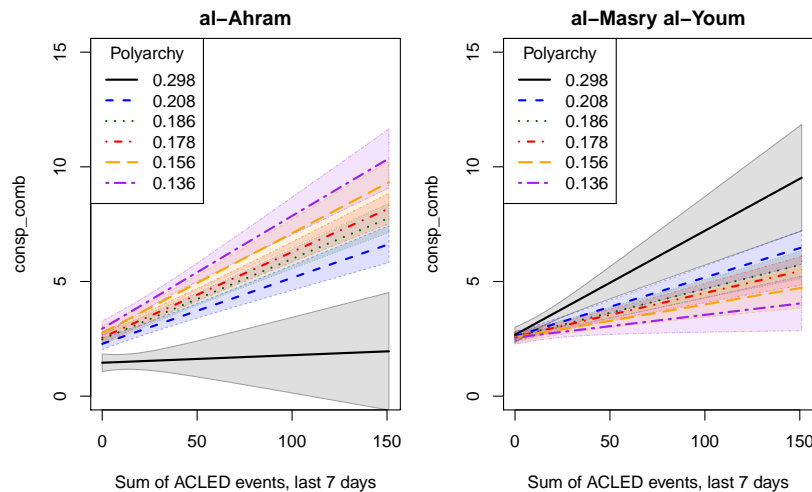

Figure 16: *The V-Dem project's Polyarchy measure of democracy for Egypt from 1998 to 2020.*

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We find that with the continuous measure of democracy, al-Ahram is less responsive to ACLED events when Egypt scores higher on democracy. By contrast, al-Masry al-Youm is most responsive to ACLED events when the democracy score is highest. This further supports our finding that the government newspaper undersupplies conspiracism in response to events during Egypt's period of relative democracy.

References

Abdulla, Rasha. 2014. Egypt's Media in the Midst of Revolution. Technical report Carnegie Endowment for International Peace Washington DC: .

Amin, Hussein. 2002. "Freedom as a Value in Arab Media: Perceptions and Attitudes Among Journalists." *Political Communication* 19(2):125–135.
URL: *http://www.tandfonline.com/doi/abs/10.1080/10584600252907407*

Armbrust, Walter. 2019. *Martyrs and Tricksters: An Ethnography of the Egyptian Revolution*. Princeton University Press.

Badr, Hanan. 2021. Egypt: A Divided and Restricted Media Landscape after the Transformation. In *Arab Media Systems*. Ebsco open editions ed. Berlin: .

Black, Jeffrey. 2008. "Egypt's press: More free, still fettered." *Arab Media & Society* 4:1–13.

Bueno De Mesquita, Bruce and Alastair Smith. 2023. "Institutional Change as a Response to Unrealized Threats: An Empirical Analysis." *Journal of Conflict Resolution* 67:1032–1062.

Clarke, Killian. 2021. "Which Protests Count? Coverage Bias in Middle East Event Datasets." *Mediterranean Politics* pp. 1–27.

Cooper, Kenneth J. 2008. "Politics and priorities: Inside the Egyptian press." *Arab Media & Society* (06).

Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, Nazifa Alizada, David Altman, Michael Bernhard, Agnes Cornell, M. Steven Fish, Lisa Gastaldi, Haakon Gjerløw, Adam Glynn, Allen Hicken, Garry Hindle, Nina Ilchenko, Joshua Krusell, Anna L uhrmann, Seraphine F. Maerz, Kyle L. Marquardt, Kelly McMann, Valeriya Mechkova, Juraj Medzihorsky, Pamela Paxton, Daniel Pemstein, Josefine Pernes, Johannes von Römer, Brigitte Seim, Rachel Sigman, Svend-Erik Skaaning, Jeffrey Staton, Aksel Sundström, Ei tan Tzelgov, Yi ting Wang, Tore Wig, Steven Wilson and Daniel Ziblatt. 2021. "V-Dem Country-Year/Country-Date Dataset v11.".
URL: *https://www.v-dem.net/en/data/data-version-11/*

Diab, Osama. 2011. "New Egypt, new media.".
URL: *https://www.theguardian.com/commentisfree/2011/mar/10/egypt-media-newspapers-mubarak-propaganda*

El-Ghobashy, Mona. 2021. *Bread and Freedom: Egypt's Revolutionary Situation*. Stanford University Press.

Elmasry, Mohamad Hamas. 2012*a*. "Journalism with Restraint: A Comparative Content Analysis of Independent, Government, and Opposition Newspapers in pre-Revolution Egypt." *Journal of Middle East Media* 8(1).

Elmasry, Mohamad Hamas. 2012*b*. "Producing News in Mubarak's Egypt: An analysis of Egyptian newspaper production during the late Hosni Mubarak era." *Journal of Arab & Muslim Media Research* 4(2):121–144.

Hammou, Sabah. 2012. *Youmiyat Suhufiya fi al-Ahram*. Self-Published.

Harb, Zahera. 2019. "Challenges facing Arab journalism, freedom, safety and economic security." *Journalism* 20:110–113.

Kuhn, M, Jed Wing, Stew Weston, Andre Williams, Chris Keefer, Allan Engelhardt, Tony Cooper, Zachary Mayer, B Kenkel, RC Team et al. 2014. "caret: Classification and regression training. R package version 6.0–21." *CRAN: Wien, Austria* .

LaFree, Gary and Laura Dugan. 2007. "Introducing the global terrorism database." *Terrorism and political violence* 19(2):181–204.

Lorentzen, Peter L. 2013. "Regularizing Rioting: Permitting Public Protest in an Authoritarian Regime." *Quarterly Journal of Political Science* 8(2):127–158.

Oliver, J. Eric and Thomas J. Wood. 2014. "Conspiracy theories and the paranoid style(s) of mass opinion." *American Journal of Political Science* 58(4):952–966.

Peterson, Mark Allen. 2011. "Egypt's media ecology in a time of revolution." *Arab Media & Society* 14:1–16.

Pochat, Victor Le, Tom Van Goethem, Samaneh Tajalizadehkhoob, Maciej Korczyński and Wouter Joosen. 2018. "Tranco: A research-oriented top sites ranking hardened against manipulation." *arXiv preprint* 1806.01156:1–15.

Rayman, Noah. 2013. "Is the Egyptian Press Ready for Democracy? Evaluating Newspaper Coverage as an Indicator of Democratization." *Arab Media & Society* (17).

Sakr, Naomi. 2013. *Transformations in Egyptian journalism*. London: I.B. Tauris.