Seeing is Disbelieving: The Depths and Limits of Factual Misinformation in War

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Abstract:
Misinformation, lies, and fake news are pervasive in war. But when are they actually believed by the people who live in warzones, and when are they not? This question is key, as their spread can spark greater violence and spoil efforts to make peace. In this study, we advance a new argument about lies in war. Building on existing research which links people's factual beliefs in conflict to their psychological and informational biases, we argue that they also hinge on their exposure and proximity to relevant events. While war is rife with lies, those close to the action have the means and the motives to see through them. We test this argument with a unique combination of survey and event data from the Coalition air campaign against the Islamic State of Iraq and the Levant (ISIL) in contemporary Iraq, finding support for our theory. Ultimately, the results help enhance our understanding of the dynamics of modern armed conflict and the reach of misinformation in contemporary world politics.

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11, 978

"The truth is not half so important as what people believe to be true" – Napoleon

"You can't cover up the sun with a finger" – Pashtun saying

There are no Russian troops fighting in Ukraine. The repeated chemical weapons attacks in Syria since 2011 have been perpetrated by the West. The American drone campaign in Pakistan is killing all or almost all civilians. These are all key pieces of disinformation[1] in conflict settings around the world. But when are they actually *believed* by the people who live there, and when are they not? This question is important: if embraced, such lies and falsehoods can generate or escalate violence, conceal atrocities, and block efforts at lasting peace and reconciliation. In other words, the proliferation of false beliefs can initiate, exacerbate, and extend violent disputes. In Myanmar, for example, pervasive rumors about provocation and aggression by the Rohingya minority have fueled a ruthless crackdown against the community since 2017, sending more than 600,000 people fleeing into neighboring Bangladesh.[2]

While there is a limited body of empirical research on who believes lies and misinformation in conflict zones, there are some strong theoretical reasons to *expect* that civilians will accept them. Research from psychology shows that people often accept information that fits their prior identities and worldviews (Taber and Lodge 2006). Meanwhile, literature from communications shows how different news outlets often vary widely in their factual pictures of the world, fueling factual biases among their audiences (Feldman et al 2011). Given the powerful group identities and media biases in war, this suggests that civilians are likely highly vulnerable to misinformation in conflict zones.

[1] We follow the trend in the literature of distinguishing between disinformation and misinformation (Scheufele and Krause 2019). Misinformation is false information passed along without the intent to deceive the recipients, while disinformation is false information intended to deceive the target audience. Our argument applies to both of these, along with other related terms like lies, rumors, and fake news, as it is less focused on the source (or intentionality) of the falsehood than on whether it is believed.

[2] See, e.g., Annie Gowen and Max Bearak, "Fake News on Facebook Fans the Flames of Hate against the Rohingya in Burma." *Washington Post*, December 8, 2017.

Moreover, this picture is reinforced by the few existing studies on the topic, which highlight how bias, fear, and messaging distort people's understanding of the conflict and make them susceptible to false beliefs (e.g., Greenhill and Oppenheim 2017, Silverman 2019). In other words, the picture gleaned from existing research is that false information essentially runs amok in conflict settings, unchecked by the reality of what is happening on the ground.

In this paper, however, we argue that this emerging view is missing an important element of the story. While people in war zones do often believe lies about the disputes, they do not always cling to such risky misperceptions. In particular, we maintain that the accuracy of people's beliefs in war is based on their *proximity* and *exposure* to the relevant events. The core logic is as follows. On the one hand, war is rife with lies, many of which are widely accepted as populations rely on their motivated biases and partisan information sources to form beliefs about what is taking place. On the other hand, those closest to the "action" have both the most need to thoroughly understand what is taking place and the greatest access to first-hand information about it. This combination of a powerful "accuracy motive" (Kunda 1990) as well as high-quality local information makes them far more likely to understand events on the ground accurately. For these reasons, when it comes to misinformation and lies in war, *seeing is the key to disbelieving*.

In order to test these claims, we examine a unique national survey of Iraq fielded in 2016 amid the U.S.-led Coalition air campaign against the Islamic State of Iraq and the Levant (ISIL) in the country. Importantly, the survey contains items on Iraqis' factual beliefs about the campaign and items about their wartime experiences. Moreover, we pair the survey with geo-located data on Coalition airstrikes from the NGO *Airwars* in order to exploit an observed measure of proximity to the strikes. Overall, the results support our contentions: both self-reported experience in targeted areas and observed proximity to Coalition airstrikes significantly *diminish* factual misperceptions

about the nature of the campaign, including beliefs about its targeting and its effects. These results survive a rich series of tests designed to check their robustness and rule out alternate explanations. Ultimately, the paper thus shows that, as in peace, misinformation, propaganda, and "fake news" are pervasive in conflict, but are sharply limited by exposure and proximity to what is happening. This has key implications for a number of areas in conflict studies – including our understanding of civilian populations, conflict exposure, and rationalist explanations for war – as well as broader debates about the reach of truth and lies in contemporary world politics.

Literature:

Who believes lies and falsehoods in conflict zones? While there is limited empirical work on this question directly, existing literature from psychology and communications provides strong reasons to *expect* disinformation campaigns to be effective in war. To begin with, a vast literature in social and political psychology suggests that people frequently engage in "motivated reasoning," or thinking aimed at getting the answers they want and not those that are most correct or defensible in any objective sense (e.g., Kunda 1990). Indeed, studies show that when individuals hold strong "directional biases" on an issue – that is, they want to believe something about it – they not only reach self-serving conclusions, but actually access and process information differently in doing so. These dynamics are clear in a variety of contexts, from legal disputes (Braman and Nelson 2007) to political campaigns (Taber and Lodge 2006) to economic markets (Benabou 2013).

In many ways, war is a fertile ground for these biases too. War is a violent contest between different "sides" claiming to represent different groups, and often both stems from and unleashes powerful grievances between them (e.g., Balcells 2010). As in other political contexts, these group attachments and grievances shape how people react to new events. Research on wartime attitudes,

for example, shows that civilians punish out-group combatants much more than those representing the in-group for their abuses and transgressions (Lyall, Blair, and Imai 2013). War is also rife with fear and threat perceptions, which may amplify these tendencies to engage in "low-road thinking" about what is going on in them (Greenhill and Oppenheim 2017).

In addition, research from communications exacerbates this picture. Indeed, we know that different information sources present different factual pictures of the world, often leading to false and *biased* beliefs about issues among their audiences. Different news sources diverge factually in two key ways: (1) *selection bias*, or which events they report, and (2) *description bias*, or how they report them (McCarthy, McPhail, and Smith 1996). Empirical analyses confirm that there is wide variation in which political events attract media coverage and how they are framed across sources, such as Fox, CNN, and MSNBC in the U.S. (Feldman et al. 2011).

Such partisan media bias should be at least as severe in war as it is elsewhere. After most incidents in war, there is an inevitable clash between the warring parties to control their portrayal (Tugwell 1986). As noted by one scholar, "each violent event creates an 'opportunity space' into which both insurgent and state seek to inject their narrative" (Stevens 2013: 93). In other words, combatants and their backers have powerful incentives to manipulate the facts about the fighting. They also have the tools to do so effectively, given that much of the media in war zones is either owned by – or at least loyal to – one side or the other within the dispute (Kalb and Saivetz 2007). In short, there are strong means and motives for biased information in war, as seen in the long and sordid history of wartime propaganda, censorship, and lies from WWI and WWII to contemporary Syria and Ukraine (e.g., Carruthers 2000, Stuart and Zelizer 2004, Knightley 2004).

Together, these insights from psychology and communications suggest a bleak picture of people's beliefs in war, one in which lies and misinformation run wild and reality plays little role.

Moreover, this picture is largely supported by the few empirical studies on the topic. In one effort, Silverman (2019) argues that motivated biases strongly shape factual beliefs about conflict events, finding supportive evidence in a national survey experiment in Pakistan. In another, Greenhill and Oppenheim (2017) contend that rumor adoption in fragile contexts is driven by prior worldviews, threat perceptions, and exposure to the message, using two surveys in Southeast Asia for support. Overall, these studies highlight biases – both bottom-up as well as top-down – as driving people's factual beliefs in war. The key implication is that people will accept lies in war if they have strong ideological appeal or media support, with little to no room for the real world and actual fighting to act as a constraint. Moreover, they also suggest that those most facing risks to their own safety and mortality may even be *more* vulnerable to such self-delusion.

Theory:

We argue that this picture is missing an important part of the story. While lies are pervasive in war, they can be effectively punctured by proximity and exposure to the relevant events. Below, we walk through the logic underlying this theoretical argument, laying out both the *motivational* and *informational* reasons why it occurs.

The Role of Motivation:

While motivated bias is a strong force, people do not always and unconditionally maintain self-serving beliefs. Indeed, scholars applying ideas from motivational psychology throughout the broader social sciences have often forgotten that just because reasoning is "motivated," that does not make it biased – rather, that depends on *what an individual's motivation is.* Specifically, there is an essential distinction made in social psychology between two types of motives: (1) "directional

motives," or thinking toward a particular conclusion, and (2) "accuracy motives," or pursuing the right answer regardless of how it makes you feel (Kunda 1990). The logic behind the latter is that it hinges on the situation: when the stakes are high enough, people will process information more thoroughly and carefully in the pursuit of accuracy rather than relying on inaccurate conclusions. In practice, psychologists have induced such "accuracy motives" in people by raising the rewards or stated importance of tasks (McAllister et al. 1979) or by making people publicly explain and defend their answers (Tetlock 1983). In such cases, individuals tend to take longer, rely on fewer cognitive shortcuts and heuristics such as out-group stereotypes, and arrive at more accurate and unbiased conclusions about the issue or situation at hand (Nienhaus, Manstead, and Spears 2001, Cronley, Mantel, and Kardes 2010, Druckman 2012).

While these studies use modest economic rewards or social pressures – often in the lab – in order to motivate participants, we maintain that there is no more powerful "accuracy motive" in the real world than physical survival. When citizens think that they or their families could be killed – when their lives are "on the line" – they will expend much more effort than they would otherwise to identify and interpret useful information about the threat, adjusting (or abandoning) their past attitudes and attachments as needed when they learn something that can prove helpful. While this process may be cognitively and emotionally costly, the effort and discomfort is vastly outweighed by the motive to survive. Thus, we argue that the idea of an accuracy motive applies outside the lab in a powerful and oft overlooked way to people who are proximate to high-stakes stimuli, such as violent events.[3]

Anecdotal evidence of these dynamics in war abounds. Consider the ongoing U.S. drone

[3] In this sense, the argument helps add to our knowledge of a small but growing set of "boundary conditions" which define the limits of directionally motivated reasoning on the spread of false and unsubstantiated information, including the role of generalized social trust (Miller Saunders and Farhart 2016) and perceptions of the perpetrator's capabilities (Silverman and Berger 2017).

program in Pakistan, which has actually been very precise and discriminate in nature despite the pervasive claims to the contrary (Plaw and Fricker 2012). While there is a widespread perception throughout "Pakistan proper" that the drone attacks are indiscriminate in nature (Silverman 2019), those living in the tribal areas – where they overwhelmingly occur – largely know better. Indeed, one Pakistani journalist writing on the topic notes that the targets and results of the campaign are well understood in these areas because "for those who live the closest to the strike zones, drones are not just some abstract talking point. *Just getting through the day has become a high-stakes game*" (emphasis added).[4] In other words, the stakes of the situation are very different for people who have to make regular choices which could put them or their loved ones at risk. In this sense, civilians who actually live in or near the line of fire have a strong accuracy motive to understand what is going on around them; they have to "get it right" in order to survive, regardless of how it makes them feel about their preexisting identities and worldviews.

The Role of Information:

As with motivation, the impact of informational biases on factual beliefs in war also varies with personal proximity and exposure. While people are often deeply shaped by biased information in general – especially if it is endorsed by a trusted source – those closer to the events in question tend to know better. Civilians living close to a given type of conflict event have an advantage in learning what happened because they receive higher-quality first- and second-hand information. More proximate civilians can rely on their own lived experiences as well as the accounts of their families, friends, neighbors, and other peers who have often actually witnessed the incidents or their aftermath (or talked to someone who did). Such people will generally resist broad elite- and

[4] Naheed Mustafa, "Drone Lands Dispatch: Letter from Pakistan," *Foreign Affairs*, December 9, 2013.

media-driven narratives that clash with their community's accumulated experience and wisdom. This idea builds on recent attention to the role of "citizen witnessing" in politics (Allan 2013) and the ability of more bottom-up information to help people challenge elite cues instead of accepting them blindly (Kertzer and Zeitzoff 2017).

Once again, anecdotal evidence of these dynamics in violent conflicts is often quite clear. For example, Davenport and Ball (2002) compare three different sources on Guatemalan violence from 1977-95: news coverage, human rights reporting, and eyewitness testimony. While they find that all three have value, they conclude that civilians are the best informed on the events in their communities. Specifically, they explain that civilians "are useful for identifying what happened and who did it *within particular locales*" (emphasis added) (447). Similarly, in late-World War II Germany, it was German civilian communities exposed to Allied bombing raids that first became aware of key facts on the ground – such as Allied air superiority – that had been hidden from them by the Nazis and their propaganda machine. As noted in the U.S. Strategic Bombing Survey, a vast U.S. government study of public opinion in wartime Germany and Japan: "bombing had much to do with the final discrediting of propaganda and of the Nazis because it brought home to millions the tangible proof of almost unopposed Allied air power, indisputable proof completely at variance with the familiar Nazi propaganda" (1947: 1). In this way, the accumulation of more direct news and information among proximate civilians can help them learn what is truly going on in war, even in the face of lies, propaganda, or misinformation to the contrary.

In sum, we argue that those closer to the fighting have both stronger means and motives to form accurate beliefs and see through lies in war. In so doing, our theory joins a growing literature on the effects of exposure to war, conflict, and violence (Fahmy and Johnson 2007, Bateson 2012, Matanock and Garbiras-Diaz 2018). Studies have linked conflict exposure to effects such as pro-

social behavior within communities (Gilligan, Pasquale, and Samii 2014) and greater support for peace (Tellez 2018), as well as a hardening of attitudes toward out-groups (Canetti, Rapaport, and Wayne 2013) and desire for separation from them (Beber, Roessler, and Scacco 2014). We add to this literature by focusing on the *accuracy* of civilian beliefs, and the extent to which people *update* them in war. Our study thus complements research showing that exposure can be a powerful force that reshapes wartime attitudes and networks, while suggesting that one of its key effects is to push people to *learn* and gain a clearer picture of what is going on around them.

The Case of Coalition Airstrikes in Contemporary Iraq:

We explore these dynamics in the context of the intervention against the ISIL insurgency in Iraq by the U.S.-led Coalition from 2014-16. In this section, we first provide a brief overview of this empirical context, and then derive the specific hypotheses that come from the literature as well as our argument as applied in this case.

In August of 2014, the U.S. began carrying out airstrikes against ISIL in order to impede its impressive territorial advance that summer and protect besieged communities in northern Iraq. Soon, leaders in Washington were assembling a growing Coalition of Western and Arab states to take offensive military action against the group. This was the start of a substantial multi-national aerial campaign against the group in Iraq: as of October 31st, 2016 (around the time of our survey), the U.S.-led Coalition had conducted 10,291 airstrikes against ISIL targets in Iraq, with 6,979 by the U.S. and 3,312 by its allies (Airwars 2017). In addition to conducting thousands of airstrikes against ISIL, the Coalition has also collected a vast amount of aerial intelligence and surveillance data, trained many thousands of Iraqi soldiers, and supported Iraqi military operations against the group both strategically and tactically, with U.S. special operations forces embedded with some

Iraqi units. This support from the Coalition has been vitally important in turning the tide of battle in Iraq against ISIL.

Critically, while there were a number of mistakes, overall the Coalition air campaign was highly discriminate in nature during the period under analysis. Indeed, it is essential to clarify that we are focused only on the Obama-era campaign through the fall of 2016, as the survey used was fielded in September and October 2016 and we wish to understand beliefs about the campaign through that point in time. Thus, while there was a vast increase in the degree of collateral damage in 2017 as President Trump relaxed Obama-era targeting rules,[5] the timing of the survey allows us to avoid any complications that would arise in characterizing the selectivity of the airstrikes now. On the contrary, the Obama-era campaign was criticized by some in U.S. and Iraqi military circles at the time for its high level of restraint and strict collateral damage rules. According to disgruntled pilots, well-known ISIL structures were left standing due to fear of harming human shields, drones were forced to hover over targets for hours until they had "clean shots," and roughly three-quarters of sorties saw no weapons released at all due to collateral damage concerns.[6] In brief, some wished that the U.S. were *less* committed to such exceptional caution and precision.

This picture is corroborated by the available quantitative evidence. Data from *Airwars* – a British NGO which compiles the most comprehensive and transparent database of the airstrikes – shows that even when including contested incidents, the 10,291 strikes to this point had killed an estimated 1,396 Iraqi civilians. This means that when the survey was fielded there was a ratio of roughly one civilian casualty for every 7.4 Coalition airstrikes. Given that the campaign has killed tens of thousands of ISIL fighters in Iraq and Syria, this implies a very high combatant to civilian

[5] See, e.g., Samuel Oakford, "Coalition Civilian Casualty Claims Double Under Donald Trump." *Airwars.* July 17, 2017. https://airwars.org/news/trumps-air-war-kills-12-civilians-per-day/
[6] See Eric Schmitt, "U.S. Caution in Strikes Gives ISIS an Edge, Many Iraqis Say." *New York Times*. May 26, 2015.

casualty ratio. For the sake of comparison, consider that in the U.S. drone campaign in Pakistan – which is recognized by scholars as highly discriminate, despite its controversial nature (Taj 2010, Plaw and Fricker 2012, Fair, Kaltenthaler and Miller 2016, Silverman 2019) – there has been about one civilian killed for every 1.6 strikes (BIJ 2017). Meanwhile, there has been one civilian death for every 1.4 U.S. drone strikes in Yemen and for every 2.5 U.S. airstrikes in Somalia (BIJ 2017). In other words, other "targeted killing" programs have killed civilians far more frequently than the campaign in question. In sum, a close look shows that the pre-Trump Coalition airstrikes against ISIL in Iraq were not only effective, but also quite targeted and discriminate in nature.[7]

Yet, unsurprisingly given our discussion of information as a "weapon" in war, there have been considerable efforts to spread rumors, propaganda, and disinformation about the campaign. To begin with, ISIL itself has been one of the key sources of such propaganda. ISIL's narrative about the campaign has focused largely on portraying it as (1) ineffective, with the group's forces continuing to advance despite aerial attack, and (2) indiscriminate, with the Coalition targeting or at least harming mostly innocent civilians. This information has been disseminated both virtually through ISIL's Amaq news agency, Dabiq online magazine, and affiliated Twitter accounts, and in more traditional forms in its own territory in Iraq (and Syria) through the group's radio station, dedicated propaganda centers, and other brick-and-mortar tactics.[8] To pick just one example, the 4th issue of Dabiq magazine – released on October 11, 2014 – was entitled "The Failed Crusade"

[7] Reliable estimates of the number of ISIS militants killed during the campaign are scarce, as militant casualties are not tracked by monitoring organizations like Airwars. Yet top Coalition officials estimated that they had eliminated 45,000 ISIS militants in Iraq and Syria by August 2016, shortly before the survey. Even if we conservatively assume that just one-third of these were in Iraq (with two-thirds in Syria), and that this figure is twice as high as it should be, it would still imply a very high militant-to-civilian casualty ratio of over 5:1 using the Airwars civilian casualty data. See Terry Moon Cronk, "OIR Campaign Reached Turning Point in Ramadi, Commander Says." *DOD News*, August 10, 2016. https://www.defense.gov/Explore/News/Article/Article/910747/oir-campaign-reached-turning-point-in-ramadi-commander-says/

[8] See, e.g., "Inside the Propaganda War for Mosul." *Journal of Middle Eastern Politics and Policy*. February 5, 2017. http://jmepp.hkspublications.org/2017/02/05/mosul-propaganda-war/

and dedicated largely to the "Crusader airstrikes" and their ineffective and indiscriminate results, emphasizing their inability to prevent ISIL advances and their slaughter of innocent Muslims in both Iraq and Syria (ISIL 2014). Claims like these are amplified via ISIL's legions of affiliated Twitter accounts and can even seep into traditional media within Iraq and beyond.

Another key source of propaganda about the Coalition campaign is the *Hashd al-Sha'abi* or Popular Mobilization Forces (PMF). The PMF is a coalition of mostly-Shi'a Arab militias in Iraq that coalesced in 2014 to fight ISIL with Iranian support (although it has now been nominally incorporated into the Iraqi government). While the PMF has played a key role in the fight against ISIL in Iraq, it has always existed in an uneasy alliance with the Coalition due to concerns about its abuse of Sunni Arab civilians and its largely anti-American orientation and close ties to Iran. For these reasons, despite its official cooperation with the Coalition, the PMF has emerged as a key source of disinformation about the campaign. This disinformation centers around several core themes. First, it stresses how the Coalition's airstrikes are weak and ineffectual, positioning itself as the force liberating Iraqi society from ISIL (Garrison 2017). Second, it questions the Coalition's goals and has increasingly suggested it actively helps ISIL on the battlefield, even posting photos of Western helicopters which it alleged were transporting ISIL leaders from site to site.[9] Third, it has painted the Coalition as actively targeting Shi'a militias themselves, seizing on rare "friendly fire" incidents from erroneous airstrikes (and inventing others) to push this theme (Garrison 2017). Like ISIL, the PMF uses a range of methods to spread this disinformation, most notably its official *al-hashed.net* site and *Team Media War* Twitter account (which had one million followers by the end of 2016). Moreover, its voice is often amplified by Iranian state news and other pro-Iranian outlets within Iraq.

[9] Ahmad Majidyar, "Iran-Supported Militia Groups Intensify Anti-U.S. Propaganda." *Middle East Institute.* May 16, 2017. http://www.mei.edu/content/article/io/iran-supported-militia-groups-intensify-anti-us-propaganda-iraq

Overall, there is thus a wealth of propaganda and disinformation from various sources in Iraq about the Coalition's air campaign against ISIL, suggesting that it is both (1) ineffective and even counterproductive against the organization, and (2) inaccurate and indiscriminate in nature. While these claims often originate from combatants in the conflict such as ISIL and the PMF (as well as Iran and even Russia), they often influence and infiltrate more traditional forms of media coverage in the country. For instance, analysts have noted that infographics made by combatants such as ISIL or the PMF showing reports from the battlefield "can prove particularly effective in shaping traditional media coverage: because accurate casualty figures are notoriously difficult to obtain, the government faces continual pressure to refute [such] claims."[10] This is important for our analysis because traditional media outlets such as *Al-Iraqiyya* state TV continue to be among the most important in the Iraqi media landscape (Amos 2010). In sum, then, the Iraqi population has been exposed to a considerable amount of propaganda, disinformation, and fake news about the dynamics and consequences of the Coalition actions in the dispute.

Empirical Hypotheses:

The critical question then becomes: who believes this disinformation, and who does not? Existing literature on false beliefs in war (and beyond) would highlight the role of *bias* in at least two ways. First, we should see variation based on civilians' orientations toward the combatants – especially the perpetrator of the attacks. This is the idea of motivated reasoning discussed earlier: Iraqis who hold more unfavorable views of the Coalition will be more likely to embrace negative stories of its battlefield performance or behavior, as these align more with their prior worldviews. Second, we should see variation based on people's "information diets" and exposure to divergent

[10] See f.n. 8.

information streams about the fighting. In particular, people who rely on sources which are more critical of the Coalition – and thus more likely to emphasize its abuses and its setbacks instead of its restraint and successes – should be more likely to believe the (negative) disinformation about the campaign as well.

Yet the main hypotheses we are interested in testing center around the *mitigation of bias.* In particular, the argument suggests that motivational and informational biases should be limited by people's exposure and proximity to the violence in question. Thus, we should see that "local" Iraqis who live under (or near) the airstrikes are *less* likely to believe negative propaganda about them than their "non-local" counterparts. As described in the theory section, this is both because such civilians can actually see the targets and results of the campaign (*informational advantage*) and because they have a powerful incentive to understand what is happening (*accuracy motive*). To illustrate this point, consider the experiences of civilians from Tikrit, a key Iraqi town that was captured by ISIL in June 2014 and liberated in March 2015 prior to the survey. Civilians in Tikrit saw which buildings and neighborhoods were hit by anti-ISIL airstrikes and which were not during the fighting. They also had a key motive to pay attention to this because they needed to know how to stay safe and which areas to avoid in the conflict. Likewise, these civilians were likely to know whether the strikes made ISIL run and hide, change its routine, or even retreat. This information, too, was essential for their survival and decision-making about whether to stay put, flee, or even resist ISIL as the Coalition approached. This yields the following hypothesis:

> ***H1 (Local Accuracy):*** *Iraqis who are more directly exposed to the Coalition airstrikes will form more accurate factual beliefs about them.*

In addition, another empirical implication of the argument is that we should see people's exposure and proximity to the strikes shape the impact of other kinds of factors. In particular, Iraqis

who have more direct exposure to the violence should be less influenced by their prior orientations and information sources in the conflict. Rather, such civilians should not only hold more accurate beliefs, but also be willing to *update* them accurately regardless of their prior views or information diets in the dispute. In other words, the impact of these factors will be diminished or even disappear among more proximate civilians. This leads to a second hypothesis:

> ***H2 (Local Bias Resistance):*** *The factual beliefs of Iraqis who are more directly exposed will be less influenced by their prior orientations or information streams.*

Methods:

In order to test our argument, we use a rich nationally representative survey of Iraq fielded by the Iraqi research firm IIACSS in September and October of 2016. The survey was carried out with multi-stage stratified probability sampling of the adult (18+) population of the country, except for territory under ISIL rule (primarily Mosul). The sample included urban and rural areas across the country; Primary Sampling Units (PSUs) were blocks in the former and villages in the latter. Interviews were conducted face-to-face by a mixed-gender team of experienced Iraqi enumerators, with the women interviewed by women and men interviewed by men. Overall, the survey included 3,500 individuals, with a base sample of 2,500 N and a 1,000-N "booster sample" from Sunni Arab governorates as well as internally displaced persons (IDPs) from ISIL-controlled areas.[11]

The survey included extensive safeguards to maintain the safety of all respondents as well as enumerators. No interviews from areas under ISIL control or active contestation were collected. After the interviews were complete, the data were weighted with information from the 1997 and 2010 Iraqi censuses as well as 2015 projections from the Iraqi Central Organization of Statistics

[11] The "Supporting Information for Review and Online Publication" file includes a map of the distribution of survey responses as well as Coalition and ISIL violence across the country.

(COSIT). To check for falsification, we ran the program "Percentmatch" and found no indications of any suspicious duplication or near-duplication of interviews.[12] Analysis of these data are IRB approved (University of [redacted] IRB # 20171201).[13]

Demographically, the sample is 54.2% male, with roughly half of the individuals under age 35 and over half not reaching secondary school. The communal breakdown is 12.9% Kurd, 39.0% Sunni Arab, and 45.4% Shi'a Arab (the Sunni Arab share is slightly inflated due to the intentional oversample). Overall, the demographics are similar to other leading academic surveys in Iraq such as the Arab Barometer, and to recent Iraqi COSIT demographic projections.[14]

Substantively, the survey covered a wide range of social and political topics, with modules about people's perceptions of the most important challenges facing Iraq, their support for different political leaders and actors in the country, their methods of obtaining news and information, their views of sectarian and ethnic relations , and their attitudes and beliefs about the fighting with ISIL. The survey also gathered a range of demographic information about each interviewee, including their socioeconomic status, their conflict experiences, and their ethnic and sectarian identification. In this sense, the survey offers a rich source of information about Iraqi wartime attitudes, beliefs, and experiences in which to explore our hypotheses.

[12] The resulting Percentmatch plot is included in the Supporting Information file.

[13]Specifically, the survey was initially developed and fielded by [redacted] of the Iraqi polling firm IIACSS in 2016 for use by the U.S. government. Data collection followed ethical best practices for international survey research, and was done with the same standards and respondent protections as other IIACSS projects such as the Arab Barometer and the World Values Survey waves in Iraq. Subsequent to the data's collection, [redacted] asked for permission to use the data for academic research purposes from the U.S. government and that permission was granted. The authors of this study then requested and obtained university IRB approval to analyze the data (which are fully non-identifiable) in 2017 in order to investigate Iraqi beliefs and attitudes about the conflict.

[14] Key demographics of the sample are compared with the second and third waves of the Arab Barometer in Iraq as well as recent Iraqi COSIT projections in the Supporting Information file.

Measurement:

As our dependent variables, we use two questions gauging Iraqis' factual misperceptions about the Coalition campaign. In particular, Iraqis were asked about their level of agreement on a Likert scale with the following claims: (1) *Coalition airstrikes mainly target PMF forces*, and (2) *Coalition airstrikes mainly help ISIL*. The scales for both items ran from "disagree strongly" to "disagree somewhat" to "neither agree nor disagree" to "agree somewhat" to "agree strongly."[15] Overall, an average of 55.6% of respondents agreed to some extent (somewhat or strongly) with these claims, providing substantial variation in our outcomes to be explained.

As alluded to earlier, both of these claims are empirically false. In the first case, the U.S.-led Coalition's anti ISIL airstrikes under President Obama did not "mainly target" the PMF; they targeted ISIL. While the Coalition did on (extremely rare) occasion hit PMF troops, there was no secret U.S. policy of bombing Shi'a militias in the country. In fact, data from the strike-tracking NGO Airwars help corroborate this point, given that they contained just 55 "friendly fire" claims out of more than 10,000 airstrikes at the time of our survey. Setting aside the fact that these were undoubtedly almost all unintentional, and many did not even hit the PMF but other local proxies, claiming that the international anti-ISIL campaign in 2016 "mainly targets" the PMF and not ISIL was thus clearly untrue.[16]

Turning to the second claim, the airstrikes do not "mainly help" ISIL. In fact, they have been deeply damaging to the group, destroying much of its financial and oil resources, severely disrupting its operational activities, eradicating thousands of its fighters, and ultimately helping

[15] The neutral response was not explicitly offered but marked if respondents expressed ambivalence about the claim. The Supporting Information file contains the full distribution of both DVs.

[16] Despite its outlandish nature, this idea builds on loud allegations by the PMF and other pro-Iranian elements in the country that these rare friendly fire events were intentional, as well as the strong undercurrents of anti-Americanism within Iraqi society, making it appealing to many Iraqis. See, e.g., Jane Arraf, "How Iraqi Forces Drove ISIS From Ramadi," *Newsweek*, February 25, 2016. https://www.newsweek.com/2016/03/04/iraqi-forces-fighting-isis-ramadi-fallujah-mosul-430042.html

"roll back" almost all its territory in the country since 2014 (Jones et al. 2017).[17] Despite this, a skeptical reader might wonder if – while effective against ISIL on the battlefield – the Coalition campaign could still be counterproductive if it generated sufficient resentment among Iraqis and boosted public support for the group. This idea, however, clashes sharply with observed reality on the ground. In fact, ISIL has been quite unpopular in Iraq since the start of the campaign, with no discernible rise in its support since. The amount of Iraqi sympathy for the group was approximately 2% in fall 2014, 0.5% in fall 2015, and 1.5% in the survey in fall 2016.[18] In sum, the idea that the international anti-ISIL campaign was making the group popular or sympathetic in Iraq is belied by the available evidence.

For the primary independent variables in the analysis, we use a variety of different items. To capture Iraqis' degree of exposure and proximity to the strikes, we use two distinct measures. First, we use a pair of survey questions about the degree to which respondents have lived in areas under ISIL control, where almost all of the Coalition's anti-ISIL airstrikes have actually occurred. To begin with, respondents were just asked *whether they had lived in an area while it was under the control of ISIL.* 21.3% of the sample (N=746) reports living under ISIL's rule at some point. Notably, this is very similar to the 19% of Iraq's population that ISIL is estimated to have presided over in Iraq at its peak in mid-2014 (Jones et al 2017). In addition, those who said yes were then asked for *how long they had lived in an area while it was under ISIL control,* with a five-point scale ranging from "less than one month" to "more than a year." In our base models, we combine

[17] This idea actually taps into conspiracy theories promoted by some in the country that the Coalition is "in cahoots" with ISIL and is operationally assisting it on the battlefield; claims that have included photos of U.S. helicopters flying over Iraq on Twitter with red circles showing them allegedly "caught" transporting ISIL leaders and allowing them to escape the country's grasp. See, among other things, f.n. 6.

[18] Moreover, more indirect items in the survey such as questions asking Iraqis to estimate the amount of sympathy for ISIL countrywide provide roughly similar results, with a median estimate of 3%. Results from IIACSS surveys in Iraq from 2014-16. Approval for 2014 and 2015 surveys obtained along with 2016 survey, via process described in f.n. 13. Figures shown in Supporting Information file.

these two questions into a single ordinal measure of experience within the targeted areas. Second, we also show results using an additional, observational measure of exposure – explained in more depth later – based on the respondents' distance from the nearest airstrike as recorded by Airwars' strike-tracking database.

We measure motivated bias surrounding the Coalition's campaign in two major ways. First, we use questions about individual attitudes toward some of the primary combatants in the conflict, in particular the U.S. and the PMF. The question about the U.S. is a four-point measure of Iraqis' confidence in the United States' ability to responsibly deal with problems in the region. Given that the U.S. is the main perpetrator of the Coalition campaign, we expect that respondents with little confidence in the U.S. will *want to believe* the factual misperceptions about the strikes. Meanwhile, the question about the PMF is a three-point measure of Iraqi support for its goals and activities. Given that the PMF is a key rival of the U.S.-led Coalition in Iraq and a key source of opposition and suspicion toward it, we expect that Iraqis who support the PMF will be motivated to believe these misperceptions. Second, we use Iraqis' sub-national group identities – in particular whether they are Shi'a Arab, Sunni Arab, or Kurd – to measure motivational biases toward the campaign. In Iraq today, Shi'a Arabs tend to hold more negative orientations toward the U.S. because it has acted as a check on Shi'a (and Iranian) influence in the country, while Sunni Arabs and Kurds tend to hold less hostile orientations toward the U.S. for this reason (Kose, Ozcan, and Karakoc 2016). Given this reality, we expect Shi'a Arabs to be more likely to accept the misperceptions, and Sunni Arabs and Kurds to be relatively less likely to do so.[19]

[19] In the models below, we omit the Kurdish variable so that our sectarian dummies can be easily interpreted against a clear baseline category (otherwise the baseline would be Iraqis not affiliated with any of the main sects, a small slice of the data). Kurds can thus be thought of as the baseline group, though their inclusion does not change the results.

To capture informational bias surrounding the campaign, we use several items on Iraqis' "information diets" and how heavily they rely on different types of news sources in the dispute. The Iraqi news environment is sharply polarized along sectarian and other political lines (Amos 2010), with different Iraqi media channels varying in what they show about the counterinsurgency against ISIL among other issues.[20] We focus specifically on the respondents' level of exposure to three major outlets with distinct sectarian orientations: *al-Iraqiyya TV*, which is the country's state TV channel and is quite influential but typically perceived as pro-government and pro-Shi'a in orientation, *al-Sharqiyya TV*, a private satellite channel that is more Sunni-friendly and often quite critical of the government, and *Rudaw TV*, a Kurdish outlet closely linked to the ruling Barzani family in Iraqi Kurdistan. Due to these sectarian affiliations, we expect exposure to *Al-Iraqiyya* to boost Iraqis' belief in factual misperceptions about the airstrikes and exposure to *al-Sharqiyya* and *Rudaw* to reduce such perceptions.

Finally, we include several covariates in the models in order to account for their possible influence on the misperceptions. To begin with, we include respondents' age, gender, education, income, and urban vs. rural status in the models. These represent key socioeconomic factors that have been linked to support for conspiracist beliefs and misperceptions in the region and beyond (e.g., Gentzkow and Shapiro 2004). Additionally, we include an indicator of internally displaced person (IDP) status, as this can strongly shape conflict attitudes (Bohnet, Cottier, and Hug 2016) but is distinct from actual exposure to the fighting.[21] The base models are estimated via ordinary

[20] For instance, pro-Sunni sources like *Al-Baghdadiyya TV* have branded ISIL as "tribal revolutionaries," while pro-Shi'a sources like *Al-Iraqiyya TV* have employed terms like "terrorists" or "terrorist gangs." See Mohammed Salih. "Iraqi Media Divided in Coverage of IS Conflict." *Al-Monitor*. September 4, 2014.

[21] While one might initially think IDP status is a good indicator of local violence exposure, in fact IDPs in war zones often flee for social, economic, or psychological reasons rather than actual violence exposure (Engel and Ibañez 2007). Moreover, even if they are fleeing violence, it may be other types of violence besides Coalition's airstrikes. Thus, IDP status is actually a poor measure of exposure to the strikes. Yet because IDPs often have especially strong grievances in disputes, it is an important covariate to account for in the models.

least squares (OLS),[22] with dependent variables coded from 0 to 4 so that higher values indicate greater support for each factual misperception.

Results:

Table 1 shows the base results. Since our primary interest is in the effect of exposure and proximity to the campaign (H1), the first two columns contain naïve models with this alone, and the subsequent columns add additional sets of independent variables as described above in order to account for other key sources of the misperceptions.

As can be seen, the models show that personal exposure has the expected effect – that is, Iraqis who have lived in the areas actually targeted by the Coalition's airstrikes are *significantly less likely to believe disinformation* that they are attacking their allies or assisting their enemies than those who have not. These findings hold in the naïve exposure-only models (Columns 1-2) and once we add the richer set of motivational (Columns 3-4) and informational (Columns 5-6) factors. While many of these other factors are linked strongly with the misperceptions as well, the significant effect of exposure persists across the board. In other words, even after accounting for these key drivers of factual bias, we see that those who have faced the most risk of harm from the strikes are less likely to hold false beliefs about them. This offers some initial support for H1 and the idea that seeing is disbelieving in war.

[22] Results are substantively similar with ordered logit (see Appendix, Table A5). We also include descriptive statistics for all of the variables used in the analysis, as well as the full wording for all attitudinal items used from the survey in the Supporting Information file.

Table 1: Impact of Exposure on Iraqi Misperceptions about Coalition Airstrikes

	Airstrikes Target PMF	Airstrikes Help ISIL	Airstrikes Target PMF	Airstrikes Help ISIL	Airstrikes Target PMF	Airstrikes Help ISIL
Exposure						
Time under ISIL	-0.27***	-0.24***	-0.13***	-0.13***	-0.12***	-0.13***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)
Orientations						
Shi'a Arab			0.81***	0.93***	0.65***	0.77***
			(0.10)	(0.10)	(0.12)	(0.12)
Sunni Arab			0.20*	0.43***	0.09	0.25*
			(0.09)	(0.09)	(0.11)	(0.11)
Confidence in U.S.			-0.40***	-0.33***	-0.31***	-0.24***
			(0.02)	(0.02)	(0.03)	(0.03)
Support for PMF			0.29***	0.30***	0.18***	0.24***
			(0.04)	(0.04)	(0.05)	(0.05)
Information						
Iraqiyya TV					0.12***	0.05
					(0.03)	(0.03)
Sharqiyya TV					-0.19***	-0.12***
					(0.03)	(0.03)
Rudaw TV					-0.28***	-0.29***
					(0.04)	(0.04)
Demographics						
Age	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Gender	0.17**	0.24***	0.15**	0.22***	0.21***	0.27***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Education	-0.07***	-0.06**	0.01	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Income	-0.04*	-0.04**	-0.07***	-0.07***	-0.08***	-0.09***
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)
Urban	0.00	0.02	0.03	0.06	0.01	0.03
	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
IDP	0.28***	0.29***	0.59***	0.55***	0.60***	0.57***
	(0.08)	(0.08)	(0.08)	(0.07)	(0.08)	(0.08)
Constant	2.62***	2.43***	1.78***	1.36***	2.21***	1.85***
	(0.12)	(0.12)	(0.14)	(0.13)	(0.16)	(0.16)
Observations	2,990	2,992	2,934	2,934	2,262	2,262
R-squared	0.05	0.04	0.28	0.26	0.33	0.31

Notes: Results from ordinary least squares regressions. Demographics (age, gender, education, income, urbanity, IDP status) not shown. Standard errors in parentheses.
**** p<0.001, ** p<0.01, * p<0.05*

Meanwhile, most of the other factors in the model behave as expected. Being a Shi'a Arab strongly boosts both misperceptions about the campaign, while being a Sunni Arab boosts them as

well but more modestly and inconsistently.[23] This reflects the growing animosity toward the U.S. among Shi'a Arabs in recent years, while Sunni Arab views of the U.S. have softened substantially (although not to the level of Kurds and other small minorities, the omitted baseline in the models). In addition, confidence in the U.S. diminishes belief in both misperceptions, while support for the PMF increases them. Overall, these effects support expectations about civilians' beliefs aligning with their broader identities and loyalties in the dispute.

The informational factors largely move in expected directions as well. Indeed, reliance on the generally pro-Shi'a *al-Iraqiyya TV* predicts greater belief in the "Targets PMF" misperception, which makes sense given the PMF's Shi'a appeal and Iranian backing. In contrast, reliance on the Sunni-friendly *al-Sharqiyya TV* and especially the Kurdish-oriented *Rudaw TV* predict less belief in both misperceptions. These effects align with the general orientations of the different channels, speaking to the role of divergent sources of information in the dispute.[24]

Finally, some of the demographic variables are also notable. In particular, men and IDPs are significantly more likely to believe both misperceptions, while wealthier Iraqis are significantly less likely to do so. We were relatively agnostic about the impact of these variables, although it is worth noting that the income effect aligns with some other existing studies on misperceptions and conspiracist beliefs which highlight the role of social class (e.g., Hogg et al. 2017), while the IDP effect suggests that grievances due to conflict-induced displacement may fuel false beliefs in war. Future research may wish to follow up on these findings, although we believe they are likely to be at least somewhat contextual in nature.

[23] Specifically, Sunni Arab identification only robustly boosts belief in the misperception about the Coalition aiding ISIL and not the one about it targeting the PMF. This makes sense given that the Iranian-supported PMF principally appeals to Shi'a Arabs; most Sunnis have little need for a narrative with the PMF as the central victim.

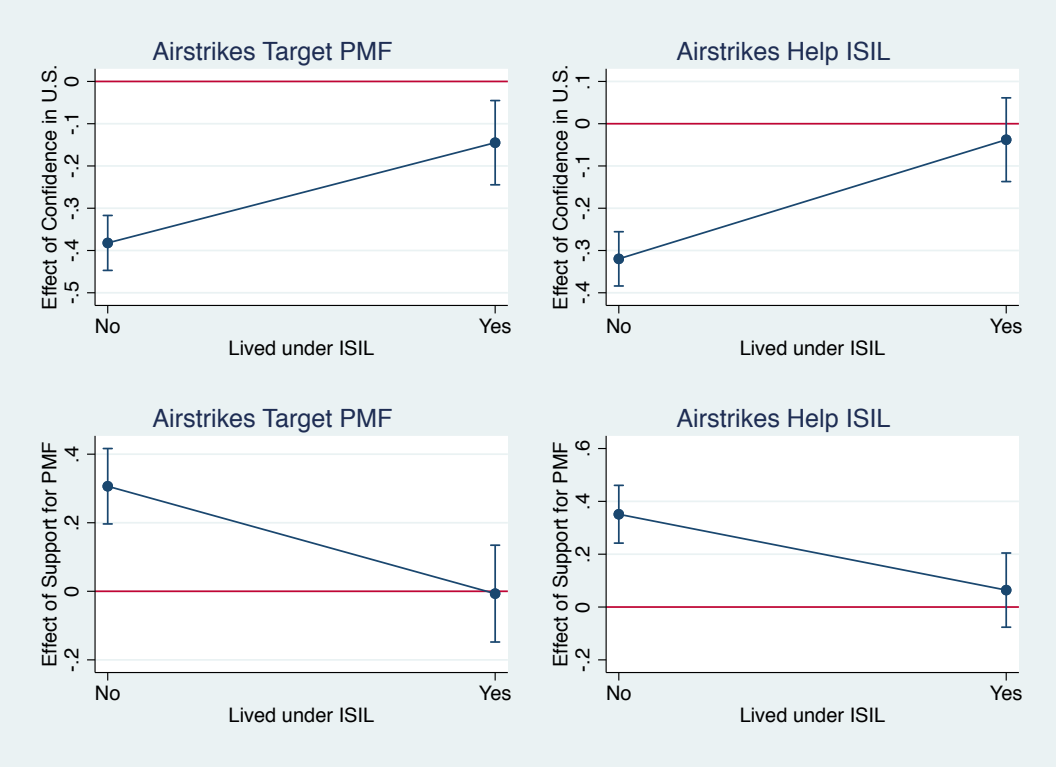
[24] That said, these are best understood as control variables that help provide a strict test of our hypotheses, since it is difficult to observationally separate the effects of media exposure from the attitudes that align with it. We thus leave the task of identifying media effects on wartime beliefs more precisely to future work.

In order to explore our hypotheses more thoroughly, we analyze several different slices or "cuts" of the data. As discussed earlier, if our theory is right, we should not only see that (1) Iraqis who are more exposed to the airstrikes hold more accurate factual beliefs about them (H1) but also (2) that their beliefs are less shaped by their broader political attachments and information streams in the dispute (H2), since they more likely to *accurately update* their beliefs about what is going on regardless of these other key influences.

In order to test this, we explore whether some of the primary sources of motivational bias in the model are *moderated* by personal exposure. To this end, Figure 1 shows how the effect of both (1) confidence in the U.S. and (2) support for the PMF vary by experience under ISIL rule. Starting with pro-American attitudes (the top two panels), we can see that confidence in the U.S. significantly reduces both misperceptions among the unexposed population, but among the more proximate populace this effect disappears or is at least substantially diminished. Turning toward pro-PMF views (the bottom two panels), we can see that the same pattern emerges: support for the PMF significantly boosts both misperceptions about the strikes among unexposed Iraqis, but these effects fade among those who have lived in the targeted areas. This helps drive home the argument about the power of exposure, showing that while factual beliefs in war are generally biased in the direction of civilians' prior attachments in the dispute, this bias is "disciplined" and diminished by exposure to the events in question (H2).[25]

[25] All four effects are statistically significant for unexposed Iraqis (shown on the left side of each plot), and yet lose their significance among exposed Iraqis (shown on the right side of each plot). The difference-in-difference between them is significant in three of the four cases.

Figure 1: Impact of Pro-U.S. and Pro-PMF Views on Misperceptions by Exposure

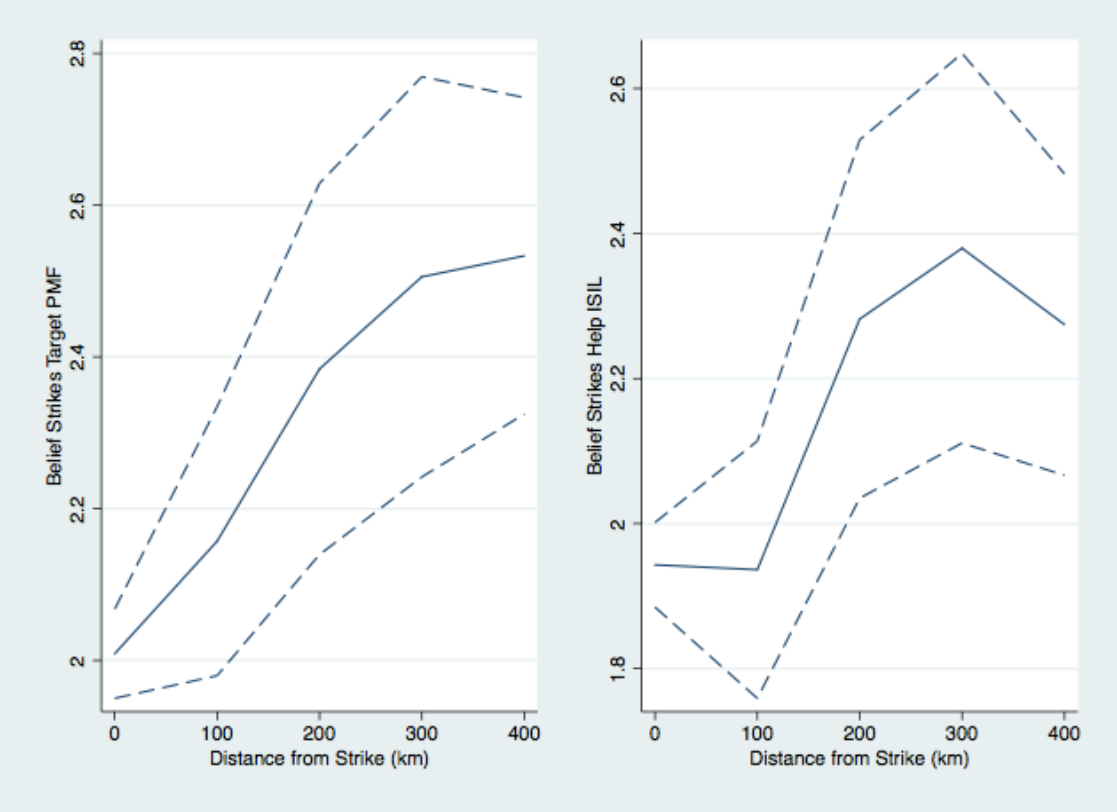


Note: figure shows marginal effect of confidence in the U.S. and support for the PMF by experience under ISIL rule. Results from OLS regressions, with 95% confidence intervals.

Despite the evidence presented so far, a skeptical reader might still be concerned that the measure of our main independent variable – exposure to the fighting – is self-reported in nature. This could leave it subject to potential reporting or recall biases, among other issues. To address such concerns, we use data from the airstrike-tracking NGO *Airwars* on the observed location of all 10,000-plus Coalition airstrikes in Iraq. Premised on the model of the Bureau of Investigative Journalism's Drones Project – the most comprehensive, transparent, and reliable public database of U.S. drone warfare in countries like Pakistan (Bauer, Reese, and Ruby 2015) – *Airwars* tracks the frequency, results (civilian casualties), and locations of all reported international airstrikes in Iraq and Syria. In its effort to do so, the organization relies on a wide range of sources, including international and local media, NGO reports, social media sites (e.g., so-called "martyrs' pages"),

and official statements by the combatants themselves. It then attempts to triangulate across these sources and investigate wherever possible, yielding a five-point scale of reporting quality for the alleged civilian casualties in each event, which runs from Discounted to Confirmed. Because the respondents in our survey are geolocated, we were able to match them with the Airwars data and create a measure of distance from the closest observed strike for each respondent.

Figure 2: Predicted Level of Factual Misperceptions by Respondent's Distance from Strike



Note: figure shows predicted level of belief in each factual misperception by proximity to closest Coalition airstrike. Results from ANOVA regressions, with 95% confidence intervals.

To examine the impact of this measure, we add it to our base models of both false beliefs (i.e., the final two columns of Table 1).[26] The results show that proximity significantly decreases

[26] We use ANOVA rather than OLS here so that the predicted values are not linearly constrained, showing the effect's functional form across the range of values of distance from a strike.

both misperceptions. To clearly illuminate these dynamics, Figure 2 plots the predicted amount of each misperception by respondents' proximity to the strikes, along with 95% confidence intervals. This figure shows how both factual misperceptions – that the attacks target the PMF, and that they help ISIL – decline substantially as one moves from areas far away to those much closer to (and ultimately underneath) an airstrike. Moreover, the figure also conveys effects that are significant in substantive terms: because the outcomes are all five-point scales coded from 0 to 4, the value "2" represents respondents precisely in the middle. Thus, the figure shows that those within about 50-100 km of a strike are likely to reject the claim (or at least be ambivalent), while those outside this range are likely to believe them. This provides further evidence, based on a more direct and behavioral measure of personal exposure, that is consistent with our central argument: that seeing is in fact disbelieving when it comes to factual misinformation in war.

Robustness:

We run several additional tests to bolster our results. Perhaps the key confounder concern is that "local" civilians might be different in (other) ways that threaten our findings. In particular, the primary alternative is that proximate communities might be motivated not by accuracy but by anti-ISIL bias. Local civilians might be more vehemently opposed to ISIL due to its brutalization of adjacent communities or the more immediate threat that it poses to them ("we could be next"). That could make them more supportive of any effort to eliminate it, Coalition airstrikes included (and thus skeptical of negative claims toward them). We address this concern in two ways. First, we replicate the base models with several measures of opinion toward ISIL. Second, we conduct a "placebo test" in which we examine support for *valid* claims about human rights abuses by the PMF in its anti-ISIL operations. If locals were truly motivated by a desire to expunge ISIL, they

would be more likely to discount not just negative claims against the Coalition but those against the PMF as well since the PMF has been among its most effective adversaries. Yet, the results of these tests reveal the opposite (see the Appendix, Tables A1-A2); controlling for attitudes toward ISIL has no substantive impact on our findings, and exposure does *not* make Iraqis more skeptical of the *valid* claims about the PMF's anti-ISIL activities (as it does with the *false* claims about the Coalition's campaign). This provides additional evidence consistent with our argument and against the notion that our findings result from anti-ISIL bias.

We also take seriously concerns about social desirability bias and preference falsification surrounding the results. Recent research in Colombia, for example, finds that civilians in areas of insurgent control tend to over-report their support for counterinsurgent actors on direct questions (Matanock and Garcia-Sanchez 2018). This could be problematic for us if Iraqis who had lived in the targeted areas or close to the airstrikes overstated their support for the Coalition and skepticism of misinformation about it. We engage with this possibility in several ways. First, we note that the non-response rates for the DVs are extremely low, with 97% of the sample answering each item.[27] Second, the survey has several items in which enumerators judged the behavior of the respondents, including their comfort and honesty during their interviews. It is worth noting the vast majority of respondents scored positively on these dimensions, with 92% deemed candid and 90% comfortable during the interview. Moreover, the means of these measures are actually *higher* among those who experienced ISIL rule, and adding them to our models yields no substantive change in the findings (see Appendix, Table A3). Finally, we would also note that the reported models already contain a measure of support for the U.S., and replacing it with an alternate one yields no substantive change

[27] Non-response is even lower on the items about experience under ISIL control, with 99% of the sample answering. Moreover, any potential concerns about preference falsification on this front are ameliorated by the robustness of the results with a *behavioral* measure of experience outside the survey (using the Airwars event data).

(see Figure A1). If proximate civilians were just overstating their support for the U.S. out of fear, it is not clear why they would do so more on their beliefs than their attitudes.[28] Overall, these tests speak against concerns about preference falsification driving our results.

In addition to this, we also conduct a number of other robustness tests to boost confidence in the findings. These include: (1) restricting the sample by sectarian identity (Sunni Arabs only), (2) using alternate measures of motivated biases as well as experience under ISIL rule, (3) adding district level fixed effects, (4) adding spatially clustered standard errors, and (5) using ordered logit models rather than OLS regressions. As shown in the Appendix (Tables A4-5, Figure A1), these tests all support the main findings, helping show their robustness to alternative modeling choices, measures of our main variables, and attempts to address other sources of bias. All of the robustness checks are described in much greater depth in the Appendix.[29] Collectively, they help substantially boost our confidence in the paper's central results.

Conclusion:

From WWII to contemporary Iraq, war is rife with lies. Yet, despite their prevalence and dire consequences, there is surprisingly little work on who accepts them in war zones. Moreover, the picture from the extant literature is one dominated by bias, in which civilians indulge freely in disinformation in war regardless of what is going on around them (Greenhill and Oppenheim 2017, Silverman 2019). In this paper, we greatly enrich this picture by showing how and when this bias is overcome. Drawing on oft-overlooked insights from communications and social psychology, we contend that people who are more proximate or exposed to the relevant events have the means

[28] Rather, in this alternate story, as in many others, one would expect attitudes and beliefs to covary.
[29] While one might also be concerned about question order, it is worth noting that there were 16 survey items between the DVs and experience items. The behavioral experience measure also helps assuage concerns here.

(*local information*) and motives (*accuracy motive*) to sort truth from lies. Pairing survey and event data from a war-torn society, we examined this theory in the case of the Coalition air campaign against ISIL in Iraq. The results are broadly supportive of our argument: Iraqi factual beliefs about the Coalition airstrikes were generally quite biased, but these biases were substantially reduced by exposure and proximity to the strikes themselves. In other words, the results confirmed that – when it comes to lies in war – seeing is disbelieving.[30]

The results have some key implications for our understanding of modern violent conflict. To begin with, they illuminate the *limits* of lies and falsehoods in war. While there has been much concern over the proliferation of wartime disinformation in recent years – for example, Russian propaganda and disinformation efforts in Ukraine – our findings show how the persuasive impact of these strategies is constrained by and conditional on their audience's proximity to the fighting. In this sense, they extend and qualify existing studies on the spread of misperceptions in conflicts, such as Silverman (2019) and Greenhill and Oppenheim (2017). Reconciliation with the Silverman (2019) study is straightforward, since it does not include civilians on the front lines and speculates that they may act differently (20-21). Engagement with the Greenhill and Oppenheim (2017) study requires more care, since it finds that people who are more scared of the conflict and its effects are more likely to buy rumors about it. Here we think it is important to distinguish between subjective threat perceptions and objective exposure or proximity to the fighting. It is quite possible that the former may increase people's credulity in war, even as the latter diminishes it. This gap may be a fruitful area for future research to explore.

[30] One key limitation of the analysis is that we are unable to separate the two mechanisms behind the argument, and thus leave it to future research to analyze their relative importance. One way to do so might be to examine civilians' beliefs during a genocide or a campaign only targeting people of some groups (such as, for example, the Holocaust), since proximate civilians would always have local information but would only have a strong accuracy motive if they were from the targeted communities.

Moreover, the results also outline when civilians accurately recognize combatant behavior in war more broadly. This is key because it underpins a variety of population-centric tactics in war. The logic behind many prescribed actions in contemporary conflict – such as exercising restraint or providing aid in war zones – is that they should be done so that the civilian population does not aid the enemy (Sewall et al. 2007). Yet, if people do not recognize these actions and embrace lies about them, this logic is imperiled. If a careful drone strike is actually seen as a bloody massacre, what is the (strategic) point of this precision to begin with? This study reveals the scope conditions of this concern, showing that it applies mostly to communities removed from the relevant events. For both informational and motivational reasons, those who are near the "action" typically know what is happening, while those more removed may not. This is why, in a context like Pakistan, the U.S. drone campaign is quite popular and effective in the tribal areas where it actually occurs (e.g., Taj 2010, Johnston and Sarbahi 2016), while it is widely perceived as indiscriminate and alienating among the rest of the country (e.g., Fair, Kaltenthaler, and Miller 2016). This helps inform debates about the effectiveness of selective violence, aid delivery, and other tactics that send a "signal" to civilian populations in war, suggesting that they may have divergent impacts among directly and indirectly exposed populations.

The results have implications for other areas of conflict studies too. For one thing, they add to a vibrant literature on conflict exposure, which has been linked to both conciliatory effects (e.g., Tellez 2018) as well as a hardening of intergroup attitudes (e.g., Hadzic, Carlson, and Tavits 2020). Our results show that one major way in which exposure and proximity matters is by giving people a clearer picture of events on the ground in war. This suggests that its broader effects on attitudes may be situational: depending on *what those events are,* and how they align or clash with people's prior worldviews, their attitudes may be hardened or softened in the process. Moreover, the results

also relate to rationalist explanations for war, which highlight the role of private information and incentives to misrepresent it as a central driver of conflicts (Fearon 1995). This study implies that information asymmetries about the relative power or resolve of combatants are unlikely to persist among those who experience wars directly, but may be easily sustained among those who do not. This means that the more publics are insulated or removed from the actual fighting, the more likely disagreements about relative strength or will are likely to persist and sustain the fight.

These findings should also be of interest to scholars of political psychology and behavior. In recent years, there has been a surge of behavioral research on the abundance of political rumors, conspiracy theories, factual misperception, or "fake news" in mainstream politics (e.g., Abalakina-Paap et al 1999, Jolley and Douglas 2014, Bode and Vraga 2015, Miller, Saunders, and Farhart 2016). While debates continue to rage about the strength of these beliefs, there is a creeping image that we are mired in a "post-truth era" in which facts exert a dwindling effect on how people form opinions. This study shows that, while rumors and lies are pervasive in wars, there are also clear boundaries to their appeal. In fact, it suggests that personal exposure is the antidote to lies and misinformation: civilians who directly witness events and who have to make good choices to survive seek out the facts and cut through the lies. In this sense, the study offers a note of qualified optimism in the often-gloomy debates about facts in politics. When people have enough "skin in the game" and can see the dynamics in question, they will typically get it right regardless of their prior attitudes and level of fear. At the same time, it also raises the question: who else in social or political life – from those near violent crimes to natural disasters to disease outbreaks – thinks like local civilians living near the front lines of war?

Finally, the study offers key implications for us as information producers and consumers. For information producers from war, such as conflict journalists, the project suggests that accurate

war reporting requires being "on the ground" in directly affected areas and speaking to the locals about what is going on, rather than reporting from the safety of capital cities or nearby countries. This is a major critique of reporting in conflicts such as the Soviet-Afghan War in the 1980s, which were often covered "from across the border in Pakistan, from brief visits to Kabul, or from furtive interviews with guerrilla fighters who soon developed a reputation for being willing to tell the correspondent whatever he wanted to hear" (Knightley 2004: 476). Moreover, datasets that track violent events – such as the Global Terrorism Database or UCDP/PRIO Armed Conflict datasets – should prioritize news reports with *local* civilian sources, or at least gather meta-data on stories they use that allow users to do so. Lastly, for consumers of information about wars, such as peace activists or ordinary citizens, they should be discerning customers of any narrative they hear about what is happening in a war zone. Scenes like American "Code Pink" activists marching with non-local Pakistanis against U.S. drone strikes in the tribal regions of the country – while the voices of local Pakistanis are systematically suppressed – risk making these activists into tools of militant groups or intelligence agencies in the conflict.[31] In sum, we must all reckon with both the depths and the limits of lies in war.

[31] "US Activists Join Drone Protest in Pakistan," *The National*, October 7, 2012.

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