**Post-publication review of**: Nkonde, M., Rodriguez, M. Y., Cortana, L., Mukogosi, J. K., King, S., Serrato, R., Martinez, N., Drummer, M., Lewis, A., Malik, M. M. (2021). Disinformation creep: ADOS and the strategic weaponization of breaking news. *Harvard Kennedy School (HKS) Misinformation Review, 1*(7). <a href="https://doi.org/10.37016/mr-2020-52">https://doi.org/10.37016/mr-2020-52</a>

Reviewed by: Alexei Abrahams, Ph.D., Data Scientist at the Harvard Kennedy School. August 7<sup>th</sup>, 2021.

#### Context:

"Disinformation creep: ADOS and the strategic weaponization of breaking news" (henceforth Nkonde et al 2021) was published by the Shorenstein Center's *Misinformation Review* on the 18th of January, 2021. The authors argue that the American Descendants of Slavery (ADOS) movement engages in a variant of disinformation termed by the authors as "disinformation creep", in which ADOS activists exploit breaking news events to discourage African-American voters from voting for the Democratic Party. The authors reach their conclusions based on an original Twitter dataset collected from several sources. In accordance with the journal's standards, replication code is provided, and in accordance with Twitter's terms of service, the unique numeric identifiers of the tweets themselves are also provided.

ADOS subsequently self-published a rebuttal essay (henceforth ADOS 2021) in which they call into question the reliability of the journal article's findings.<sup>3</sup> The rebuttal levies several criticisms, and offers evidence in support.

### Assessment of ADOS' criticisms of Nkonde et al 2021:

In what follows, I review the criticisms raised by ADOS of the journal article and assess their validity. As part of making this assessment, I used the study's list of numeric tweet identifiers to download 489,838 tweets (91.5% of the study's 534k tweets) on August 5th, 2021.<sup>4</sup>

In summary, while the rebuttal draws on some evidence from outside of the study's data collection period, I generally find their criticisms to be justified. The argument by Nkonde et al 2021 appears to rely entirely on subjective interpretations of a handful of tweets tweeted by the ADOS movement's founders, Yvette Carnellus and Antonio Moore. While these interpretative claims occur within an atmosphere of scientific method and big data, the role of these data and methods is never clarified, leaving the reader to wonder if they factored in at all.

# Criticism:

Nkonde et al 2021 summarize ADOS as an online movement, whereas in fact the group is "registered as a 501(c)(4) social welfare organization with over 40 chapters currently in place nationwide".

Assessment: ADOS founder @breakingbrown tweeted on October 13, 2020, that ADOS will soon be a 501 social welfare organization (https://twitter.com/ADOSBayArea/status/1316188433665069056). The study by Nkonde et al 2021, however, collected data until the end of September, 2020, raising the possibility that ADOS subsequently changed in ways that could not have been anticipated by the authors. At least on this point, the authors should be extended the benefit of the doubt, though it would have been more defensible for Nkonde et al 2021 to simply state that they were limiting the scope of their study to ADOS' online activities, without asserting that the organization is actually "largely online".

https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/FFLQUK

<sup>&</sup>lt;sup>1</sup> The article is accessible here <a href="https://misinforeview.hks.harvard.edu/article/disinformation-creep-ados-and-the-strategic-weaponization-of-breaking-news/">https://misinforeview.hks.harvard.edu/article/disinformation-creep-ados-and-the-strategic-weaponization-of-breaking-news/</a>

<sup>&</sup>lt;sup>2</sup> The data and replication files are accessible here

<sup>&</sup>lt;sup>3</sup> https://adosfoundation.org/media/2021/06/ADOS Harvard Rebuttal SmearReviewed.pdf

<sup>&</sup>lt;sup>4</sup> With the numeric identifier of a tweet, it is possible to download the tweet via Twitter's REST API so long as the tweet has not been deleted, the user has not been deleted or suspended, and the user has not set their permissions to forbid downloads.

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## Criticism:

Nkonde et al 2021 further summarize ADOS' online presence to the Twitter activity of the movement's two activists: Yvette Carnellus (@breakingbrown) and Antonio Moore (@tonetalks). This ignores other ADOS activists on Twitter, and other ADOS activity beyond Twitter. For example, the ADOS website ados101[dot]com is not referenced by Nkonde et al 2021, even though it contains relevant information to their research question (in particular, a disavowal of affiliation with the FBA<sup>5</sup> -- an affiliation alleged by Nkonde et al 2021).

### Assessment:

The disclaimer that ADOS is unaffiliated with FBA is indeed viewable on ADOS' website at the bottom of the "About ADOS" page (<a href="https://ados101.com/about-ados">https://ados101.com/about-ados</a>). Consulting the Internet Archive, however, it appears that this disclaimer was added somewhere between December 26th, 2020, and January 10th, 2021. Given that Nkonde et al 2021 was published on January 18th, 2021, it seems unlikely that the authors noticed or had an opportunity to caveat or withdraw their allegation. On the other hand, Nkonde et al 2021 mention the alleged affiliation only once in passing, and not as a central part of their argument. In summary, then, the authors may be extended the benefit of the doubt on this point.

The authors' choice to focus on the tweets of @breakingbrown and @tonetalks is justifiable. While the ADOS movement may enjoy support from many thousands of Twitter users, the skew of influence endemic to social media activity often implies that just a handful of users (often less than 1%) command the vast majority of attention and upvoting (80%+) within any given discourse or community. It is therefore not unusual for researchers to treat the activity of a few influencers as a shorthand for what an entire community thinks or says. Based on the 489,838 tweets that I could obtain from the dataset of Nkonde et al 2021, I can confirm that @tonetalks and @breakingbrown were the two most retweeted users in the dataset, receiving 7.74% and 5.77% of retweets, respectively. Arguably the authors might also have considered @Black\_Action (2.54% of retweets), @wishbumpycoulda (2.27% of retweets), or @MaxHPF (1.98% of retweets), but given that @tonetalks and @breakingbrown are the accounts of the ADOS founders, the article's focus on those two influencers is justifiable.

That said, peer-reviewed research on social media tends to summarize social media discourse in two other complementary ways, namely topic modeling and community detection. In simple terms, topic modeling helps uncover the major underlying themes of a discourse, while community detection helps uncover the major communities represented within a discourse.

To perform community detection, the authors would need to draw linkages between different users, typically by their retweeting behavior. The authors' dataset, however, consists purely of non-retweets,

<sup>&</sup>lt;sup>5</sup> According to the ADOS rebuttal, the Foundational Black Americans (FBA) is a group that favors abstention from voting at all levels, whereas ADOS favors voting at some levels, and strategic withholding of votes from the Democratic Party to incentivize redressal of grievances.

<sup>&</sup>lt;sup>6</sup> The Internet Archive's record of the site on December 26th, 2020, shows no disclaimer (<a href="https://web.archive.org/web/20201226011238/https://ados101.com/about-ados">https://web.archive.org/web/20201226011238/https://ados101.com/about-ados</a>). The next snapshot of the site was taken on January 10th, and the disclaimer is visible (<a href="https://web.archive.org/web/20210110071312/https://ados101.com/about-ados">https://web.archive.org/web/20210110071312/https://ados101.com/about-ados</a>).

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as is often all that can be recovered from historical Twitter scraping. As a result, the ADOS community may itself consist of several subcommunities with different agendas, but the article is blind to this -- a limitation which ought to have been highlighted.

With regard to topic modeling, the authors do indeed estimate a Structured Topic Model (STM), as is evident in their R code. Curiously, the results of this exercise are never reported in the article, raising the question as to how topic modeling informed the analysis (if at all). Indeed, topic modeling is only ever mentioned in a single sentence within the 'Methods' section at the bottom of the paper. While topic modeling algorithms like LDA or STM are mature, 'off-the-shelf' tools at this point, proper implementation involves a lot of preprocessing (filtering out stopwords, stemming, lemmatizing, etc) and hyperparameter tuning, none of which is described in the paper. Reviewing the replication code, it appears the authors used the default settings for STM, without any explanation as to why. In summary, the reader is left wondering how topic modeling factored into the analysis, if at all.

#### Criticism:

Nkonde et al 2021 cherry-picked tweets by ADOS activists most supportive of the "disinformation creep" narrative, while ignoring exonerative content.

### Assessment:

The rebuttal article points to several tweets by ADOS activists as evidence against the interpretation of Nkonde et al 2021. In particular, Nkonde et al 2021 allege an affiliation between ADOS and Foundational Black Americans (FBA), a group which discourages black voters from voting altogether. The rebuttal points to a disclaimer on the ADOS website disavowing such an affiliation, and to tweets in which the same ADOS activists encourage black voters to vote. These tweets to which ADOS refers do indeed exist, and were indeed tweeted on the dates claimed by ADOS (see

https://twitter.com/breakingbrown/status/1308521087983144966 and https://twitter.com/tonetalks/status/1312816227866177539). While the former of these two tweets does appear in the dataset by Nkonde et al 2021, the latter does not -- presumably because the latter was tweeted in October 2020, which falls outside of the study's data collection period (November 2019 to September 2020).

While Nkonde et al 2021 allege that the ADOS founders cynically exploited the death of Black Panther star Chadwick Boseman to discourage black voters from voting for the Democratic Party, the ADOS rebuttal points to tweets in which the ADOS founders expressed sympathy and condolences. I was able to find both of the tweets referenced in the rebuttal,

(https://twitter.com/tonetalks/status/1299537349974487040 and https://twitter.com/breakingbrown/status/1299545808140996611), both of which were tweeted in August 2020, during the period of study. I find that the former of these two was not part of the Nkonde et al 2021 dataset, while the latter was. According to Nkonde et al 2021, their dataset was assembled by searching for tweets mentioning #ADOS, LineageMatters, or AmericanDOS. While the latter of the above two tweets mentions #ADOS, the former does not, likely explaining why only one ended up in the dataset.

<sup>&</sup>lt;sup>7</sup> https://dataverse.harvard.edu/file.xhtml?fileId=4300056&version=1.0

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That said, the authors should have downloaded the tweet timelines of @breakingbrown and @tonetalks to properly establish context. The authors' decision to download tweets mentioning #ADOS is defensible, and that data collection exercise confirmed that these two accounts were the most influential. Based on that information, the authors made the justifiable decision to focus on the tweeting behavior of @breakingbrown and @tonetalks. But then they continued to work off of their original dataset of #ADOS tweets, in effect limiting themselves to only ever reading tweets by @tonetealks and @breakingbrown that explicitly mentioned #ADOS. As evinced by https://twitter.com/tonetalks/status/1299537349974487040, this approach filtered out tweets in which the ADOS founders arguably stepped off the political soapbox to express other sentiments. Indeed, Nkonde et al 2021 note that the number of tweets mentioning #ADOS fell around the time of Boseman's death, and seem to take this as evidence that the ADOS founders or community were indifferent to the actor's passing -- whereas in fact it is just as arguable that the decline in tweets mentioning #ADOS is indicative of the decision by the ADOS community to temporarily set aside their hashtag campaigning to mourn Boseman. We therefore agree with the ADOS rebuttal that "the... authors should have adopted a... model that looked at ADOS accounts individually...[such a] data sample would have encompassed a more robust and relevant set of tweets."

Next, the rebuttal takes on Nkonde et al 2021's allegation that ADOS exhibits a "lack of concern with the continuing wave of the COVID crisis". The rebuttal points to a YouTube video uploaded by Antonio Moore (@tonetalks; see the video at <a href="https://youtu.be/th8AAxUFjIA">https://youtu.be/th8AAxUFjIA</a>) on February 27, 2020, cautioning viewers to take the virus seriously, and to be careful of disinformation (for example, a claim that African-Americans are uniquely safe from the virus due to genetic advantages). Moore proceeds to highlight several reputable articles (by The Guardian, NPR, Slate, etc) providing guidance about the virus. The video itself has received over 21 thousand views to date, suggesting it was by no means ignored. Naturally, the YouTube video does not fall within the Twitter dataset, but again, in view of the decision by Nkonde et al 2021 to focus on @breakingbrown and @tonetalks, the decision to ignore the YouTube channel of @tonetalks (with 81.2k subscribers as of August 6, 2021) risked filtering out useful information, as this video confirms.

## Discussion

Overall, it is evident that the way that Nkonde et al 2021 collected data limited their visibility into social media activity by the ADOS founders, which in turn biased their view of them. Even among the tweets that they did collect, however, those that were potentially exonerative were not surfaced in the journal article.

But what about the tweets that they *did* analyze? Here we would argue that the interpretations offered by the authors were neither rigorous nor balanced. In Figure 2, for example, Nkonde et al 2021 highlight a tweet by @breakingbrown emphasizing the importance of the US-Mexico border for screening out covid-positive immigrants or tourists. The authors write,

In using the phrase "borders matter" phrase as a play on the phrase "Black Lives Matter," Carnell engages in disinformation creep by using anti-racist messaging to support racist policies. (Nkonde et al 2021)

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The claim that the phrase "borders matter" is a play on "black lives matter" is not at all substantiated in the article. The authors offer no evidence against the possibility that @breakingbrown was simply expressing that borders are important via a perfectly ordinary usage of the word 'matter'. The authors go on to conclude that the phrase "borders matter" is a devious and deliberate exploitation of anti-racist messaging ("black lives matter") to support border control -- an activity which they categorize as a racist policy, again without justification. None of these extrapolations is defended scientifically -- neither the claim that "borders matter" is a subversion of "black lives matter", nor that this single tweet is one of many such tweets, nor that expressing support for border control is inherently racist, and so on.

In Figure 5, Nkonde et al 2021 highlight a tweet posted by @breakingbrown on August 11, 2020, after Biden's announcement that Kamala Harris will be his running mate. The tweet begins by disparaging both Biden and Harris on dimensions likely to resonate with an African-American audience, calling Biden "Jim Crow Joe Biden" while calling Harris "Top Cop Kamala Harris". The tweet goes on to complain that the only two African-Americans ever to appear on presidential tickets -- first Barack Obama, and now Kamala Harris -- are not ADOS. Nkonde et al 2021 claim that this latter issue of Harris' identity was the central thrust of the tweet, not Harris' history of being tough on crime within a justice system widely known to be stacked against the African-American community. Why Nkonde et al 2021 feel that identity was the central thrust of the tweet is unclear.

Setting aside the authors' unsubstantiated interpretations of the tweets themselves, the larger allegation (that ADOS activists exploit breaking news events to advance their agenda) bears reflection. Scientifically speaking, to justify this claim several alternative hypotheses would need to be discredited. Firstly, it is evident from Figure 1 that there is a steady level of background chatter on #ADOS throughout the course of the 10-month study period. A plausible, innocuous alternative hypothesis, therefore, could be that the ADOS founders keep up a steady stream of ADOS-related commentary, but garner the most upvoting when events relevant to the African-American community draw in wider audience participation. From this view, the ADOS founders are not timing their tweet strategically, but events relevant to the broader African-American community (Boseman's passing, Biden's announcement that Harris will be his running mate) accidentally lend them greater visibility. To scientifically rule out this alternative hypothesis, the authors would need to show that the founders tend to mention #ADOS statistically significantly more often in conjunction with newsworthy events than not. No such exercise is undertaken, however.

If the authors could establish that the ADOS founders do indeed time their mentions of #ADOS strategically to coincide with newsworthy events, it could still be that they do so primarily when those events are of specific relevance to the African-American community (Boseman's death, Harris being chosen as running mate). Timing one's tweets to garner the greatest audience is strategic but fairly innocuous, and is likely a widespread practice hardly unique to ADOS.

These issues raise a broader question, namely whether the ADOS founders' tweeting behavior is demand-driven (tweeting what their audiences already believe to be true) versus supply-driven (seeding ideas to manipulate their audiences into believing something new). The notion that these tweets are deviously engineered to manipulate their audiences is a very supply-side view of social media activity, yet the authors offer no scientific strategy for ruling out the more innocuous demand-side story.