Memes Missiles and Mobilizations: An Analysis of the 2021 Israel/Hamas Conflict

Introduction:

Operation: "Guardian of the Walls" was an Israeli defense initiative in response to indiscriminate Hamas rocket attacks on Jerusalem in May of 2021. It led to widespread, largely anti-Israel international social-justice protests and mobilizations globally. In tandem with these mobilizations, a notable surge in anti-Israel political rhetoric emerged online and internationally and with it, a rash of antisemitic attacks both in America and across the globe. While some research has delved into the mechanics, both of hostile online networks and the political mobilizations they support, the velocity and magnitude of the events of 2021 was unprecedented -- It implicates adversarial state actors, hostile extremist groups, social justice activists and mobilizations. In this report, we juxtapose the delivery of hashtag campaigns with the delivery of missiles and real-world protests in a single ecosystem of reactivity. The aim of this report is to examine the relationship of outbursts of Middle East conflict, rises in antisemitic and antizionist rhetoric, social justice outrage, anti-Israel protests and real-world antisemitic incidents.

An ecosystem of right-wing white supremacist hatred toward Jews has been well documented by numerous researchers, with quantitative work characterizing social media signals of such hatred. However, there are few academic explorations of social justice based antisemitic activity and fewer quantitative characterizations of this phenomena. Using the May 2021 Gaza conflict as an entry point, we thus set out to examine whether a politically progressive ecosystem of antisemitism can emerge, complete with online and real-world spikes in antisemitism, robust social cyber signals, coded language, and moral outrage.


4 https://time.com/6071615/iran-disinformation-united-states/


6 https://networkcontagion.us/reports/antisemitic-disinformation-a-study-of-the-online-dissemination-of-anti-jewish-conspiracy-theories/
**Bottom Line Up Front:**

- Warfare during the May 2021 Gaza-Israel conflict sparked the largest increase of online mentions of social justice terms like “apartheid”, “colonialism” and “settler” in the history of social media.

- Warfare during the Gaza-Israel conflict sparked the largest increases in anti-Israel protests and antisemitic incidences in recent history in the United States.

- Terms pertaining to social justice, anti-Israel protests, and antisemitic incidents overlapped together and persisted together beyond the lifetime of either the military conflict or neutral conflict language around Israel or Palestine.

- We show these social justice terms serve as “weaponized conflict language” which create an overwhelming volume of racialized, demonizing, and unprecedented double standards against Israel. The scale and intensity of this phenomena suggest this activity is antisemitic, clearly matching the criteria set out in IHRA definition of antisemitism.

- We find that weaponized conflict language activity fosters “virtue targeting” - the spatial distribution of tweets containing the word “apartheid” and the spatial distribution of protests both indicate where antisemitic incidents are likely to take place in the real world.

The Network Contagion Research Institute, in partnership with Boundless, undertook, to our knowledge, the largest quantitative analysis to date on the Operation: Guardian of the Walls incident in May of 2021. We aggregated data from the Anti-Defamation League, the AMCHA initiative antisemitic incident database, the ACLED events database, as well as open-source news stories to develop a timeline of real-world events in the U.S. and missile exchanges and fatalities by day in the Middle East. Ingesting and indexing over 6 billion comments from Twitter and Reddit, we layered social media chatter over this timeline. We used scaled machine learning analyses and natural language processing to examine bias, double standards and shifts in tone as the conflict ensued and spatial modeling to determine how protests and antisemitic events and hashtags might be related.

**Kinetics to Memetics - A Timeline Analysis of the May Conflict:**

*How warfare during the Gaza Israel Conflict sparked the largest increase online mentions of Israel, online social justice outrage, anti-Israel protests and antisemitic incidences in recent history.*

We began by developing a high-level approximation of key signals during the month of May 2021 to understand how social media activity on Twitter and Reddit, as well as antisemitic incidents and anti-Israel

---

7 [https://www.adl.org/resources/tools-to-track-hate/antisemitic-incidents](https://www.adl.org/resources/tools-to-track-hate/antisemitic-incidents)

8 [https://amchainitiative.org/search-by-incident/#incident/display-by-date/](https://amchainitiative.org/search-by-incident/#incident/display-by-date/)

9 [https://acleddata.com/](https://acleddata.com/)
protests may have changed with ensuing hostilities in the Gaza-Israel conflict. Looking at the previous and following months for comparison, we noted exponential surges in social-cyber activity ensuing with the conflict. These surges set records by nearly 1000% for online mentions of descriptive terms such as "Jew", "Zionist" and "Palestinian". But they also set records for global peaks by roughly 1000% in the use of social justice terms such as "colonial", "apartheid", and "settler" across the whole of Twitter and Reddit (Appendix 1 and 2). A key finding from this initial assessment is that the language of human rights experiences extreme erosion (i.e., complete misappropriation) on social media with respect to Israel. Human rights language becomes co-opted as weaponized conflict language to demonize Israel, thereby losing its meaning and intent in the human rights realm.

In tandem with the sharp rise in social-justice language, we also show sharp increases in anti-Israel protests domestically, as well as antisemitic activity both on university campuses and in cities across the United States. This raises concern that the social justice tropes/virtue signaling we analyze on social media may stir animosity to inspire real world attacks or incidents. This "virtue targeting" lands not only on Israel, but on vulnerable diasporic Jewish populations in the United States and perhaps elsewhere as well. Indeed, several expert sources\(^\text{10}\), suggest there were record levels of antisemitic activities during the month of the conflict.

While these trends were highly notable, the temporal relationship between the Middle East, social media signaling, protests, and real-world antisemitic incidents is not clear without more fine-grained analysis. We thus developed a comparative timeline of real-world antisemitic events\(^\text{11}\) in the U.S., missile exchanges and fatalities by day in the Middle East, Israel-Palestine related protests\(^\text{12}\), and social media activity\(^\text{13}\) on Twitter (figures 1-5) to illustrate the sequence and overlap of these trends\(^\text{14}\).

Figure 1 depicts the overlap between social media activity and the Israel-Gaza conflict: Using key terms associated with the conflict, we find Twitter reactivity slightly precedes activity (missile launching) in the Gaza-Israel conflict, presumably due to rising tensions and prominence in the news cycle. As missiles launch, social media activity instantaneously escalates peaking on May 12\(^{th}\). One notable characteristic of the graph is the different lengths of the distributions in the time series: though they ignite simultaneously, the online chatter perseveres beyond the life of the conflict, showing sustained activity for nearly a week after the ceasing of hostilities.

\(^{10}\) Center for the Study of Contemporary European Jewry at Tel Aviv University's Faculty of Humanities, ADL

\(^{11}\) Data gathered from AMCHA and ADL hate crime databases, filtered to exclude non-antisemitic events and BDS incidents.

\(^{12}\) The Armed Conflict Location & Event Data Project (ACLED) https://acleddata.com/about-acled/

\(^{13}\) We ingested Twitter comments posted in May 2021 in which the Tweet’s text contains at least one key phrase (Appendix 3) relevant to the Israel-Gaza conflict.

\(^{14}\) There is reason to believe these activities are interconnected because conflict in the Middle East is a predictable precedent to antisemitic incidents historically. Furthermore, though the role of social media signals is less clear, evidence suggests that hate crimes and other real activity follow from social-cyber signals.
We next analyzed key social justice terms that became prominent during the May conflict and their relationship with active warfare. We find that key terms denoting oppression that are often associated with Israel (from both academic and legal spheres) show a similar pattern in (Figure 2) to neutral conflict-related terms: They escalate before conflict, spike with conflict itself and sustain beyond the conflict’s end. Notably however, the activity of social justice terms on Twitter remains elevated for a longer period than terms that are neutral in the description of the conflict. This shows that moral and political sentiments triggered by the conflict were more persistent than both the conflict itself and the neutral terms describing the conflict on social media.

![Figure 1: May 2021 timeline of attacks from Gaza and Israel compared to tweets containing neutral conflict terms, with a vertical line indicating the end of the Israel-Gaza conflict, shows a rise in Twitter posts in response to the conflict that lasts beyond the end of the attacks.](image1)

![Figure 2: May 2021 timeline of attacks from Gaza and Israel compared to tweets containing weaponized conflict terms, with a vertical line indicating the end of the Israel-Gaza conflict, shows a rise in Twitter posts in response to the conflict.](image2)

We then sought to examine the relationship between the Israel-Gaza conflict, real world antisemitic incidents and anti-Israel protests in the U.S. (Figure 3). In general, antisemitic incidents began to spike with a slight delay after the opening of hostilities in the May conflict but showed persistent peaks beyond the conflict itself. Antisemitic incidents died down towards the end of May, but notably, show a sustained overlap - both with social-justice slogans on Twitter and real-world anti-Israel mobilizations in the United States (Figure 4).
Figure 3: May 2021 timeline of attacks from Gaza and Israel compared to pro-Palestine protests and antisemitic incidents, with a vertical line indicating the end of the Israel-Gaza conflict, shows that real-world responses persist beyond the end of the conflict.

Figure 4: May 2021 timeline comparing reported Antisemitic incidents from AMCHA and ADL compared to weaponized conflict terms posted on Twitter shows a rise in incidents following rises in Twitter posts.
Figure 5: May 2021 weekly timeline of attacks from Gaza and Israel, the Twitter volume of neutral conflict terms, the Twitter volume of weaponized conflict terms, and real-world mobilizations and antisemitic incidents show shared distributions.
Protests, Posts and Pandemonium – An Overlapping Ecosystem of Disruption:

How terms pertaining to Social Justice outrage, anti-Israel protests, and antisemitic incidents overlapped together and persisted together beyond the lifetime of either the military conflict or neutral conflict language around Israel or Palestine

In totality, our results indicate that active warfare, neutral conflict language, social justice outrage and antisemitic incidents demonstrate a pattern: Active warfare dies down rapidly along with neutral conflict-descriptive social media signals. Weaponized conflict language (social justice outrage), protests, and antisemitic activity, however, appear to share a prolonged distribution beyond the life of the conflict itself. This suggests that these three elements: protest activity, weaponized conflict language, and real-world antisemitic incidents erupt rapidly in response to conflict and in tandem. They also appear to persist after hostilities have ended, resulting in an ongoing interconnected relationship between online and real-world antisemitism.

Manufacturing Double Standards by Weaponizing Language - Measuring Anti-Israel Demonization:

How anti-Israel sentiment completely dominates the social media signal and how social justice terms serve as “weaponized conflict language” creating an overwhelming volume of racialized, demonizing, and unprecedented double standards against Israel.
We next sought to characterize tweets from May 2021 containing both neutral and/or social weaponized conflict terms (see Appendix 3). The top 100 tweets from this data set, determined by highest number of retweets, showed an overwhelmingly negative portrayal of Israel (Figure 6). 93% of the tweets held a negative portrayal of Israel, while the other 7% held a neutral portrayal. From May 2021 tweets containing the same set of neutral and/or weaponized conflict language, we found the links that appeared most frequently within the Twitter posts (Figure 7). 63.6% of these links portray Israel in a negative light while the other 36.4% are neutral in their portrayal of Israel. Together these two data sets show that overall, Twitter conversation in response to the Israel-Gaza conflict portrays Israel in an overwhelmingly negative light.

<table>
<thead>
<tr>
<th>Title</th>
<th>Link</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce Sanctions Against Israel</td>
<td><a href="https://petition.parliament.uk/petitions/585314">https://petition.parliament.uk/petitions/585314</a></td>
<td>4437</td>
</tr>
<tr>
<td>Alarabiya</td>
<td><a href="https://www.alarabiya.net/">https://www.alarabiya.net/</a></td>
<td>1640</td>
</tr>
<tr>
<td>Inside the Battle for Jerusalem</td>
<td><a href="https://www.youtube.com/watch?v=ZiSRCPiklHl">https://www.youtube.com/watch?v=ZiSRCPiklHl</a></td>
<td>1471</td>
</tr>
<tr>
<td>Your click helps the plight of the Palestinian people</td>
<td><a href="https://arab.org/click-to-help/palestine/">https://arab.org/click-to-help/palestine/</a></td>
<td>1382</td>
</tr>
<tr>
<td>Let’s Talk About the Israel-Palestine Conflict</td>
<td>The Daily Show</td>
<td><a href="https://www.youtube.com/watch?v=Ne24yXyzUG0">https://www.youtube.com/watch?v=Ne24yXyzUG0</a></td>
</tr>
<tr>
<td>Gaza Fights For Freedom (2019)</td>
<td>Full Documentary</td>
<td>Directed by Abby Martin</td>
</tr>
<tr>
<td>Palestine: learn about what’s happening in Palestine, and how to help</td>
<td><a href="https://free-palestine.carrd.co/">https://free-palestine.carrd.co/</a></td>
<td>904</td>
</tr>
<tr>
<td>Only See Great? Palestinians Only See Apartheid Sponsored by PUMA</td>
<td><a href="https://ctt.ec/63Ud4+">https://ctt.ec/63Ud4+</a></td>
<td>831</td>
</tr>
<tr>
<td>The Israel-Palestine conflict: a brief, simple history</td>
<td><a href="https://www.youtube.com/watch?v=iyRZI0uUnlU">https://www.youtube.com/watch?v=iyRZI0uUnlU</a></td>
<td>718</td>
</tr>
</tbody>
</table>

Figure 7: Most of the top links (determined by frequency of appearance) in Twitter posts containing relevant terms (Appendix 3) in May 2021 have a negative depiction of Israel.

15 The use of these 100 specific tweets are the most retweeted and thus have the highest visibility on the platform. [https://docs.google.com/spreadsheets/d/1C98stCxnGufYLSbpynSHOnaEzTvYU3QdwA5AHsmXEk/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1C98stCxnGufYLSbpynSHOnaEzTvYU3QdwA5AHsmXEk/edit?usp=sharing)

16 The tweets were examined and categorized into negative, neutral, and positive portrayals of Israel by multiple analysts and then compared to ensure accuracy.
While the above findings portray overwhelming negativity, they don’t give insight into the context and character of the negative messaging. We therefore used a machine learning algorithm, word2vec, which maps the strength of word associations in a shared corpus, to characterize and model changes in the context and character of messaging during the May conflict over time on Twitter. Mapping word associations by week, we find that in the second week of May 2021, “Jew” becomes more closely associated to apartheid, settler, white, oppressor, and evil in Twitter posts (Figure 8). Palestine, by contrast, becomes more closely associated to victim, suffering,
indigenous, and murder immediately after the start of the conflict (Figure 9). The changes in these associations are sustained beyond the end of the month, showing a slight return to the mean value in each graph.

This suggests that the increasingly negative portrayal of Jews and Israel throughout Twitter in response to the Israel-Gaza conflict was couched in a growing racial characterization of the issue: Our analysis quantifies how Jews and Israel are increasingly associated with the guise of a White colonial-settler oppressing an indigenous ethnic minority as a key feature of the changes in language. Especially prominent in these themes is the framing of apartheid, which was, by far, the term most deployed in the social-justice chatter on Twitter and Reddit in response to the conflict.

The notion that Israel is committing apartheid is a debated proposition. One of the concerns in that debate is that the term, apartheid, and others like it, are being applied to Israel in ways that attest to a double standard.
The deliberate weaponization of double standards against Jews or Israel is noted by the IHRA standard as evidence of antisemitism: “denying the Jewish people their right to self-determination, e.g., by claiming that the existence of a State of Israel is a racist endeavor; applying double standards by requiring of it a behavior not expected or demanded of any other democratic nation; using the symbols and images associated with classic antisemitism (e.g., claims of Jews killing Jesus or blood libel) to characterize Israel or Israelis; drawing comparisons of contemporary Israeli policy to that of the Nazis”\textsuperscript{17}. We therefore developed a topic network of the term “apartheid” to determine if it might be used as a strategy to manufacture such a double standard at scale.

The topic network for apartheid in May (Appendix 4) shows Israel singled out almost exclusively as the only nation highlighted thematically across the entire of Twitter. Before May, this association is less prominent, in comparison to the topic network for apartheid in March 2021 for example (Appendix 5). We also examined whether hashtags, which often energize political activity and mobilizations on Twitter and further showed that all of the top 20 hashtags associated with the term “apartheid” (Figure 10) pertain to the Israel-Gaza conflict, failing to list any other topic.

A notable conclusion from this data is that “Israel” didn’t merely become more closely associated with apartheid, rather in both language and political slogans the theme of apartheid came to mean Israel exclusively. Replete with caricatures of Israel as white, totalitarian, and genocidal, this data attests to a clear double standard and proves the dislocation of terms which pertain to global human rights and racial justice for purposes of populist political virtue signaling. The apartheid libel closely parallels the notion on the extreme right of the “Great Replacement” theory, wherein Jews, as cosmopolitan elites, displace native white people through immigration. Inverting these themes, apartheid depicts Israel and Jews as white supremacists displacing people of color in their native lands as colonizers.

\textsuperscript{17} https://www.holocaustremembrance.com/resources/working-definitions-charters/working-definition-antisemitism
Virtue Targeting, Progressive Protests and the Geography of Antisemitism:

How weaponized conflict language forecasts “virtue targeting” - the spatial distribution of both protests and tweets containing the word “apartheid” indicate where antisemitic incidents are likely to take place in the real world.

Populist caricatures of Jewish ethnic replacement, coded in racialization and social justice outrage and amplified for virtue signaling, underscored a rash of protests across the United States, many organized by college campus groups. Though anecdotal evidence provides numerous instances\(^\text{18}\) of antisemitic activity including threats, harassment, and violence in close proximity to these protests geographic modeling quantitative analyses have not been done to statistically validate this relationship.

We thus sought to develop a spatial model (Figure 11) to examine whether the location of antisemitic incidents in May\(^\text{19}\) correlated with where protest activity was taking place. We also sought to examine the relationship between social media signaling around Israel and increases in recorded antisemitic incidents as part of the model. Specifically, we sought to examine whether online virtue targeting, with the term “apartheid”, might indicate where antisemitic incidents take place during the month.

Our spatial model shows that both protests and virtue targeting locations together are statistically significant indicators for where antisemitic incidents are likely to take place (Appendix 6). This finding is robust and holds both when we control for population, and also when we control for tweet locations of other social justice terms that did not show evidence of virtue targeting (Appendix 7). This suggests that it is virtue targeting specifically, and not concerns for human rights, that predict antisemitic incidents.


\(^{19}\) The data was used in the model was taken from the ADL hate crime database and filtered to only include antisemitic events.
Conclusions:

Social media outrage against Israel in May 2021 largely reflected the racialized worldview that is common on the progressive left, characterizing Israel in propagandistic fashion as a white, settler-colonial, apartheid actor. In fact, in the face of Israel’s defensive operations against ongoing missile attacks from Gaza, the overwhelming crescendo of social justice outrage and demonization took form in racialized accusations of apartheid, ethnic cleansing, settler colonialism which was historic. These terms and related ones reached their highest global peaks in the history of every social media platform NCRI analyzed as the conflict ensued.

Through this activity, Israel is singled out as an exemplar of moral evil far beyond any other comparable Western country. Yet many of these countries have, in recent history, engaged in unjust wars, extraterritorial killings and caused far more loss of life. These legal terms intended to describe violations of human rights lose their intended meaning and our data shows that they are completely transformed for purposes of virtue signaling through demonization of the Jewish state.

The virtue signaling to demonize Israel rapidly transforms in virtue targeting of diasporic Jewish communities. Like a residue, the racialized demonization of Israel and Jews persisted and circulated on social media long after active warfare had ceased, and overlapped tightly both with protests and with antisemitic activity leveled at diasporic Jewish communities. Following on the heels of conflict in the Middle East, our data suggests that these three factors combined into a progressive ecosystem of antisemitism which erupted violently. Further research is warranted in the face of these events to assess the depth of risk progressive hate against Israel poses to diasporic Jewish communities. Most notably, NCRI data suggests that expressions of that outrage on social media corresponded in both time and location with anti-Israeli protests and antisemitic acts and incidents.

Questions for Future Research and Policy Makers:

- Political actors often demonize their opponents in order to justify violence against them. Does social media demonization of Israel cause antisemitic harassment and hate crimes in the U.S.?
- Protest and expressions of outrage, and even demonization, are legitimate forms of political speech in the United States. What can be done to protect American Jews from the violence that such forms of protest and speech potentially motivate without undermining the very protections for free expression, protest, and human rights that are essential to maintaining a democratic society?
- While this paper focused on the United States, it is important to remember that Jews in other countries become subject to the same trends. We must consider what can be done to protect these communities against anti-Jewish violence that results from the online weaponization of anti-Israel rhetoric.
- A recent blossoming of research in political psychology has shown a great many symmetries in the attitudes and beliefs held by people on the left and right. The so-called “Great Replacement” refers to a far right conspiracy theory in which powerful, sinister actors (in many versions, emphasizing Jews) are attempting to ensure that White people become a minority in the U.S. To what extent do overwrought
characterizations of Israelis as genocidal Nazis constitute a symmetrical manifestation of the same type of extremist distortions by some on the progressive left?

● Universities have been both the incubators of ideological worldviews emphasizing racialized conflict and oppression, and the sites of spikes in antisemitic incidents during conflicts between Israel and Palestinians. What can they do to prevent such incidents and protect vulnerable groups on their campuses?
Appendix 1: Reddit timeline of comments containing weaponized conflict terms shows a large spike in May 2021.

Appendix 2: Timeline of Reddit comments containing neutral conflict terms shows a large spike in May 2021.
Appendix 3: List of relevant terms used to determine data sets.

Appendix 4: Topic network of words associated with apartheid in the May 2021 Twitter data set shows Israel as associated with negative connotations, while Palestine is associated with victims.
Appendix 5: Topic network of words associated with apartheid in March 2021 Twitter posts shows apartheid is not as closely associated with Israel as its counterpart in May.
### Anti-Semitic Incidents May 2021

<table>
<thead>
<tr>
<th></th>
<th>Dependent variable:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ADL_May + AMCHA_May</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>May_protest</td>
<td>0.578***</td>
</tr>
<tr>
<td></td>
<td>(0.134)</td>
</tr>
<tr>
<td>Apartheid</td>
<td>0.008**</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
</tr>
<tr>
<td>Genocide</td>
<td>-0.006*</td>
</tr>
<tr>
<td></td>
<td>(0.003)</td>
</tr>
<tr>
<td>Population</td>
<td>0.00000***</td>
</tr>
<tr>
<td></td>
<td>(0.00000)</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.367***</td>
</tr>
<tr>
<td></td>
<td>(0.108)</td>
</tr>
<tr>
<td>Observations</td>
<td>3,108</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-928.643</td>
</tr>
<tr>
<td>Akaike Inf. Crit.</td>
<td>1,867.286</td>
</tr>
</tbody>
</table>

*Note:* $p<0.1$; $p<0.05$; $p<0.01$

---

Appendix 6: Negative binomial regression of antisemitic incidents shows that protests and geographic locations of tweets with virtue-targeted term “apartheid” in May 2021 were significant geographic predictors of the phenomenon in the U.S.
Appendix 7: top hashtags associated with “genocide” in May 2021 on Twitter shows the term has not been manipulated for virtue targeting of the Israel-Gaza conflict. Though a scattering hashtags pertaining to the conflict appear, the term shows a wide diversity of global concerns over Tigray and Ethiopia, the violence in Myanmar, as well as no fly zones, chemical attacks and refugee issues associated with them along with appeals to the European Union.