



START

Influence-to-Action Model and Campaign/Narrative Impact Assessment Tool

*Addendum to the Final Report (Year 2) for the
Laboratory for Analytic Sciences*

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National Consortium for the Study of Terrorism and Responses to
Terrorism

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About This Report

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About START

The National Consortium for the Study of Terrorism and Responses to Terrorism (START) is a university-based research, education and training center comprised of an international network of scholars committed to the scientific study of terrorism, responses to terrorism and related phenomena. Led by the University of Maryland, START is a Department of Homeland Security Emeritus Center of Excellence that is supported by multiple federal agencies and departments. START uses state-of-the-art theories, methods and data from the social and behavioral sciences to improve understanding of the origins, dynamics and effects of terrorism; the effectiveness and impacts of counterterrorism and CVE; and other matters of global and national security. For more information, visit www.start.umd.edu or contact START at infostart@umd.edu.

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Executive Summary

Influence operations, or influence campaigns,¹ have been a tool for warfare and strategic geopolitical competition for governments as long as there has been recorded history. Today, we see firsthand the Chinese government's efforts to spread disinformation around the globe about the origin of the SARS-CoV-2 virus, as well as Russia's efforts to influence the courses of American social and political futures. Geiger found that mis- and dis-information have become an increasingly effective tool for nefarious actors to influence elections, policy, and public sentiment in the United States.² In other words, influence operations are an effective and low-cost means for our strategic adversaries and competitors to advance their goals and agendas.

Given U.S. adversaries' views of influence operations, and the immense implications and potential consequences of them, there is an urgent need to advance the state of the art in measuring and assessing the impact and effectiveness of hostile influence operations. The Unconventional Weapons and Technology Division (UWT) of the National Consortium for the Study of Terrorism and Responses to Terrorism (START) developed the *Influence-to-Action Model (I-AM)* and the prototype *Influence-to-Action Campaign/Narrative Impact Assessment Tool (I-AM Assessment Tool)* in an effort to begin to address this issue.

Theoretically grounded in the social movement literature – specifically in social movement diffusion and the role of threat in social movements – I-AM draws from a variety of psychological, sociological, marketing, and communications literature, and is designed to assess the relative likelihood of impact an influence operation would have on the target audience compared to the likelihood of impact from other influence operations. Some of the theories and hypotheses that we drew upon to develop the I-AM include cognitive dissonance, choice certainty, signal detection, dual-process, mere-exposure, and primacy and recency effects.

To validate our model, we conducted case studies of one historical and two present-day Russian and Chinese foreign influence operations. The three case studies were chosen to test I-AM against large-scale, potentially state-sponsored influence operations in different time periods and of differing state origins to discern if the variables were applicable across time and space. All three cases were successful in some aspect of influencing either pre-existing communities or propagating messaging into mainstream media; however, all three held significant differences. Applying I-AM to these cases, we were able to successfully analyze all three cases, demonstrating I-AM's flexibility.

¹ The RAND Corporation defines influence operations, also known as influence campaigns, as “the collection of tactical information about an adversary as well as the dissemination of propaganda in pursuit of a competitive advantage over an opponent.”

² Geiger, Abigail W. 2019. “Key Findings about the Online News Landscape in America.” Pew Research Center, September. <https://www.pewresearch.org/fact-tank/2019/09/11/key-findings-about-the-online-news-landscape-in-america/>.

Upon completion of the case studies, we fielded two surveys targeting the adult U.S. general population sample. Through these surveys, we were able to obtain weights associated with each variable contained in the I-AM. Using these variable weights, the I-AM Assessment Tool is able to calculate the relative impact an artifact (e.g., an article, a meme, a tweet, etc.) could potentially have on the U.S. general population compared to other artifacts being examined.

As a prototype, the I-AM Assessment Tool currently employs a High-Medium-Low assessment metric to assess an artifact's potential impact on the U.S. general population. While the current assessment metric does provide the end users information needed to make decisions and/or recommend future course(s) of action, end users would benefit much with development and incorporation of a more nuanced and granular assessment metric in the future iteration of the I-AM Assessment Tool.

Nevertheless, even as a prototype, the I-AM Assessment Tool provides the end users a systematic methodology that one can use to analyze artifacts collected from across multiple media types and multiple platforms. This systematic methodology will allow the end users to conduct consistent analysis of foreign influence operations materials regardless of the "influencer" and their modes of delivery.

Introduction

Influence operations, or influence campaigns,³ have been a tool for warfare and strategic geopolitical competition for governments as long as there has been recorded history. Today, we see firsthand the Chinese government's efforts to spread disinformation around the globe about the origin of the SARS-CoV-2 virus, as well as Russia's efforts to influence the courses of American social and political futures. Geiger found that mis- and dis-information have become an increasingly effective tool for nefarious actors to influence elections, policy, and public sentiment in the United States.⁴ In other words, influence operations are an effective and low-cost means for our strategic adversaries and competitors to advance their goals and agendas.

Given U.S. adversaries' views of influence operations, and the immense implications and potential consequences of them, there is an urgent need to advance the state of the art in measuring and assessing the impact and effectiveness of hostile influence operations. The Unconventional Weapons and Technology Division (UWT) of the National Consortium for the Study of Terrorism and Responses to Terrorism (START) developed the *Influence-to-Action Model (I-AM)* and the prototype *Influence-to-Action Campaign/Narrative Impact Assessment Tool (I-AM Assessment Tool)* in an effort to begin to address this issue.

This report provides detailed descriptions of the following activities carried out during the sunsetting period of this research:

1. Survey #2 design and sample characteristics
2. Survey#2 results analyses
3. Survey#2 findings
4. Prototype I-AM Assessment Tool development process
5. Prototype I-AM Assessment Tool development results
6. Prototype I-Am Assessment Tool tests and results

This report concludes with an overall conclusion for the project and recommendations for potential future directions.

³ The RAND Corporation defines influence operations, also known as influence campaigns, as “the collection of tactical information about an adversary as well as the dissemination of propaganda in pursuit of a competitive advantage over an opponent.”

⁴ Geiger, Abigail W. 2019. “Key Findings about the Online News Landscape in America.” Pew Research Center, September. <https://www.pewresearch.org/fact-tank/2019/09/11/key-findings-about-the-online-news-landscape-in-america/>.

Survey #2 Design and Findings

To further refine *Influence-to-Action Model*, and to ascertain weights for each of the variables contained in the model, START designed and fielded a survey #2 for the U.S. general population. This section of the report describes the survey design, sample characteristics, and findings.

Survey Design and Survey Sample Characteristics

Survey Design

The goal of this survey was to refine the *Influence-to-Action Model*; therefore, we chose the outcome variables to be the same 11 narrative variables that the *Model* utilizes to assess the narrative’s impact on the target audience. These 11 narrative variables are grouped into two categories – individual (internal) and societal (structural) level variables. Harkening back to the *Model’s* grounding in the social movement theory, narrative variables relevant to threats and identities are conceptualized as threats described in political process theory as individual (internal) level variables. On the other hand, narrative variables relevant to opportunities are conceptualized as societal (structural) level variables in the political process theory perspective. Table 1, below, provides the full list of the narrative variables used as the outcome variables for this survey:

Variable Name	Variable Short Description
Individual (Internal) Level Variables	
Emotional Appeal	The message either explicitly or implicitly includes an attempt to appeal to the emotions of the target audience. For example, a nation-state, in order to entice a specific ethnic diaspora living in the United States, frames the message in the “perspective” of a member of that ethnic diaspora and tells the hardship of living in the United States that most members of the diaspora can identify with.
Threats to Identity	The message either explicitly or implicitly identifies threat(s) to the commonly perceived/accepted identity of the target audience. For example, the message clearly identifies that people with certain ideologies in the United States are not approving of people of certain ethnicity.
Threats to Culture (Way of Life)	The message either explicitly or implicitly identifies threat(s) to the commonly perceived/accepted culture of the target audience. For example, the message clearly identifies that people with certain ideologies in the United States are not approving of people living in a diaspora, who are not assimilating to the “American culture.”
Identity Affirmation	The message either explicitly or implicitly conveys that the target audience is of a certain identity (that aligns with the reader’s identity), and that you should be proud of your identity.
Victim Affirmation	The message either explicitly or implicitly conveys that the target audience is being victimized due to an aspect of your identity, social status, economic status, race, ethnicity, etc. For example, the message implies that people who meet certain criteria are not able to advance further in the society because another group within society (e.g., another social class) is systematically placing barriers to prevent the advancement of those people.
Victimization	The message either explicitly or implicitly conveys there is a need to “right the wrong” or “fight against injustice”; therefore, your actions against those who have made you a victim are justified.

Variable Name	Variable Short Description
Societal (Structural) Level Variables	
Persistent and Increasing Threats (Things are getting out of hand)	The message either explicitly or implicitly conveys persistent and worsening conditions if something is not done to reverse the course. For example, messaging about potential worsening of COVID cases and situation around the holidays.
Clear Alternative Future (World will be better by doing something about it)	The message either explicitly or implicitly identifies that by taking action, there is an alternative future where threats against the target audience will diminish or even be eliminated.
Purported Lack of Response (Nothing is being done about it)	The message either explicitly or implicitly identifies that no one is doing anything to stop and/or reverse the threat against the target audience.
Clearly Identified In-/Out-Group (It is the right thing to do for the “team”)	The message either explicitly or implicitly identifies there is an in-group (the one that the target audience belongs to) and (an) out-group(s), and that one needs to take action because “it is the right thing to do for the ‘team’.”
Social Validation (Increases my reputation)	The message explicitly or implicitly states doing something about the identified injustice is correct, justified, and/or legitimate. The message may also imply that “everyone is doing it,” and that those who do are “in the right” and will be “recognized” for doing so.

Table 1: Influence-to-Action Model Variables used as Survey Outcome Variables

For the survey, we utilized two different approaches to determine which variable(s) is/are seen as the most important variable(s) for people when they decide whether to act based on information they receive (i.e., the type of message the narrative conveys, or more accurately, the type of message the participants perceive the narrative conveys).⁵ First, we asked the survey participants to arrange the two categories of variables in the order of importance to them, resulting in each participant producing two ordered list of variables – one for the individual level variables and another for the societal level variables. Once the participants produced two ordered list of variables, we had the participants conduct pairwise comparisons of their top three choices from each list utilizing the contingent valuation method. Through these procedures, we were able to ascertain which narrative variables are self-identified to be relatively more important compared to other narrative variables.

For our second approach, we asked the participants to consider the 11 narrative variables independently of each other⁶ and asked them to utilize a five-point Likert scale that ranged from “strongly disagree” to “strongly agree” to answer the following prompt: “I will definitely donate my time and/or money to a cause or movement if the messaging [insert a phrase containing one narrative variable].”⁷ Through this procedure we were able to ascertain the impact of each narrative variable on the target audience. We will present our findings from these two approaches in the **Survey Findings** section below.

Participant Qualifiers

For this survey, we collected data from 3,049 American adults. To accurately represent the U.S. general population, we used age, gender, location of residence (according to the U.S. Census regions), and race as

⁵ This allowed us to address the literature’s shortfall and refine our *Influence-to-Action Model* by determining which narrative variables will increase the target audience’s likelihood of action based on their self-identified importance of these variables.

⁶ To ensure the participants considered each narrative variables independently, we showed the participants one question at a time with one narrative variable listed per question.

⁷ For example, the prompt for emotional appeal would read, “I will definitely donate my time and/or money to a cause or movement if the messaging makes an emotional appeal to me.”

qualifiers to participate in the survey. For our sample, 1,017 (33%) of the respondents were ages 18–34, while 964 (32%) were ages 35–54, and 1,068 (35%) were 55+ years of age. For gender, 1,591 (52%) of the participants were female, 1,429 (47%) were male, and 29 (1%) were non-binary/third gender. For location of residence, 610 (20%) of the participants reside in the Northeast region of the United States, while 1,220 (40%) reside in the South, 610 (20%) reside in the Midwest, and 607 (20%) reside in the West. For Race, 1,984 (65%) of the participants identified themselves as non-Hispanic white, 366 (12%) as black, 366 (12%) as Hispanic/Latinx, and 333 (11%) as other⁸. Table 2, below, provides a detailed breakdown of the survey participant demographics:

U.S. General Population Sample (n=3,049)					
Age	18 - 34: 33%		35 - 54: 32%		55+: 35%
Gender	Female: 52%		Male: 47%		Non-binary: 1%
Residence (U.S. Census Regions)	Northeast: 20%	South: 40%	Midwest: 20%	West: 20%	
Race	White (non-Hispanic): 65%	Black: 12%	Hispanic/Latinx: 12%	Other: 11%	

Table 2: Survey Demographic Characteristics

Participant Demographic Characteristics

The survey also captured several other demographic characteristics of the participants in addition to those mentioned above in the qualifying characteristics. These demographic characteristics included education level, employment status, marital status, past financial difficulties, religious inclination, ideological inclination, and identity fusion index.

For education level, 1,060 (35%) of the participants hold at least a bachelor’s degree while 1,989 (65%) do not hold a college degree. For Employment Status, 1,365 (45%) of the participants are employed full-time while 317 (10%) are employed part-time, and 1,367 (45%) are unemployed, full-time student, and/or retired. For marital status, 1,440 (47%) of the participants are married or in a domestic relationship while 1,609 (53%) are not married. For financial difficulties, 478 (16%) of the participants stated they have never experienced financial difficulties throughout their lives while 2,571 (84%) stated they have experienced financial difficulties in their lives. When asked about their religious inclination, 1,342 (44%) responded that they are religious while 1,707 (56%) responded that they are not religious. Additionally, 847 (28%) of the participants identified themselves as being liberal while 1,257 (41%) identified themselves as moderate or middle of the road, and 945 (31%) identified themselves as conservative. Finally, when asked to identify the image that best represents the way they perceive their connection with groups they identify with (identity fusion index, see Figure 1 below), most of the participants (774 – 25%) identified themselves as category “C”. 575 participants (19%) identified themselves as category “A”; 511 participants (17%) identified themselves as category “B”; 580 (19%) identified themselves as category “D”; and 604 (20%) identified themselves as category “E”.

⁸ Other included 1.5% Native American; 5% Asian/Pacific Islander; 4% mixed; and 0.5% other.

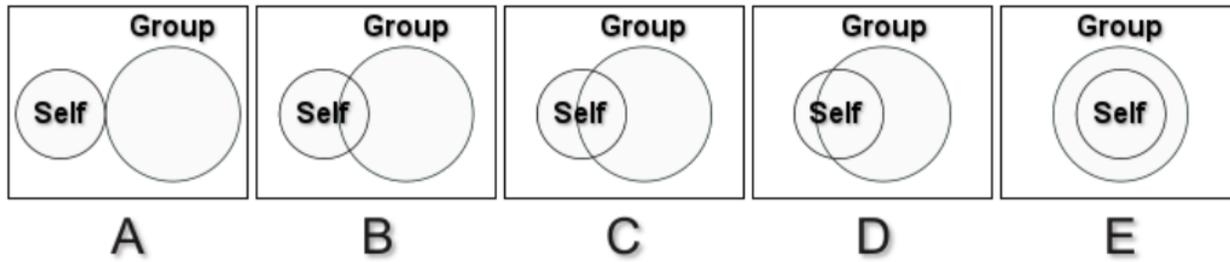


Figure 1: Identity Fusion Index Illustration⁹

Figure 2 and Figure 3, both below, provide illustrations of the survey participants' demographic characteristics:

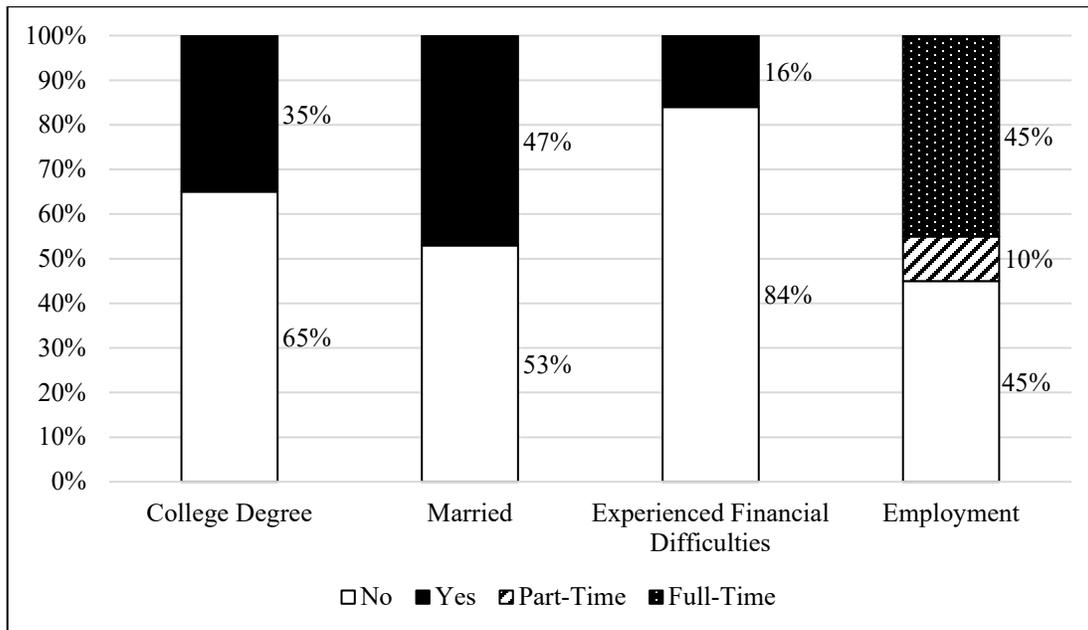


Figure 2: Survey Participants' Demographic Characteristics: Education, Marital Status, Financial Difficulties, and Employment Status¹⁰

⁹ Jimenez, Juan. "About the Dynamic Identity Fusion Index (DIFI)." <https://www2.uned.es/pspp/measures/difi/index.htm>.

¹⁰ Margin of Error for all figures in this paper is +/- 2% at 95% Confidence Interval unless otherwise noted.

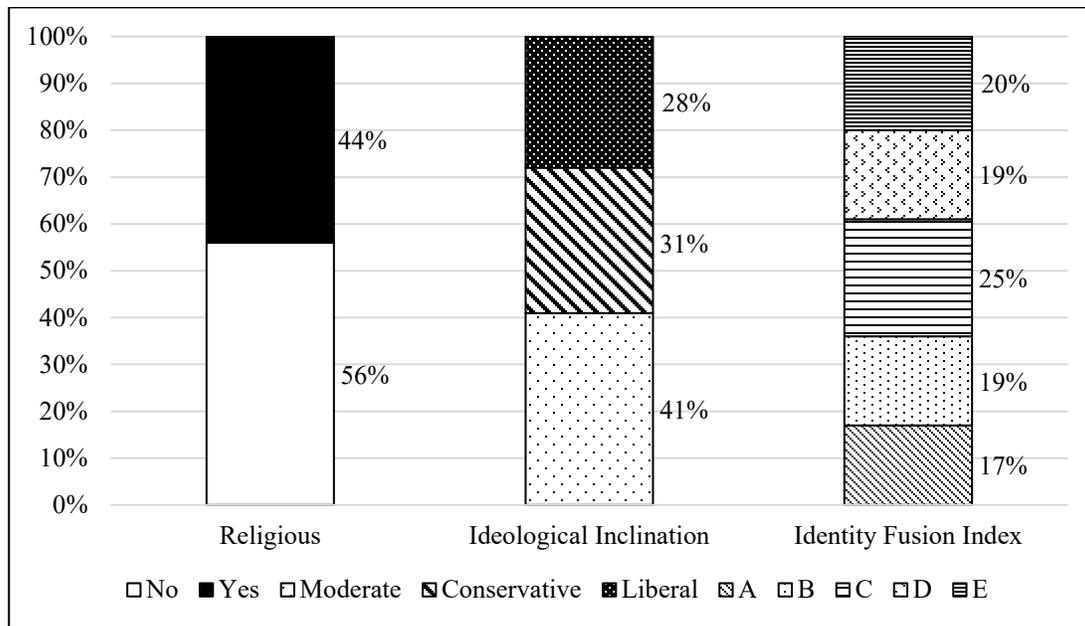


Figure 3: Survey Sample Demographic Characteristics: Religious Inclination, Ideological Inclination, and Identity Fusion Index

Participant Interaction with Information

When asked which medium the participants use the most to access the news, the highest percentage of the participants (38%) responded they access the news via the television. The Internet, social media posts from their personal networks, and social media posts from a news organization (30%, 13%, and 8% respectively) were selected as the next three types of mediums the participants use the most to access the news. Figure 4, below, provides full responses of the participants regarding the medium type they use the most to access the news:

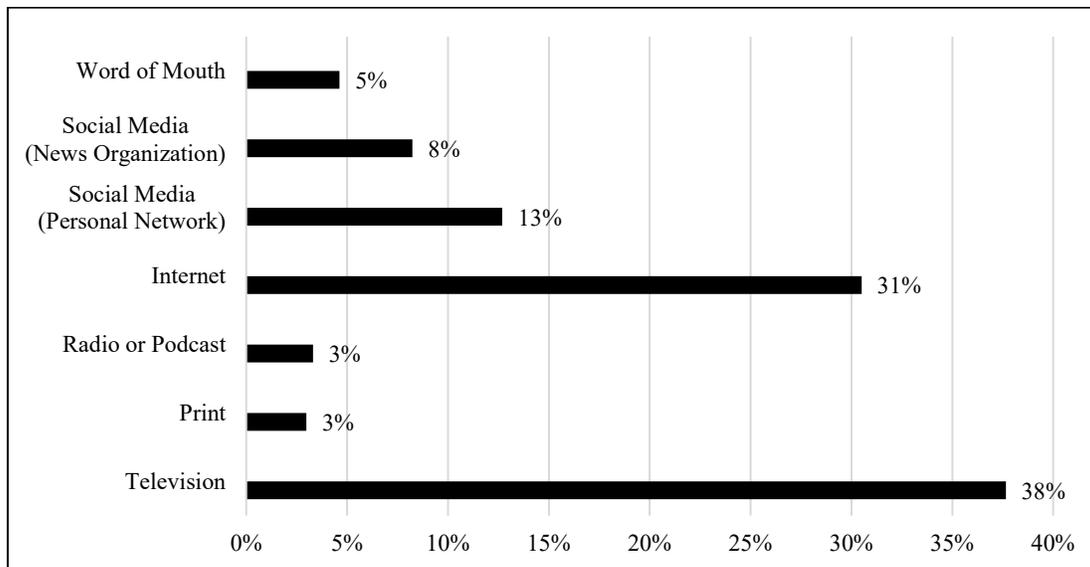


Figure 4: Medium MOST used to Access the News

We also asked about the medium the participants use the most to access information in general. For this question, the highest percentage of the participants (38%) responded they use the Internet the most to

access information in general, followed by television (33%), and by social media posts in their person networks. Figure 5, below, provides full responses of the participants regarding the medium type they use the most to access information in general:

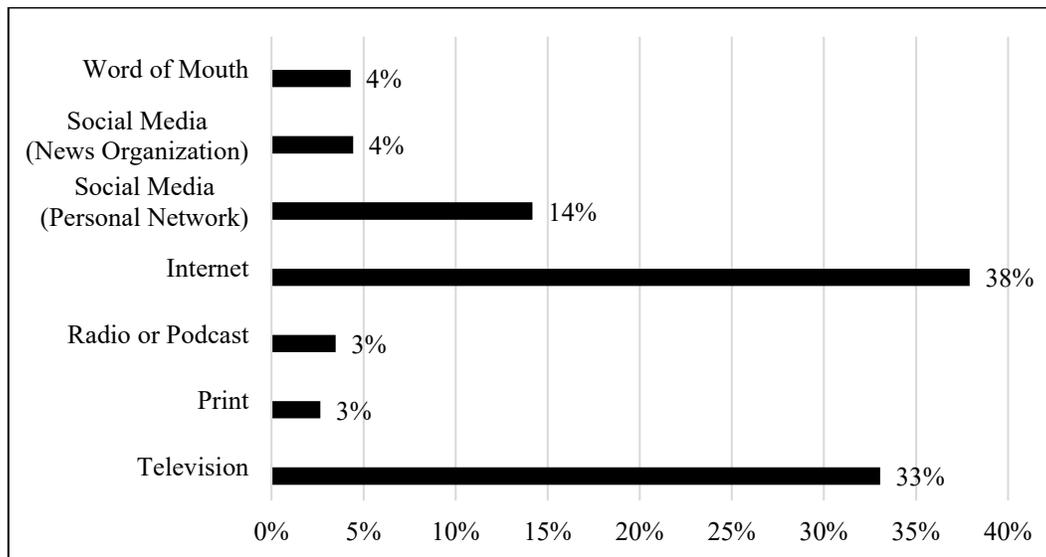


Figure 5: Medium MOST used to Access Information in General

As for how trustworthy the participants felt about the information sources, with 0 being not trustworthy at all and 10 being completely trustworthy, the participants chose local television stations as being most trustworthy than any other information sources. Additionally, the participants chose social media (both social media sources from official media outlets and personal networks) as being least trustworthy. Finally, the participants seemed to be ambivalent about most information sources listed, with the trustworthy scores averaging between 5.09 and 5.56. Figure 6, below, provides an illustration of the participants' average trustworthy ratings of each information source:

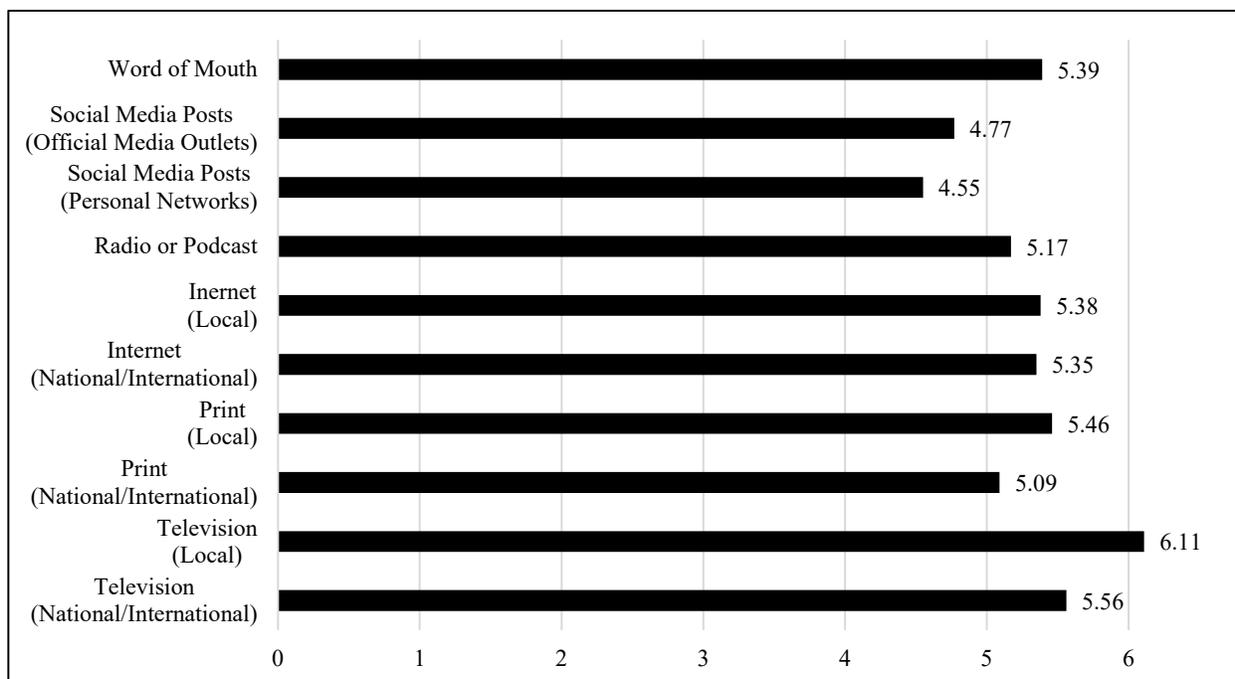


Figure 6: Average Trustworthiness by Information Source Type

Since we were interested in whether an individual would act based on the information that he/she/they receives, we asked the participants what they would do if they came across information that is of interest to them. Approximately 68%, which was the highest percentage, of the participants responded they would “Like” that particular post and/or article. The next highest response was that they would post a comment on the said post and/or article (approximately 55%). Approximately equal percentages of participants said they would share the information through either public or private forums, share posts privately via a messaging service, or discuss posts with people offline. Finally, approximately 15% of the participants (lowest percentage) answered they would do nothing. Figure 7, below, provides an illustration of the participants’ responses to the question, “What do you do when you come across information that is interesting to you or that you like? (Select all that apply)”:

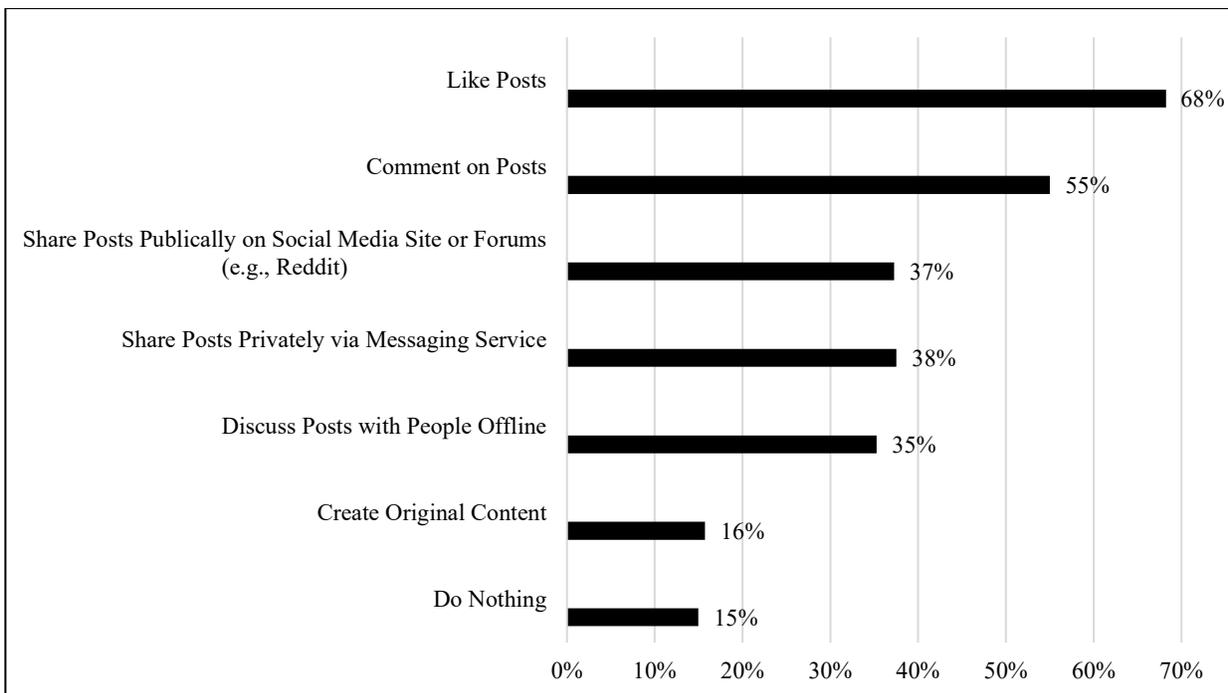


Figure 7: Responses to “What do you do when you come across information that is interesting to you or that you like? (Select all that apply)”

As for the methods used most often to share information, if one is to share it, approximately 33% of the participants responded that they share information most often using a social media platform. Additionally, approximately 26% of the participants responded that they share information most often through word of mouth. Furthermore, approximately 16% responded they use Internet chat most often to share information while approximately 10% said they use email most often as the method of sharing information. Finally, approximately 13% said they never share, and approximately 2% said they use print media most often for information sharing. Figure 8, below, provides an illustration of the participants’ responses to the question, “What source do you use MOST OFTEN to share or forward news or information?”:

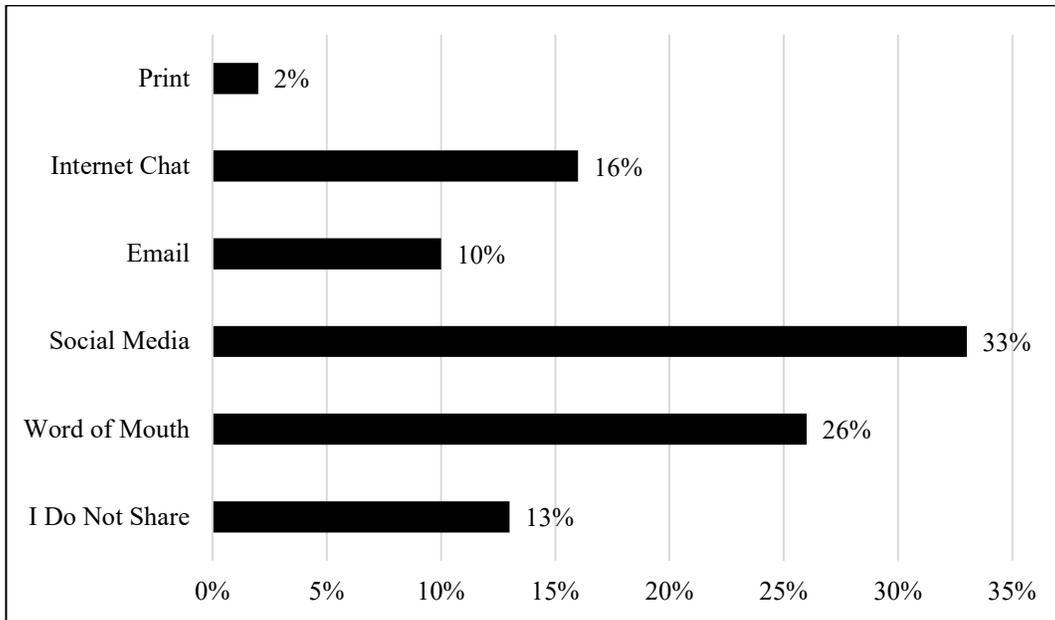


Figure 8: Responses to "What source do you use MOST OFTEN to share or forward news or information?"

When asked whether the participants have ever been exposed to what he/she/they believe to be mis- and/or dis-information, overwhelming majority of the participants (approximately 80%) responded that they have been exposed. Approximately 11% of the participants responded they have not been exposed to mis- and/or disinformation, and approximately 9% of the participants responded that they do not know whether they have been exposed. Figure 9, below, provides an illustration of the participants' responses to whether or not they believe they have been exposed to mis-/dis-information:

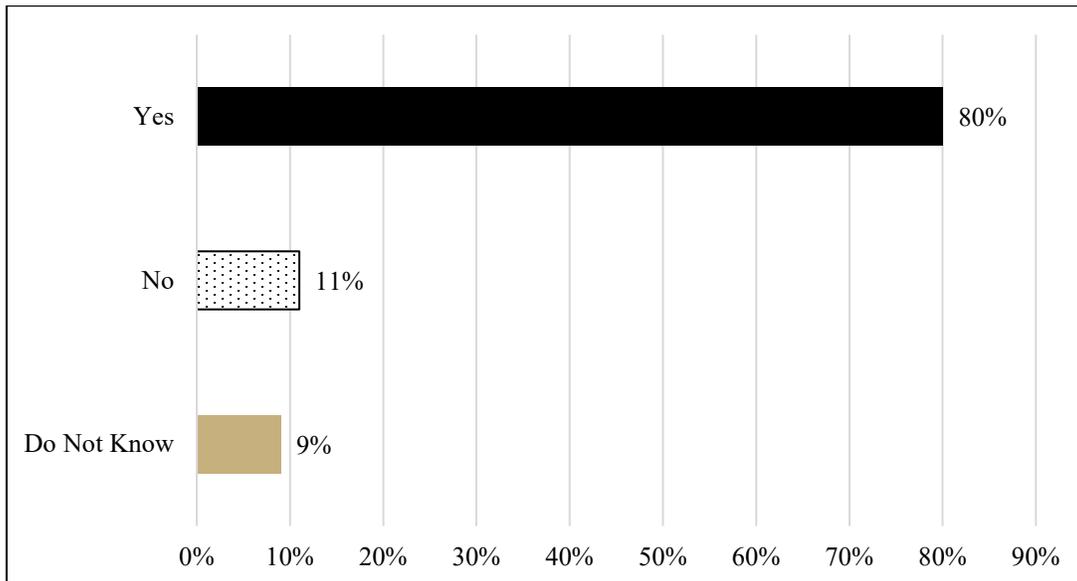


Figure 9: Responses to "Have you ever been exposed to what you believe to be mis- and/or dis-information?"

Survey Analysis

As stated above, given the goal of this survey was to refine our *Influence-to-Action Model*, we chose the outcome variables to be the same 11 narrative variables that the *Model* utilizes to assess the narrative’s impact on the target audience. These 11 narrative variables are grouped into two categories – individual (internal) and societal (structural) level variables (See Table 1 above for a list of variables). Utilizing two different approaches in the survey, we were able to ascertain the narrative variables deemed important by the American public as well as the impact each narrative variable has on the target audience. We present our detailed survey findings in this section.

Narrative Variable Importance

For determining the narrative variables deemed important by the American public, *Threat to culture / way of life*, *Identity affirmation*, and *Victimization* were within the margin of error¹¹ of each other for being the most important narrative variable within the individual level variable category. For the societal level variables, *Clear alternative future (World would be better)* and *Clearly identified in-/out-group (It is the right thing to do for the “team”)* were within the margin of error of each other for being the most important narrative variable. Figure 10, below, provides an illustration of the overall percentage each narrative variable was selected to be the most important variable by the survey participants:

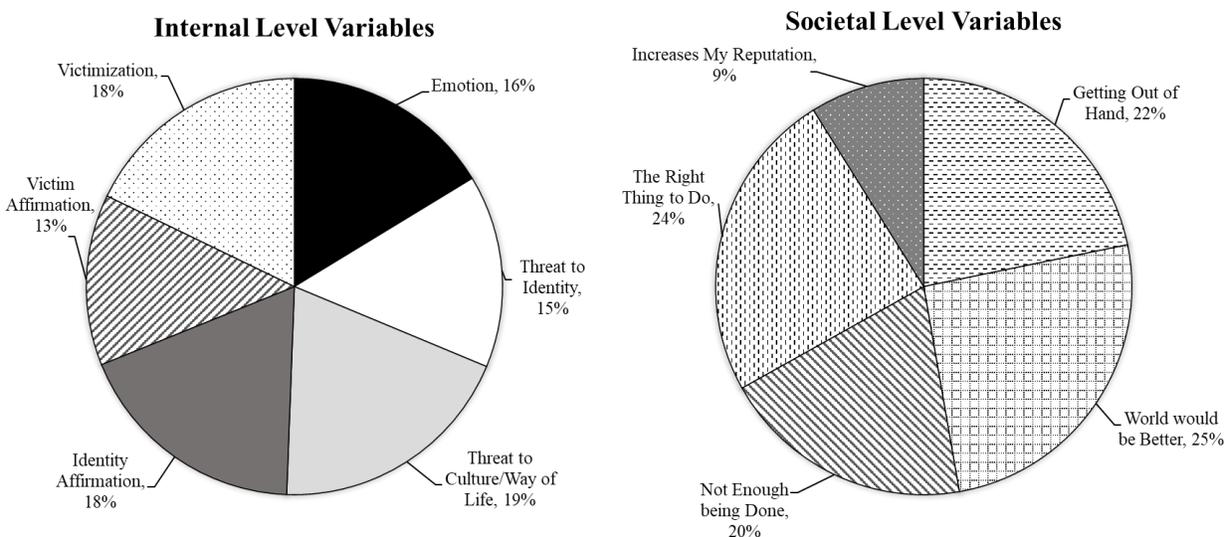


Figure 10: Percentages of Participant-rated Most Important Narrative Variables

An interesting finding for this portion of the survey was that the results for which narrative variable(s) is/are most important tended to mostly remain consistent regardless of differences in participant groupings by demographic characteristics. For example, one might hypothesize that participants with different gender, racial, educational, or political characteristics would designate different narrative variables as being most important. The survey results showed this not to be the case. While there were some nuanced variations in the rankings for each demographic group, *Threat to culture / way of life*, *Identity affirmation*, *Victimization*, *Clear alternative future (World would be better)*, and *Clearly identified in-/out-group (It is the right thing to do for the “team”)* were consistently shown to be among the most chosen variables regardless of the demographic characteristics. Figure 11 thru Figure 15, all below, illustrate this trend:

¹¹ Margin of error for the discussion of the survey results is +/- 2% at 95% Confidence Interval unless otherwise specified.

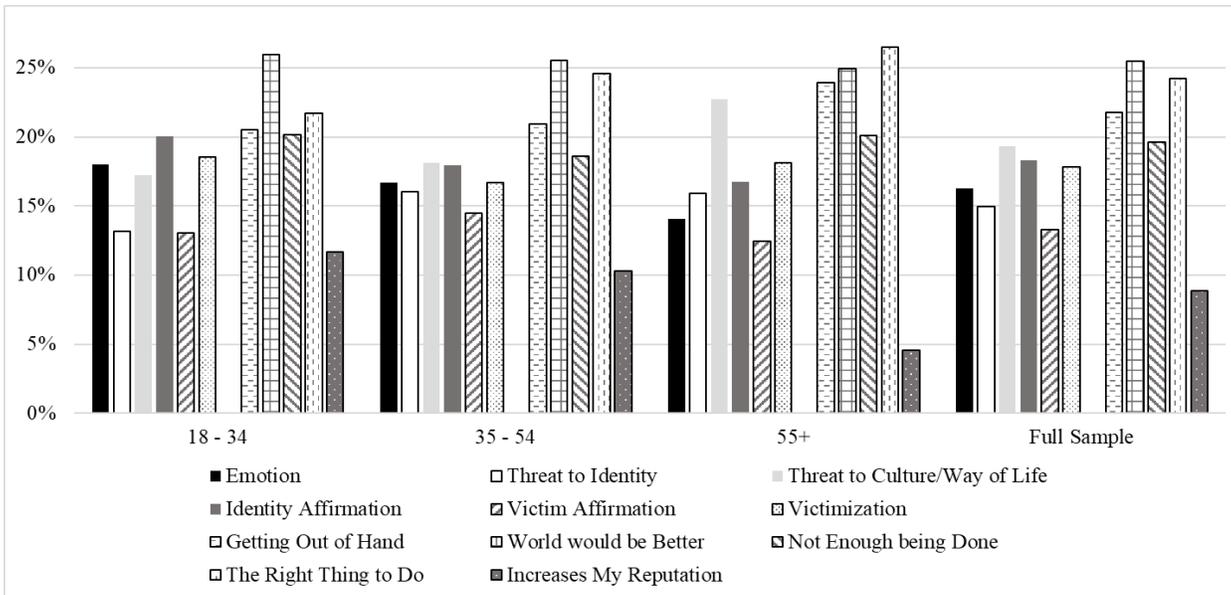


Figure 11: Percentages of Participant-rated Most Important Narrative Variables: Age Group Comparison

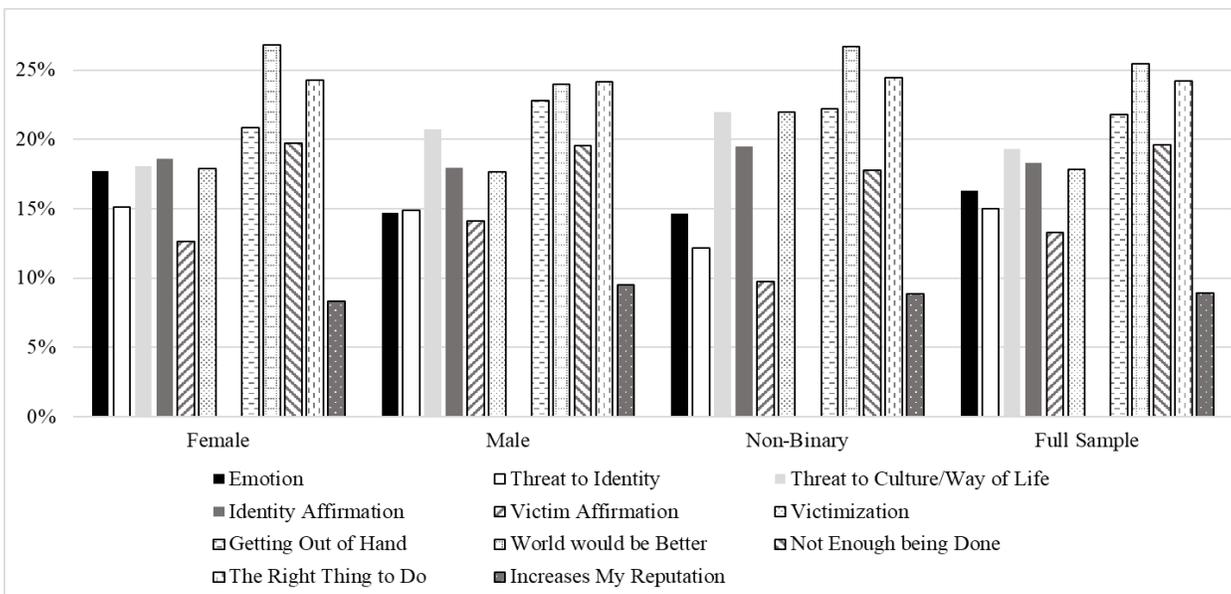


Figure 12: Percentages of Participant-rated Most Important Narrative Variables: Gender Comparison

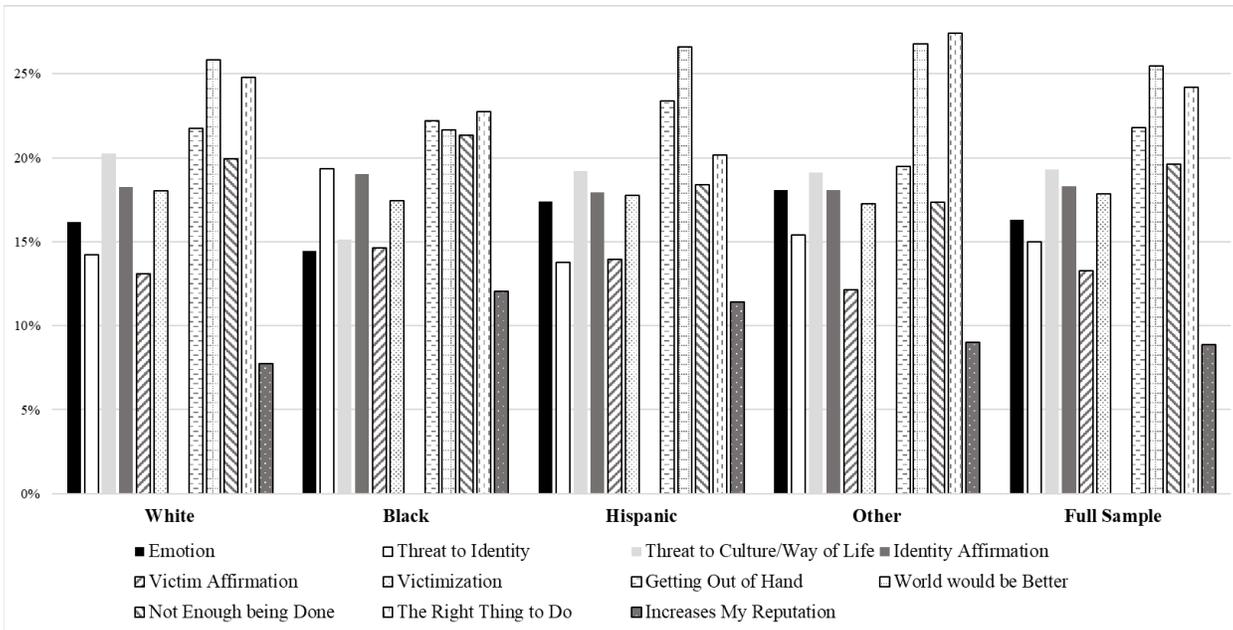


Figure 13: Percentages of Participant-rated Most Important Narrative Variables: Racial Group Comparison

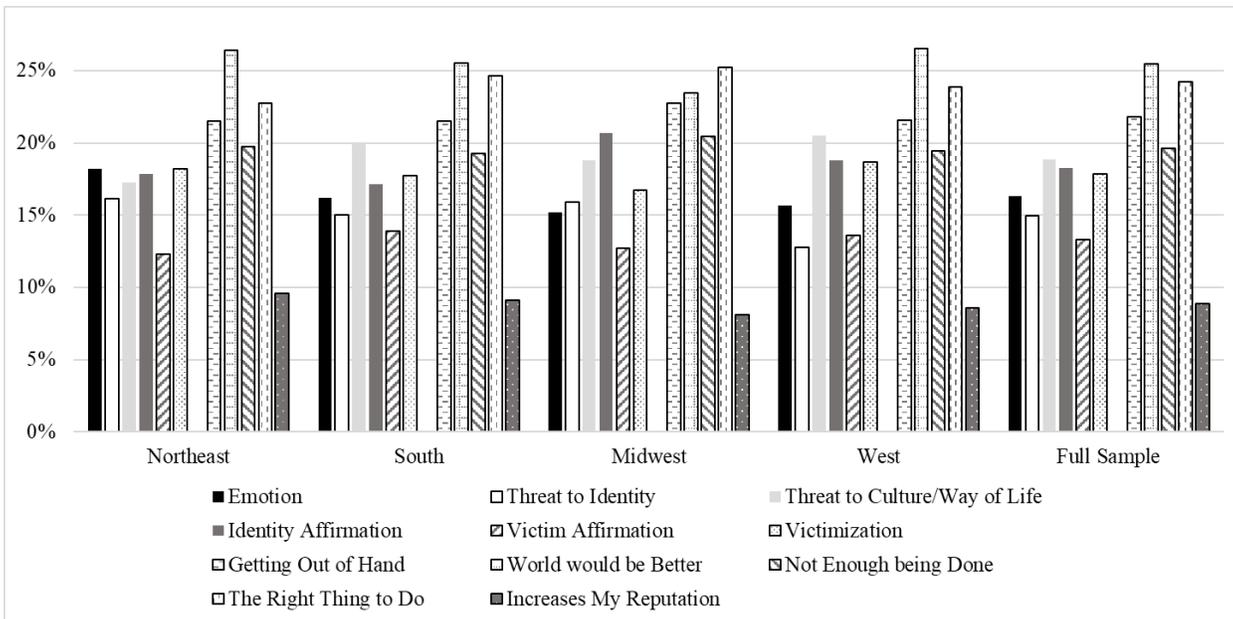


Figure 14: Percentages of Participant-rated Most Important Narrative Variables: Regional Comparison

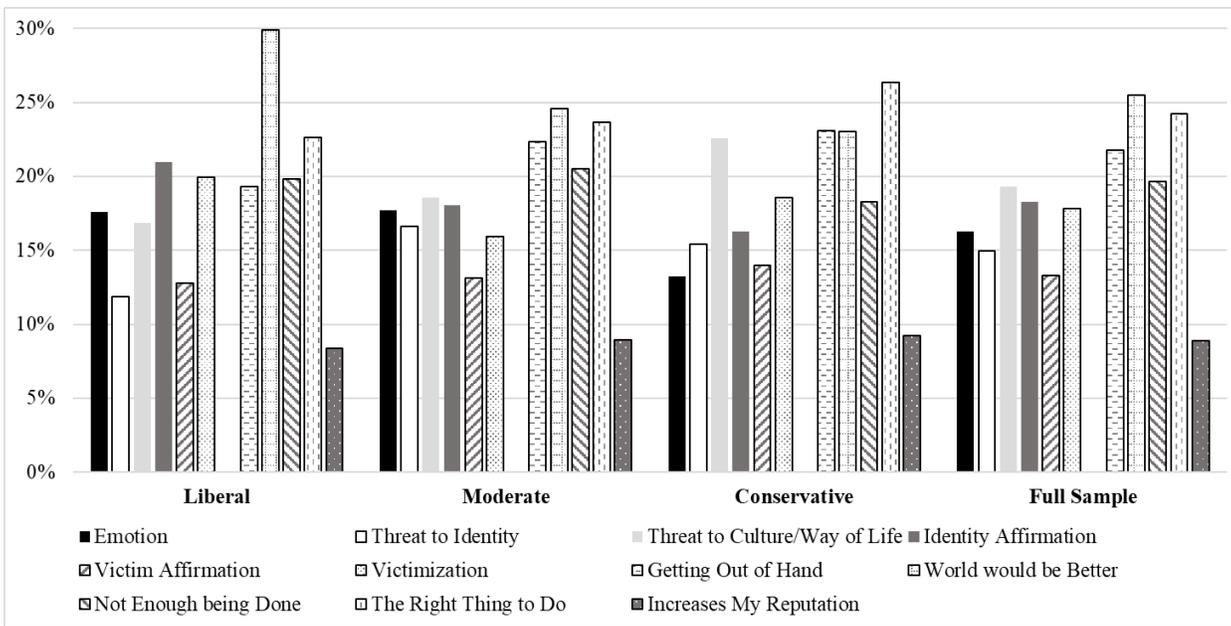


Figure 15: Percentages of Participant-rated Most Important Narrative Variables: Political Ideology Comparison

Qualitative Five-point Likert Scale Results

The five-point Likert scale approach, however, provided us with slightly different results. We ascertained from the Likert scale results that, 1) certain narrative variables (for example, *Threat to culture/way of life*) may have a high number of people who placed them as the most important as well as those who did not place them high on their importance order; and 2) the average Likert scale scores provide us a qualitatively more accurate sense of which narrative variables are more likely to motivate people toward action since the scores reflect not only the number of people who may have selected these variables as most important to them but also the number of people who may not have picked the variables as being most important to them but would act if they saw the sentiments of the variables conveyed in the narrative they come in contact with.

The average Likert scale scores showed that the participants were clearly drawn to action by narratives that conveys *Victimization* the most, followed by *Identity Affirmation*, for the individual level variable category, and *Clear alternative future (World would be better)* the most, followed by *Persistent and increasing threats (Things are getting out of hand)*, for the societal level variable category. *Threat to culture/way of life* and *Clearly identified in-/out-group (It is the right thing to do for the "team")*, which were among the most important variables, were not among the top variables for the average Likert scale score results. In fact, they were fifth and fourth ranked variables respectively, suggesting that while these variables may be important, they may be less effective in making people act.

One item of note from the average Likert scale score results was the negative score for the variable *Social validation (Increases my reputation)*, suggesting that people will most likely be “turned off” – which would mean that it would decrease the likelihood for people to act – by narratives that attempt to convey, either explicitly or implicitly, that one should act based on the potential for social validation. Figure 16, below, provides a detailed information on the average Likert score results for the narrative variables:

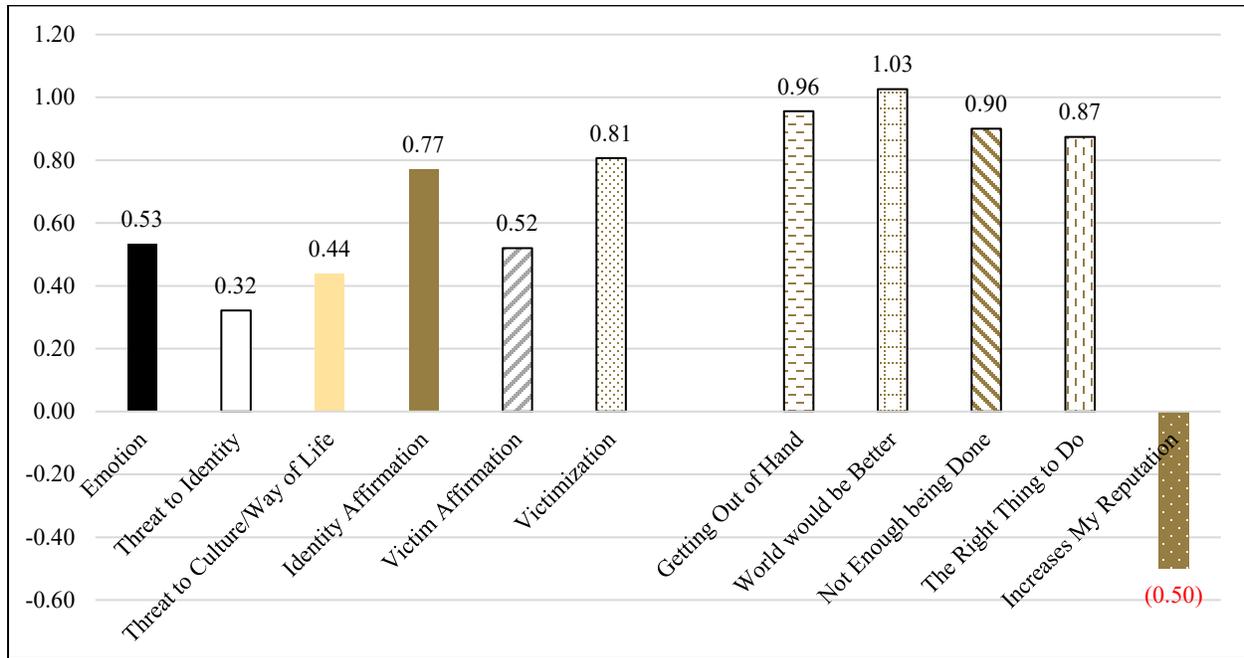


Figure 16: Average Likert Scale Scores for Full Sample

Same with the results for the most important variables above, the results for the Likert scale also showed that the results mostly remained consistent regardless of differences in participant groupings by demographic characteristics. While, again, there were some nuanced variations in the rankings for each demographic group, *Victimization* and *Clear alternative future (World would be better)* were consistently shown to be the variables with the highest average Likert scale scores for their respective variable categories regardless of the demographic characteristics. Additionally, *Identity affirmation* and *Persistent and increasing threats (Things are getting out of hand)* were consistently shown to be the variables with second highest average Likert scale scores for their respective variable categories regardless of the demographic characteristics. Figure 17 thru Figure 21, all below, illustrate this trend:

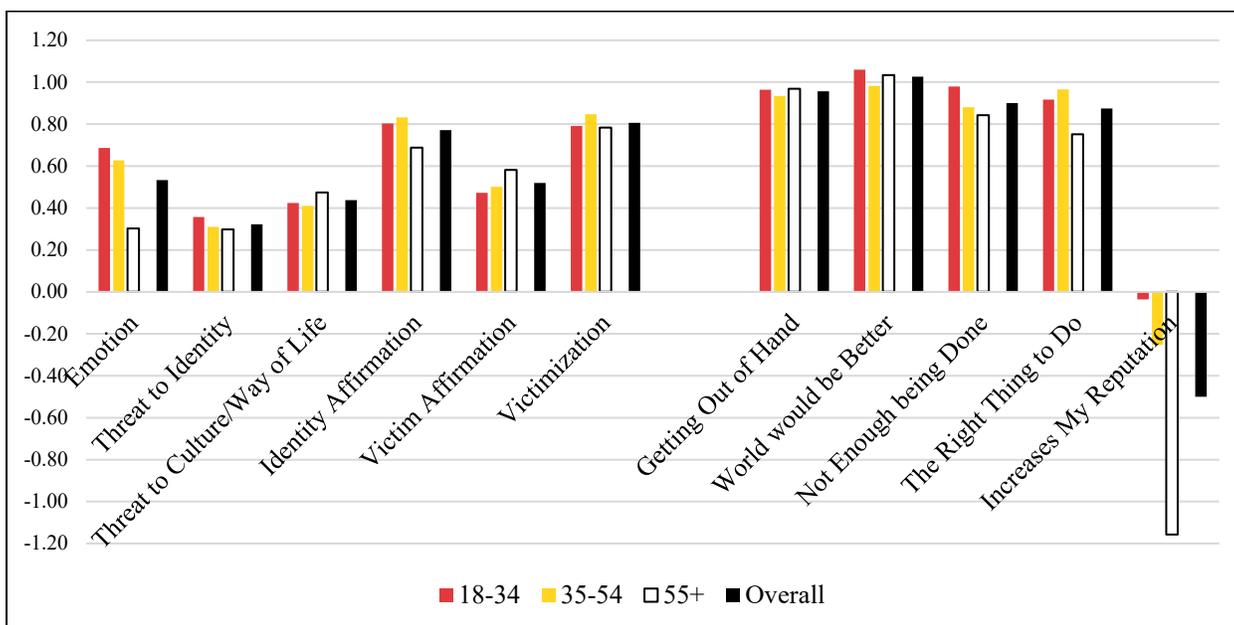


Figure 17: Average Likert Scale Scores: Age Group Comparison

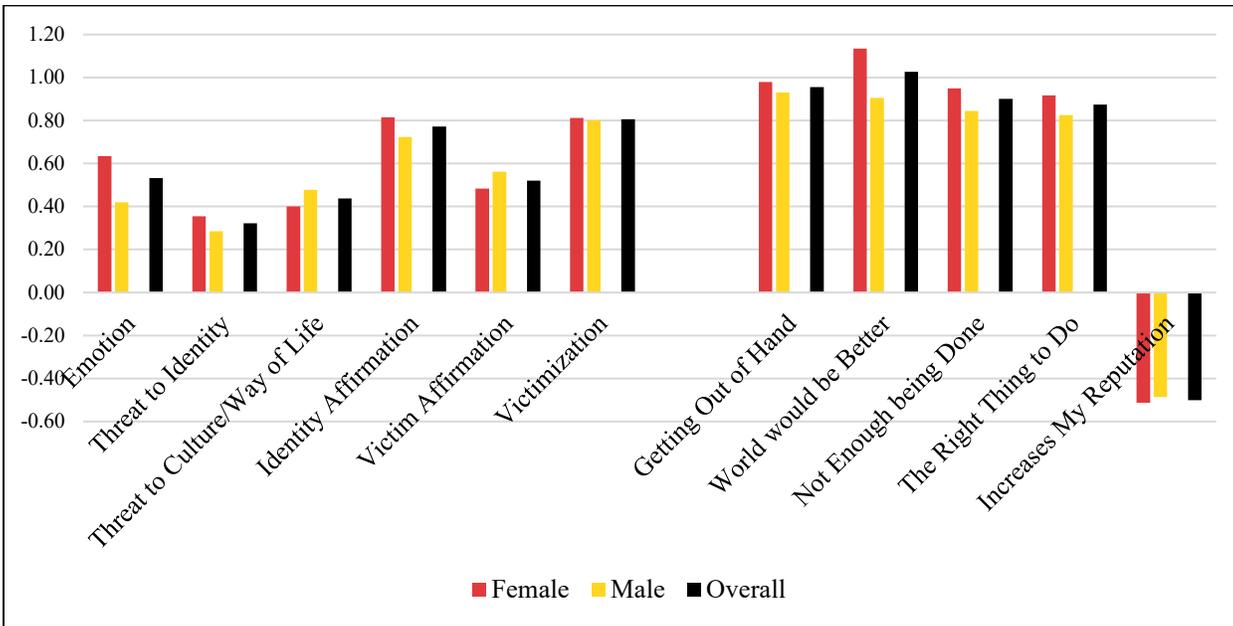


Figure 18: Average Likert Scale Scores: Gender Comparison

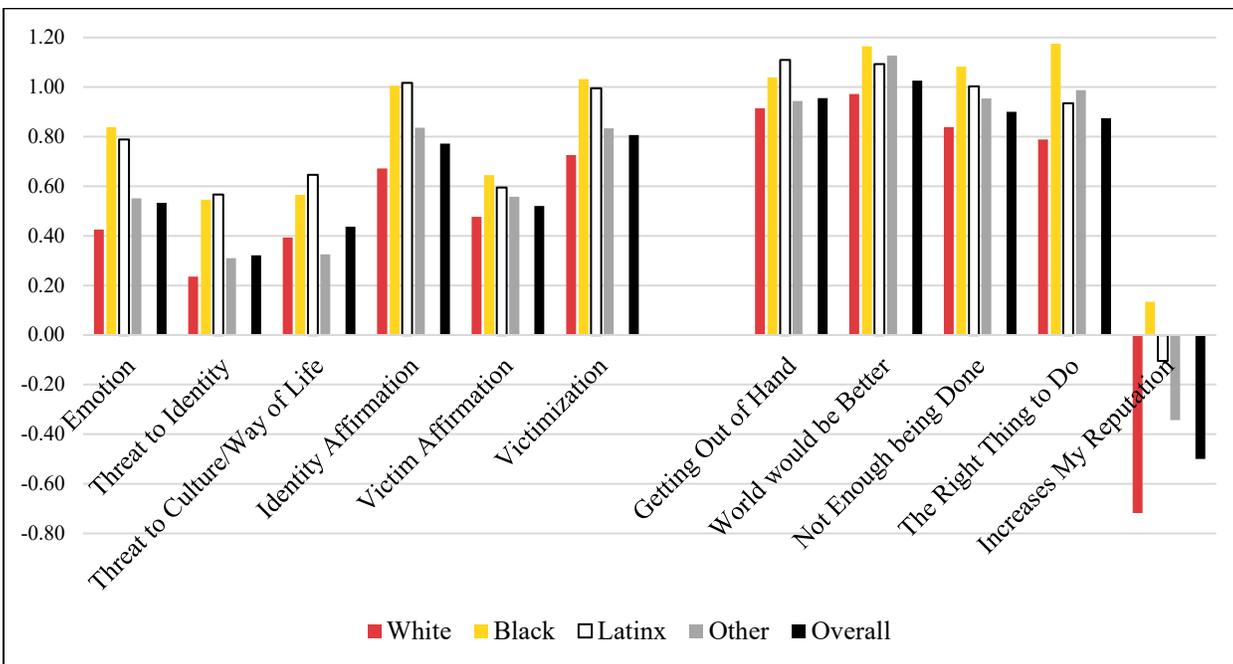


Figure 19: Average Likert Scale Scores: Racial Group Comparison

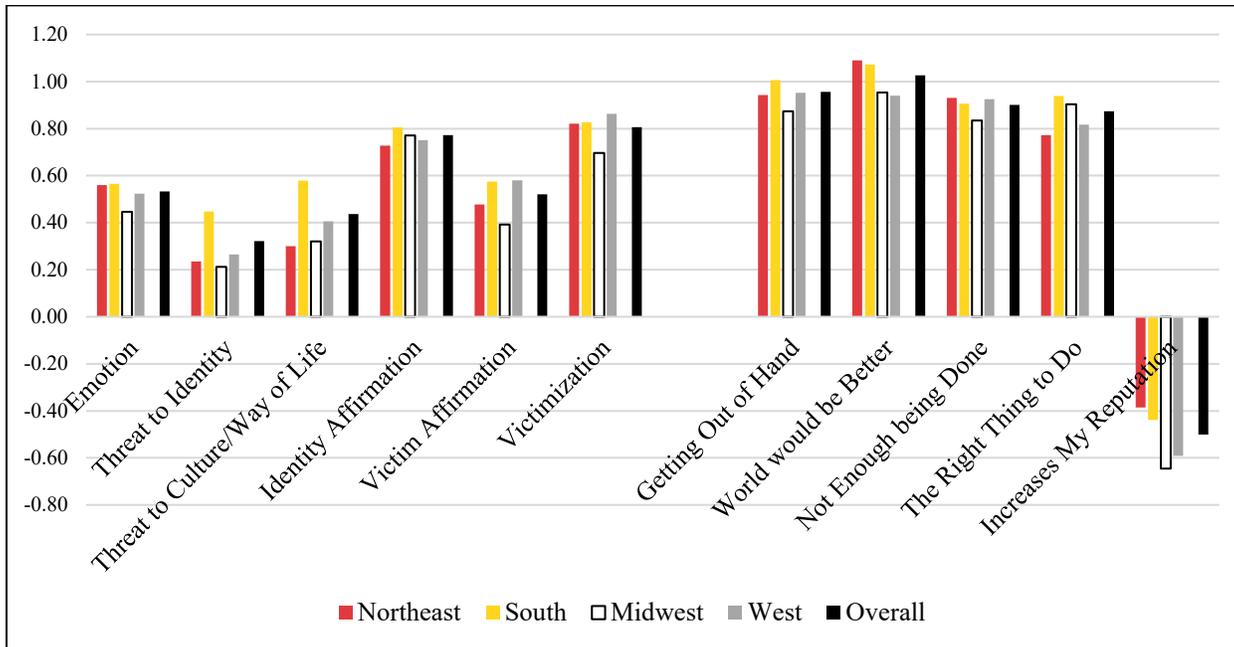


Figure 20: Average Likert Scale Scores: Regional Comparison

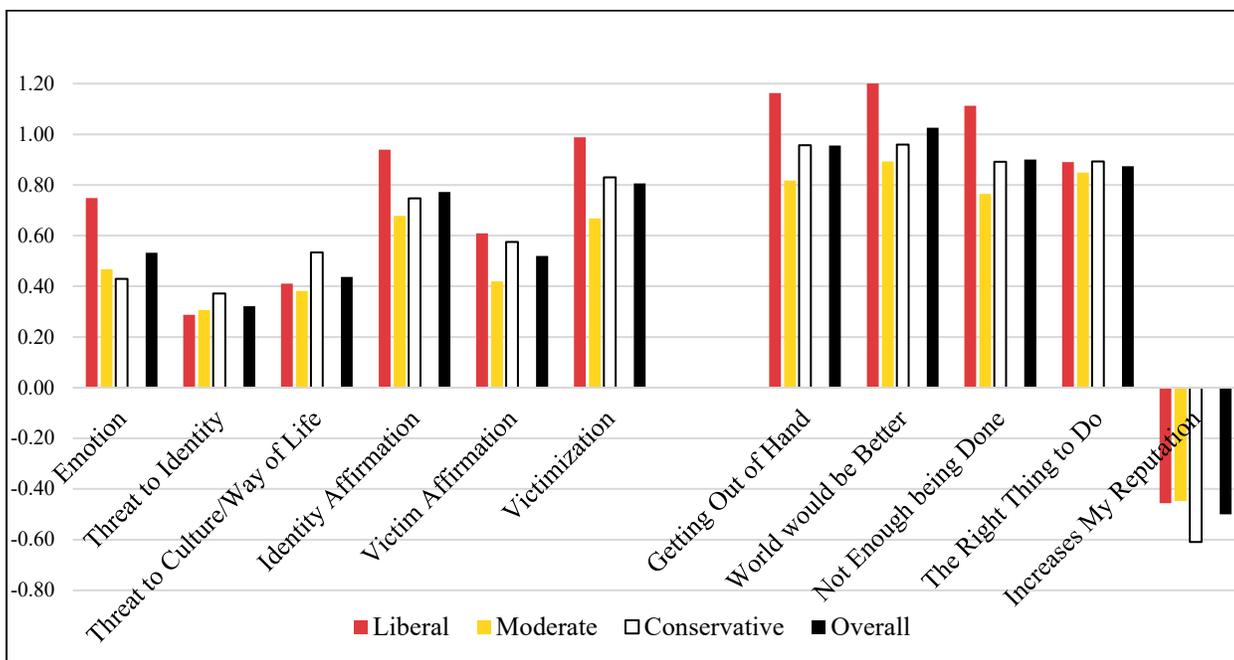


Figure 21: Average Likert Scale Scores: Political Ideology Comparison

Narrative Variable Impact

To determine each narrative variable’s degree of impact, we employed multi-way multivariate analysis of variance (MANOVA) method to analyze the survey data. The analyses found all narrative variables have a role in influencing the target audience to act (or not act) given the target audience’s specific demographic characteristics. First, we found that participants who are 55 year of age and above are less likely to act based on the narrative that appeals to one’s emotion compared to other age groups. We also found that messages that convey social validation as the motivation for action does not resonate with the 55 years and older group – we also found this to be the narrative variable with the most effect on this group. All

other narrative variables had no significant effect on the target population based on the individual’s age. Table 3, below, shows the narrative variables with statistically significant effects on the target audience based on age:

Demographic Characteristic: Age	Group: 55+ Years of Age			
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Emotional Appeal	-.2319	.0815	-2.84	0.004
Social Validation	-.9293	.0959	-9.69	0.000

Table 3: Narrative Variables with Statistically Significant Effects based on Age Group

Examining the participants’ responses by gender, we found three narrative variables to be statistically significant for this demographic characteristic – *emotional appeal*, *clear alternative future*, and *social validation*. For *emotional appeal* and *clear alternative future*, we found that male participants are less likely to act compared to female participants; however, male participants were shown to be more likely to act based on the narrative that conveys social validation than female participants. Of all the narrative variables, *social validation* was found to be the only statistically significant variable where male participants were more likely to act based on the message. All other narrative variables had no significant effect on the target population based on the individual’s gender. Table 4, below, shows the narrative variables with statistically significant effects on the target audience based on gender:

Demographic Characteristic: Gender	Group: Male			
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Emotional Appeal	-.1760	.0593	-2.97	0.003
Clear Alternative Future	-.2455	0.0594	-4.14	0.000
Social Validation	.2260	.0698	3.24	0.001

Table 4: Narrative Variables with Statistically Significant Effects based on Gender

An examination based on the participants’ self-identified racial groups revealed *emotional appeal*, *threat to identity*, *identity affirmation*, and *victimization* had statistically significant effect for those who identified themselves as black or Hispanic/Latinx. Blacks and Hispanic/Latinx were more likely to act based on narratives that conveys aforementioned variables compared to other racial groups. In addition to the narrative variables mentioned immediately above, *victim affirmation*, *purported lack of response*, *clearly defined in-/out-group(s)*, and *social validation* also had statistically significant effects on black participants, all making them more likely to act. Of these, *social validation* was shown to have the most effect on black participants. Also, *threat to culture/way of life* was shown to have statistically significant effect on Hispanic/Latinx participants in addition to those narrative variables identified above. Of the narrative variables that were shown to have statistically significant effect for Hispanic/Latinx participants, *identity affirmation* was shown to have the most effect for the group. Finally, all other narrative variables had no significant effect on the target population based on the individual’s race. Table 5, below, shows the narrative variables with statistically significant effects on the target audience based on race:

Demographic Characteristic: Race				
Group: Black				
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Emotional Appeal	.3004	.0920	3.27	0.001
Threat to Identity	.2925	.1094	2.67	0.008
Identity Affirmation	.3097	.0933	3.32	0.001
Victim Affirmation	.2246	.0997	2.25	0.024
Victimization	.3461	.0993	3.48	0.001
Purported Lack of Response	.2360	.0923	2.56	0.011
Clearly Defined In-/Out-Group(s)	.3160	.0952	3.32	0.001
Social Validation	.5641	.1082	5.21	0.000
Group: Hispanic/Latinx				
Emotional Appeal	.2382	.0933	2.55	0.011
Threat to Identity	.3444	.1109	3.10	0.002
Threat to Culture/Way of Life	.3063	.1137	2.69	0.007
Identity Affirmation	.3532	.0946	3.73	0.000
Victimization	.2977	.1008	2.95	0.003

Table 5: Narrative Variables with Statistically Significant Effects based on Race

Threat to culture/way of life was the only narrative variable shown to have any statistically significant effect on the participants based on their region of residence. The results showed participants that reside in the South were more likely to be affected by narratives that convey *threat to culture/way of life* than those who reside elsewhere in the United States. Table 6, below, shows the narrative variable with statistically significant effect on the target audience based on region of residence:

Demographic Characteristic: Region of Residence		Group: South		
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Threat to Culture/Way of Life	.2673	.0953	2.80	0.005

Table 6: Narrative Variables with Statistically Significant Effects based on Region of Residence

An individual's education level was another demographic characteristic where only one narrative variable had an effect. *Purported lack of response* was shown to be the only narrative variable to have any statistically significant effect on this demographic characteristic. The results showed participants with college or higher degrees were more likely to be affected by narratives that convey *purported lack of response* than those without college degrees. Table 7, below, shows the narrative variable with statistically significant effect on the target audience based on education level:

Demographic Characteristic: Education		Group: College Graduate		
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Purported Lack of Response	.1590	.0633	2.51	0.012

Table 7: Narrative Variables with Statistically Significant Effects based on Education Level

Clear alternative future, purported lack of response, and social validation were shown to have statistically significant effects on those participants who have experienced financial difficulties in their lives compared to those who self-identified they have never experienced financial difficulties. Those who have experienced financial difficulties were more likely to react to narratives that convey *clear alternative future* and *purported lack of response* while being turned off by narratives that convey *social validation* as the motivation for action. *Social validation* was shown to have the most effect for the participants who have experienced financial difficulties. All other narrative variables were shown not to be significant for this demographic characteristic. Table 8, below, shows the narrative variables with statistically significant effects on the target audience based on experiences with financial difficulties:

Demographic Characteristic: Experienced Financial Difficulties			Group: Yes	
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Clear Alternative Future	.1825	.0778	2.35	.2091
Purported Lack of Response	.2089	.07795	2.68	0.007
Social Validation	-.3970	.0914	-4.34	0.000

Table 8: Narrative Variables with Statistically Significant Effects based on Experience(s) with Financial Difficulty/Difficulties

An individual’s employment status was yet another demographic characteristic where only one narrative variable had an effect. *Social Validation* was shown to have statistically significant effects on those who are employed part- and full-time compared to those who are unemployed and/or retired. The results showed those who are employed part-time were most likely to act on narratives that convey *social validation* as motivation when compared to those who are employed full-time or those who are unemployed and/or retired. All other narrative variables were shown not to be significant for this demographic characteristic. Table 9, below, shows the narrative variables with statistically significant effects on the target audience based on employment status:

Demographic Characteristic: Employment Status				
Employment Type: Part-Time				
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Social Validation	.3559	.1171	3.04	0.002
Employment Type: Full-Time				
Social Validation	.3105	.0795	3.91	0.000

Table 9: Narrative Variables with Statistically Significant Effects based on Employment Status

Exploration of how the narrative variables would affect the participants based on their religious inclinations showed that *threat to identity, identity affirmation, victim affirmation, clear alternative future, clearly defined in-/out-group(s), and social validation* had statistically significant effects for this demographic characteristic. The results showed that those who identified themselves as being religious were more likely to act on narratives that convey the sentiments portrayed by the narrative variables mentioned above than those who identified themselves as being not religious. *Clearly defined in-/out-group(s) (It is right thing to do for the “team”)* was shown to have the most effect for the participants who

identified themselves as religious. All other narrative variables were shown not to be significant for this demographic characteristic. Table 10, below, shows the narrative variables with statistically significant effects on the target audience based on religious inclinations:

Demographic Characteristic: Religious/Not Religious		Group: Religious		
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Threat to Identity	.2333	.0730	3.20	0.001
Identity Affirmation	.1789	.0622	2.88	0.004
Victim Affirmation	.2134	.0665	3.21	0.001
Clear Alternative Future	.1410	.0614	2.30	0.022
Clearly Defined In-/Out-Group(s)	.2613	.0635	4.11	0.000
Social Validation	.2102	.0722	2.91	0.004

Table 10: Narrative Variables with Statistically Significant Effects based on Religious Inclination

Exploration of how the narrative variables would affect the participants based on their political inclinations showed that *emotional appeal, identity affirmation, victimization, persistent and increasing threat, clear alternative future, and purported lack of response* had statistically significant effects on this demographic characteristic. Interestingly, all of the statistically significant effects for this demographic characteristic were negative, meaning that narratives conveying these narrative variables will make people who identify themselves as moderate/middle of the road or conservative less likely to act compared to those who identify themselves as liberal. For those identified as moderate or conservative, *clear alternative future* was shown to have the most effect (in the negative direction). All other narrative variables were shown not to be significant for this demographic characteristic. Table 11, below, shows the narrative variables with statistically significant effects on the target audience based on political inclinations:

Demographic Characteristic: Political Ideology				
Group: Moderate/Middle of the Road				
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Emotional Appeal	-.2470	.0711	-3.47	0.001
Identity Affirmation	-.2296	.0421	-3.18	0.001
Victimization	-.2822	.0768	-3.67	0.000
Persistent and Increasing Threat	-.3107	.0716	-4.34	0.000
Clear Alternative Future	-.3757	.0712	-5.28	0.000
Purported Lack of Response	-.2953	.014	-4.14	0.000
Group: Conservative				
Emotional Appeal	-.2718	.0767	-3.54	0.000
Identity Affirmation	-.2099	.0778	-2.70	0.007
Persistent and Increasing Threat	-.2331	.0772	-3.02	0.003
Clear Alternative Future	-.3721	.0768	-4.85	0.000
Purported Lack of Response	-.2005	.0769	-2.61	0.009

Table 11: Narrative Variables with Statistically Significant Effects based on Political Ideology

Finally, we examined demographic characteristic identity fusion index. For this demographic characteristic, those who identified themselves as being closest to index C, D, and E shared three common narrative variables that showed as having statistically significant effects – *identity affirmation*, *victimization*, and *clear alternative future*. For those who identified themselves as being closest to index D, *threat to culture/way of life* was also found to have statistically significant effect. In addition to the three common narrative variables identified above, those who identified themselves as being closest to index E were also affected by *victim affirmation*, *persistent and increasing threat*, *purported lack of response*, and *clearly defined in-/out-groups(s)*. For those who identified themselves as index C and E, *identity affirmation* was shown to have the most effect on their decision to act while *threat to culture/way of life* was shown to have the most effect for those who identified themselves as index D. All other narrative variables were shown not to be significant for this demographic characteristic. Table 12, below, shows the narrative variables with statistically significant effects on the target audience based on identity fusion index:

Demographic Characteristic: Identity Fusion Index				
Group: C				
Statistically Significant Narrative Variable	Coefficient	Std. Err	t	P> t
Identity Affirmation	.2407	.0875	2.75	0.006
Victimization	.2240	.0932	2.40	0.016
Clear Alternative Future	.2091	.0864	2.42	0.016
Group: D				
Threat to Culture/Way of Life	.3244	.1129	2.87	0.004
Identity Affirmation	.2296	.0940	2.44	0.015
Victimization	.2684	.1001	2.68	0.007
Clear Alternative Future	.2094	.0928	2.26	0.024
Group: E				
Emotional Appeal	.2393	.0916	2.61	0.009
Identity Affirmation	.4234	.09829	4.56	0.000
Victim Affirmation	.2619	.09924	2.64	0.008
Victimization	.4139	.0989	4.18	0.000
Persistent and Increasing Threat	.2742	.0922	2.97	0.003
Clear Alternative Future	.3501	.0917	3.82	0.000
Purported Lack of Response	.2545	.0919	2.77	0.006
Clearly Defined In-/Out-Group(s)	.2821	.0948	2.97	0.003

Table 12: Narrative Variables with Statistically Significant Effects based on Identity Fusion Index

Survey Findings

Through this survey, we found that *Threat to culture / way of life* (approximately 19%), *Identity affirmation* (approximately 18%), and *Victimization* (approximately 18%) were within the margin of error¹² of each other for being the most important narrative variable within the individual level variable category. For the societal level variables, *Clear alternative future (World would be better)* – approximately 25% – and *Clearly identified in-/out-group (It is the right thing to do for the “team”)* – approximately 24% – were within the margin of error of each other for being the most important narrative variable.

¹² Margin of error for the discussion of the survey results is +/- 2% at 95% Confidence Interval unless otherwise specified.

From the five-point Likert scale portion of the survey, we were able to ascertain average Likert scale scores for each narrative variables and gain a sense of which narrative variables are more likely to motivate people toward action, which is different from simply asking which variable does one consider to be most important. The Likert scale provides us a more accurate sense of which narrative variables are more likely to motivate people toward action since the scores from the scale reflect not only the number of people who may have selected these variables as most important to them but also the number of people who may not have picked the variables as being most important to them but would still act if they saw the sentiments of the variables conveyed in the narrative they come in contact with. The average Likert scale scores showed that the participants were clearly drawn to action by narratives that conveys *Victimization* (average Likert scale score 0.81) the most, followed by *Identity Affirmation* (average Likert scale score 0.77), for the individual level variable category, and *Clear alternative future (World would be better)* – average Likert scale score 1.03 – the most, followed by *Persistent and increasing threats (Things are getting out of hand)* – average Likert scale score 0.96 – for the societal level variable category. *Threat to culture/way of life* and *Clearly identified in-/out-group (It is the right thing to do for the “team”)*, which were among the most important variables, were not among the top variables for the average Likert scale score results. In fact, they were fifth and fourth ranked variables respectively, suggesting that while these variables may be important to people, they may be less effective in making people act. One item of note from the average Likert scale score results was the negative score for the variable *Social validation (Increases my reputation)* – average Likert scale score of -0.50, suggesting that people will most likely be “turned off”, meaning that it would decrease the likelihood for people to act, by narratives that attempt to convey, either explicitly or implicitly, that one should act based on the potential for social validation.

Additionally, we were able to determine the different impact each narrative variable has on the participants based on different aspects of their demographic characteristics. From this, we found that *social validation* has the most statistically significant effects on those who are ages 55 and older, those who identified themselves as black, those who have experienced financial difficulties, those who are employed part-time, and those who are employed full-time. Additionally, we found that *identity affirmation* has the most statistically significant effects on those who identified themselves as Hispanic/Latinx, identity fusion index C, and identity fusion index E. *Threat to culture/way of life* was found to have the most statistically significant effects for those who reside in the Southern region of the United States and those who identify themselves with identity fusion index D. *Clear alternative future* was found to have the most statistically significant effects for males, those who identify themselves as politically moderate, and those who identify themselves as politically conservative. *Purported lack of response* was found to have a statistically significant effect for those who hold an undergraduate degree or above. Finally, *clearly defined in-/out-group(s)* was shown to have statistically significant effect on those who identify themselves as being religious.

Also, an interesting finding from the survey is that the trends for the most important narrative variables and the Likert scale responses were generally consistent across all demographic characteristics, suggesting that the survey participants had fairly similar feelings and values when internalizing and interpreting each narrative variable’s definitions. For example, *clear alternative future (world would be better if something is done)* was seen as a motivator for action regardless of demographic characteristics. One should not, however, interpret this trend as the American public believing in or having the same idea of what a better world looks like. Instead, one should interpret this trend as the American public believes in a better future in general but what that “better future” looks like may be very different from one individual or group to the next. Given that the initiators of the influence operation often do not care how

people react to the narratives as long as people react to them, the narratives and ensuing reactions serve to sew confusion and discontent in the society.

Finally, the survey allowed us to determine the effects of each narrative variable on the target audience. Utilizing these results, we were able to refine our *Influence-to-Action Model* and ascertain the weights for each variable of the model as applied to the U.S. general adult population. These weights will be used for in our development of the *Influence-to-Action Assessment Tool*.

Influence-to-Action Campaign/Narrative Impact Assessment Tool

The final step/product of this research was the development and instantiation of *Influence-to-Action Campaign/Narrative Impact Assessment Tool* (I-AM Assessment Tool) prototype. The I-AM Assessment Tool is intended to provide a systematic methodology to analyze and assess artifacts collected from across multiple media types and multiple platforms (e.g., an article, a meme, a tweet, etc.). The following section of this report describes the development of the prototype I-AM Assessment Tool.

Prototype Tool Development Process

Following the completion of the survey analysis process, the research team met for a two-day workshop to brainstorm the design and functionality of the I-AM Assessment Tool. Basing our initial design on previously successful tools designed by the START team, we decided on an Excel-based design where an analyst could evaluate artifacts and each variable is rated on a numerical scale. We decided to build the scale around individual artifacts as that provides the greatest flexibility of use for the tool. From our initial discussions we wanted to build a tool that could be used to compare not only artifacts within a specific campaign or narrative, but also to compare artifacts from multiple narratives, multiple time periods, and across multiple artifact types. The types of artifacts we wanted the tool to be useful for include images (e.g., memes, screenshots, etc.), short form writing (e.g., tweets, comments, etc.), blogs or news articles, long-form writing (e.g., journal articles, books, etc.), audio, and video, as well as forms of mixed media (to include comments on videos, chat between users, etc.). During the workshop, we also determined that the tool could be used for any number of artifacts, whether to be used as a quick check for a very small number of artifacts or used to aggregate and understand very large numbers of artifacts. To be able to investigate all these desired artifact mediums, comparative factors, and quantities, we first needed to develop a coding schema for the variables.

The first step to develop the numerical scale and coding schema was to look at each variable and the variables in total to determine an appropriate schema. Following a discussion of multiple ways to rank/score the variables, we chose to use a scale from 0-3 as this scale provided the flexibility for analysts to approximate the appropriate number for each variable as related to an artifact without overcomplicating the process. Our goal was to remain inclusive while simultaneously avoiding excessive granularity. Excessive measurement metrics tend to increase the level of complexity associated with the determination of values, especially in the face of intrinsically uncertain information without adding significant benefit to the effort to characterize artifacts. As the goal of the tool was to remain unbiased regarding messaging present in artifacts, we determined a 0-3 scale was the best option.

We then discussed the specific scheme for each variable and noticed some key similarities that could be generalized across all variables that would simplify the scale. In our discussions, we also determined that this generalized scoring could be communicated using emojis which would further boost the ease of rememberability for each score. For every variable, a “0” would represent that the variable was not present in the artifact, a “1” would indicate that the variable may be present but is not explicitly stated, a “2” would represent an indirect but positive identification of the variable, and a “3” would represent a direct statement of the variable present. These scoring once simplified to one-two word descriptions, shown in Table 13, below, would allow analysts, once comfortable with the variable definitions to have a quick reference schema to remember when coding and will increase the probability of consistent coding among different analysts. However, there is some nuance between these variables that required specific definitions and examples for each variable.

Quick Variable Reference Guide

0 = 🚫 No
1 = 😐 Maybe
2 = 😊 Yes, Indirect
3 = ☑️ Yes, Direct

Table 13: Quick Variable Reference Guide

We then discussed and took notes on how each score would be defined for every variable. Here we noticed and discussed something that would simplify the extended definitions for the internal variables further, that the scores of “0”, “1”, and “2” were uniform across all internal variables. Therefore, we determined that for the internal variables all scores of “0” would be defined as, “Variable cannot be identified in the narrative,” all scores of “1” would be defined as, “Cannot definitively identify that the variable is not present,” and all scores of “2” would be defined as, “The narrative does not specify the Variable you are coding for, but certain audience(s) will take it as directed towards them.” For a score of “1”, we decided to define that variable as stating that the variable cannot be determined to be present, as it is easier to determine with higher confidence that a variable is present than not. This definition therefore allows coders to more confidently state that they cannot confirm the absence of the variable. This will allow for the covering of inherent ambiguity when coding for artifacts of an influence campaign or narrative targeted at a group that the analyst may not be as intricately familiar with. For example, messaging could not specifically or indirectly contain an emotional appeal, but the analyst could not precisely determine if a group would ascertain an emotional message from the artifact, therefore a coding of “1” does not eliminate the possibility of an emotional appeal entirely.

For the score of “3” within the internal variables, we defined each variable so that the variable is directly stated within the artifact. The final definitions for the internal variables at score “3” are listed below in Table 14. For each variable, the definition is slightly changed to account for how the variable was listed in the surveys and other deliverables. For example, for Threats to Identity a score of “3” is defined as, “Messaging conveys imminent threat to a specific identity,” whereas for Victim Affirmation a score of “3” is defined as, “Messaging affirms that a specific identity/culture is a target of an external assault.” By defining the variables based on the nuance within the definitions, analysts will have a better understanding of what to look for regarding each variable. The full list of variables and definitions can be found within the tool.

Internal Variables Score 3 Definitions		
Emotional Appeal	3 = ☑️ Yes, Direct	Messaging makes an emotional appeal to the target
Threats to Identity	3 = ☑️ Yes, Direct	Messaging conveys imminent threat to a specific identity
Threats to Culture (Way of Life)	3 = ☑️ Yes, Direct	Messaging conveys imminent threat to a specific way of life and/or culture
Identity Affirmation	3 = ☑️ Yes, Direct	Messaging affirms a specific identity
Victim Affirmation	3 = ☑️ Yes, Direct	Messaging affirms that a specific identity/culture is a target of an external assault
Victimization	3 = ☑️ Yes, Direct	Messaging conveys the need to “right the wrong” or “fight against injustice”

Table 14: Internal Variables Score 3 Definitions

For the structural/societal variables we again determined that the score of “0” would be defined as, “Variable cannot be identified in the narrative.” However, for the additional scores 1-3, each score for every societal variable required a unique definition. We then defined each variable for those scores and included a brief clarifying definition to each variable generally and an example within scores 1-3 for each variable as well. Those definitions and examples are described in Table 15 below:

Societal (Structural) Level Variables Score 1-3 Definitions and Examples		
Persistent and Increasing Threats (Things are getting out of hand)	1 = 😐 Maybe	Threat is stated, but directionality of its persistence is not given (e.g., current, general statement about COVID)
	2 = 😊 Yes, Indirect	A threat is stated, and it is implied it is persistent and/or increasing (e.g., statement of a COVID new variant announced)
	3 = ☑ Yes, Direct	Messaging conveys persistent and worsening conditions if something is not done to reverse the course (e.g., COVID messaging around the holidays)
Clear Alternative Future (World would be better by doing something about it)	1 = 😐 Maybe	Messaging identifies a need to change the future but does specify the direction (e.g., saving money for your kids)
	2 = 😊 Yes, Indirect	No good alternative future can be identified, but the messaging implies there will be one (e.g., decrease use of fossil fuels)
	3 = ☑ Yes, Direct	Message clearly states a good alternative future (e.g., use more renewable energy to build a healthier future for our kids)
Purported Lack of Response (Nothing is being done about it)	1 = 😐 Maybe	Not enough is being done (e.g., politicians are not acting in regard to student loans)
	2 = 😊 Yes, Indirect	Something is being done, but more needs to happen (implying you need to be involved) (e.g., we need to support our politicians in the fight against gun control)
	3 = ☑ Yes, Direct	Messaging conveys that “no one” is doing anything about the problem, so you need to (e.g., no one is ensuring the safety of our children in school, so you need to call your representatives now and demand action)
Clearly Identified In-/Out-Group (It is the right thing to do for the “team”)	1 = 😐 Maybe	Implies or states there are multiple teams (e.g., our side is fighting...)
	2 = 😊 Yes, Indirect	Identifies “the team” and implies there is a right thing to do (e.g., eco warriors, are we just going to sit around and wait for policy change?)
	3 = ☑ Yes, Direct	It is the right thing for “the team” (e.g., our team needs you to step up and demand action for our core values)
Social Validation	1 = 😐 Maybe	Implies there is a reputation to be had (e.g., our most respected members are doing this...)

Societal (Structural) Level Variables Score 1-3 Definitions and Examples		
(Increases my reputation)	2 = 😊 Yes, Indirect	Messaging conveys the actions are “justified” and implies your reputation will increase (e.g., we know it is the necessary thing to do and our most respected members are doing it)
	3 = ☑ Yes, Direct	Messaging conveys the actions are “justified” and will your increase reputation (e.g., we know it is the necessary thing to do and if you want more respect, you will do it)

Table 15: Societal (Structural) Level Variables Score 1-3 Definitions and Examples

Once we finalized the definitions and visual representation of the tool, we took the ascertained weights, specifically from the “I will Definitely Act” variable, as this variable represents the strongest action potential, and imported them into the Excel document. The resulting weights from the survey are described in Table 16 and Figure 22 below:

Calculated Weights for “I will Definitely Act” Variable	
Individual (Internal) Level Variables	
Variable Names	Standard Weight
Emotional Appeal	0.53
Threat to Identity	0.32
Threat to Culture/Way of Life	0.44
Identity Affirmation	0.77
Victim Affirmation	0.52
Victimization	0.81
Societal (Environmental) Level Variables	
Persistent and Increasing Threat	0.96
Clear Alternative Future	1.03
Purported Lack of Response	0.9
Clearly Identified In-/Out-Group	0.87
Social Validation	-0.5

Table 16: Calculated Weights for “I will Definitely Act” Variable

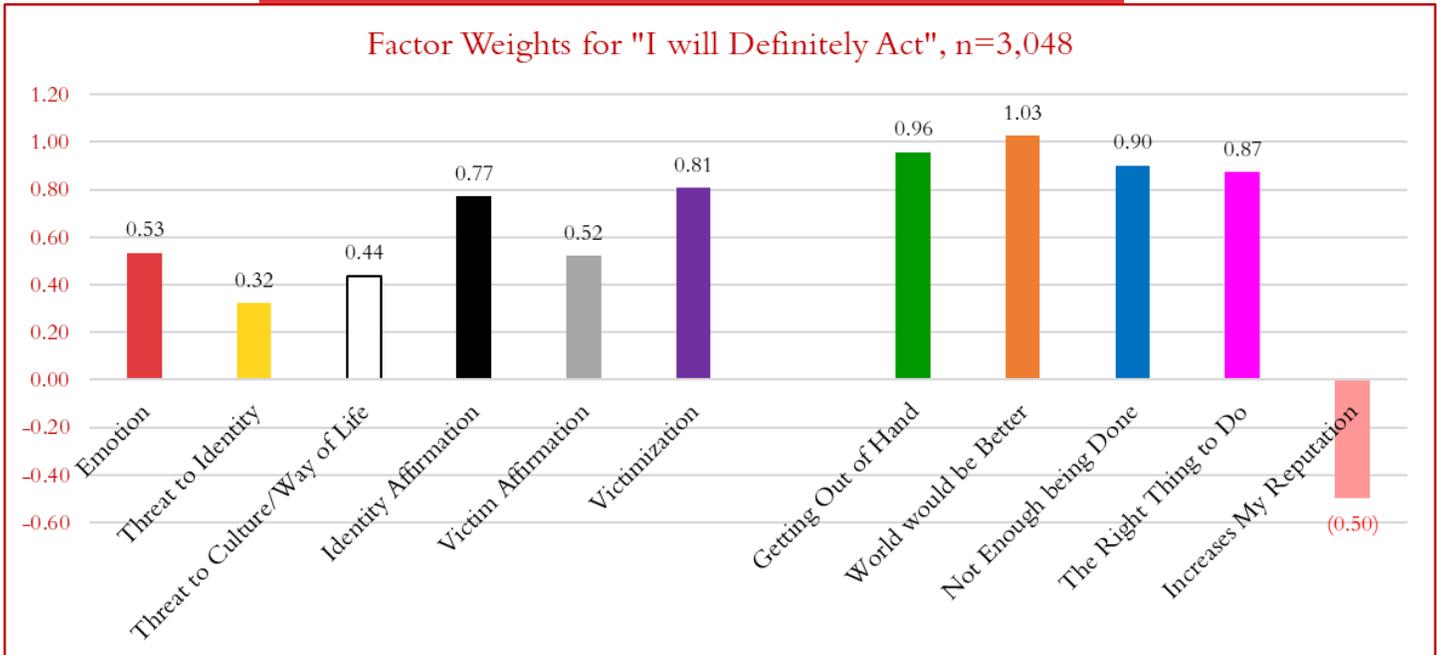


Figure 22: Factor Weights for "I will Definitely Act" Variable

Prototype Tool Development Results

Using this coding schema, we instantiated the tool (shown in [Appendix C: Blank Influence-to-Action Campaign/Narrative Impact Assessment Tool](#)) into a single table where an analyst could input the value for each variable. Additionally, we included administrative material rows to the beginning of the table to include a reference numbering column, campaign or narrative name column, and a date-time group column. For each artifact, there would be eleven columns for each variable, divided by internal versus societal level variables, with each cell preset to accept numerical inputs of 0-3. Finally, there would be a column that will automatically populate an aggregate score for the artifact using the weights of each variable as described previously.

These weights and the scoring schema of 0-3 provided us with possible scores ranging from 0-21.45 for each artifact. From this range, we determined the threshold for the Campaign/Narrative Impact Index would be separated into three equally divided tiers, with the first tier representing the highest impact (aggregate scores from 14.301 to 21.45), the second tier representing a modest impact (aggregate scores from 7.151 to 14.30), and the third tier representing little or no impact (aggregate scores from 0 to 7.15). We additionally color-coded the tiers to create a quick visual reference as to which tier an artifact falls into. These tiers are described in Table 17 below.

Campaign/Narrative Impact Index Tiers			
	1st Tier	2nd Tier	3rd Tier
Range:	14.301-21.45	7.151-14.30	0-7.15

Table 17: Campaign/Narrative Impact Index Tiers

The tool was specifically designed to be artifact agnostic and as such useful for the media types described previously and across a variety of purposes that include one artifact for multiple narratives, multiple

artifacts for one narrative, and multiple artifacts for multiple artifacts based around a specific theme, movement, time-period, or event. The initial version of the tool additionally included a page of variable definitions, identical to [Table 1](#), and the codebook which was comprised of the variable coding schemas described prior. At this point, we conducted both internal and external testing of the tool using artifacts that represented a range of narratives, shown in [Appendix D](#).

Prototype Tool Testing and Results

Our initial test of the tool included five screenshot image artifacts (specifically memes) surrounding multiple narratives. In selecting the images, we sought diversity in terms of targeted group or ideology, reliability of the source, and format to cover a variety of narrative themes in order to utilize narratives from groups or ideologies that the testers would have a range of knowledge regarding.

These images and the resulting average scores are shown in [Appendix D](#). We performed both internal and external testing of these images and then held discussions with both the internal and external testers to determine the strengths and weaknesses of the current tool iteration. These discussions revealed that the tool was effective and was easy to use, but that there were some slight formatting quirks and two supplemental items missing. These included an expanded instruction sheet and an additional linked tab where analysts could provide notes and justifications for each decision. We therefore compiled our existing instructions, some of which had thus far been only verbally communicated, into a cohesive instructional document. The full instructions can be found in [Appendix E: Tool Instructions](#).

Additionally, a tab was added entitled, “Analyst Notes & Justifications,” which we designed to match the columns from the main assessment tool with blank cells for analysts to record their decision-making process and justifications for each variable. The included administrative information columns were designed to automatically populate with the information entered in the main tool tab for easy reference between cases coded across the two documents. We also linked to each variable heading on this tab from each variable heading from the main tool to allow easier movement between the tabs.

Following these revisions to the tool, the second version of the tool was then finalized the Influence-to-Action Campaign/Narrative Impact Assessment Tool prototype.

Conclusions and Recommendations

The current literature on influence operations fails to address the impact and/or effectiveness of foreign influence operations on the target audience, specifically what factor(s) of the messaging is/are more likely to cause the target audience to act. As we sought to address this issue, we were able to identify several variables from psychological, sociological, marketing, and communications literature that have been shown to enhance people's propensity to participate in action rather than simply receive passively. The literature, however, does not provide how these variables impact the actions of the target audience. Through the development of the I-AM, followed by several model validation case studies, and two rounds of public surveys, we were able to develop and instantiate the I-AM Assessment Tool prototype. Designed to measure various components of influence operation artifacts with the goal to provide a systematic methodology to analyze and assess artifacts collected from across multiple media platforms, end users can employ the assessment tool to assess images (e.g., memes, screenshots, etc.), short form writing (e.g., tweets, comments, etc.), blogs or news articles, long-form writing (e.g., journal articles, books, etc.), audio, and video, as well as forms of mixed media (to include comments on videos, chat between users, etc.).

At the moment, the assessment tool currently employs a High-Medium-Low assessment metric to assess an artifact's potential impact on the U.S. general population. While the current assessment metric does provide the end users information needed to make decisions and/or recommend future course(s) of action, end users would benefit much with development and incorporation of a more nuanced and granular assessment metric in the future iteration of the I-AM Assessment Tool. Nevertheless, even as a prototype, the I-AM Assessment Tool provides the end users a systematic methodology that one can use to analyze artifacts collected from across multiple media types and multiple platforms. This systematic methodology will allow the end users to conduct consistent analysis of foreign influence operations materials regardless of the "influencer" and their modes of delivery

If there is an opportunity, further development of this tool will provide the U.S. military, intelligence community, and other government stakeholders a method to systematically measure the relative impact and effectiveness of foreign influence operations being conducted against the United States so that the United States national security enterprise can more effectively prepare for, counter, and neutralize nefarious influence operations.

Appendix A: General Population Survey Questions

Q1 You certify that you are at least 18 years of age; you have read informed consent; and you voluntarily agree to participate in this research study.

Your identity will remain confidential, and the research team will not receive any personally identifiable information (such as your name, phone number, etc.) about the participants of this survey from Qualtrics.

The consent form is attached here in its entirety for your review: [Informed Consent for Online Activities Survey](#)

By checking the box below, you agree to participate in the survey.

I have read and understand the informed consent, and I agree to participate in the survey.

Q2 How old are you?

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55 and over

Q3 How would you describe your gender?

- Male
- Female
- Non-binary / third gender

Q4 How would you best describe yourself? Please select only one that you most identify yourself as.

- Asian / Pacific Islander
- Black or African American
- Hispanic or Latino
- Native American or American Indian
- White (non-Hispanic)
- Mixed
- Other

Q5 In which state do you currently reside?

▼ Alabama ... I do not reside in the United States

Q6 In which state did you spend the most time living in from ages 0-18?

▼ Alabama ... I do not reside in the United States

Q7 What is the highest level of education you have reached?

- Some high school, no diploma
- High school graduate, diploma or the equivalent (for example: GED)

- Some college credit, no degree
- Trade/technical/vocational training
- Associate degree
- Bachelor's degree
- Master's / Professional
- Doctoral degree

Q8 What is your current employment status? Please select ONLY one choice that describes most closely your current employment status.

- Employed full-time
- Employed part-time
- Self-employed
- Unemployed, Looking for work
- Unemployed, Not looking for work / Unable to work
- Student (If you are a full-time student and work part-time to support yourself, please select this choice; if you are a part-time student and work part-time to support yourself, please select "Employed part-time" above)
- Retired

Q9 What is your current marital status?

- Single, never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated
- Other

Q10 How religious do you consider yourself?

- Very religious
- Moderately religious
- Slightly religious
- Spiritual but not religious
- Not religious

Q11 How would you describe your political beliefs?

- Very conservative
- Conservative
- Moderate / Middle of the road
- Liberal
- Very Liberal
- No political affiliation

Q12 With which political party do you MOST identify with and/or a member of? (Note: You need not be affiliated or be a member of any political party to identify with a specific party for the purposes of this question)

- Alliance Party

- American Solidarity Party
- Constitution Party
- Democratic Party
- Green Party
- Libertarian Party
- Republican Party
- Unity Party of America
- Working Class Party
- Working Families Party
- Other political party not listed
- None (Independent)

Q13 Have you or your family experienced financial strain or struggle at any of the following periods of your life? Please select all that apply.

- Early life or prior to birth (ages 0-4)
- Childhood (ages 5-12)
- Teenage years (ages 13-17)
- Young adulthood (ages 18-25)
- Adulthood (ages 26+)
- None

Q14 How many of the following situations have you experienced at least once throughout your life (including childhood). Please select all that apply.

- Bankruptcy
- Foreclosure
- Loss of a business or financial asset (including car)
- Period of unemployment (either self, partner, or parent)
- Less than one month worth of salary (or \$1,000) in an individual or family emergency savings account
- Individual or family debt worth more than a year's salary or \$25,000 (either credit, loans, or medical debt, not including home loan or mortgage)
- Other delinquent debt
- Other financial stressor or events not listed above
- None

Q15 For the next question, please think of a group that you identify strongly with. Your group could be a neighborhood organization, church or religious group, political group, or any group that you engage with

online or offline). Please refer to the images below and think of which option best represents the connection you feel between the group you selected and you.

Q16 Please list the type of group that you identified with (for example: religious or political group, fitness class or gym, hobby or community organization, etc.).

Please note that we are asking you to type in the group you most identify with personally and not select from the above diagram.

Q17 Which image best represents the way you perceive your connection with your group?

- A
- B
- C
- D
- E

Q18 Of the following, which sources do you use to receive news or information? (select all that apply)

- Television
- Print (newspapers, magazines, etc.)
- Radio or podcasts
- Internet (media sites or apps [e.g., ABC, New York Times, Fox News, CNN, etc.] and/or other internet sites [e.g., YouTube, etc.])
- Social media post from your network (individuals you follow, friends, family, celebrities, etc.)
- Social media post from a news organization [e.g., tweets or posts from (New York Times, Fox News, etc.)]
- Word of mouth either online or offline (friends, family, coworkers, etc.)

Q19 Of the following, which source do you use MOST OFTEN to access the news?

- Television
- Print (newspapers, magazines, etc.)
- Radio or podcasts
- Internet (media sites or apps [e.g., ABC, New York Times, Fox News, CNN, etc.] and/or other internet sites [e.g., YouTube, etc.])
- Social media post from your network (individuals you follow, friends, family, celebrities, etc.)
- Social media post from a news organization [e.g. tweets or posts from (New York Times, Fox News, etc.)]
- Word of mouth either online or offline (friends, family, coworkers, etc.)

Q20 Of the following, which source do you use MOST OFTEN to access information overall (news and otherwise)?

- Television
- Print (newspapers, magazines, etc.)
- Radio or podcasts
- Internet (media sites or apps [e.g., ABC, New York Times, Fox News, CNN, etc.] and/or other internet sites [e.g., YouTube, etc.])

- Social media post from your network (individuals you follow, friends, family, celebrities, etc.)
- Social media post from a news organization (New York Times, Fox News, etc.)
- Word of mouth either online or offline (friends, family, coworkers, etc.)

Q21 What sources do you use to share or forward news or information? Please select all that apply.

- Print (letters, memos, etc.)
- Internet chat (messages, chats, video conferencing, etc.)
- Email forwarding
- Social media (Facebook, Twitter, Reddit, etc.)
- Word of mouth (friends, family, coworkers, etc.)
- I do not share or forward news or information

Q22 What source do you use MOST OFTEN to share or forward news or information?

- Print (letters, memos, etc.)
- Internet chat (messages, chats, video conferencing, etc.)
- Email forwarding
- Social media (Facebook, Twitter, Reddit, etc.)
- Word of mouth (friends, family, coworkers, etc.)
- I do not share or forward news or information

Q23

On a scale from 0 to 10 (with 0 = not at all, and 10 = absolute trust), how much do you trust information coming from each of the following sources?

0 1 2 3 4 5 6 7 8 9 10

- Television national or international news
- Television local news
- Local print newspapers or magazines
- National or International print newspapers or magazines
- Radio or podcasts
- Internet national or international news sources
- Internet local news sources
- Social media post from your network (individuals you follow, friends, family, celebrities, etc.)
- Social media post from a news organization (New York Times, Fox News, etc.)
- Word of mouth (friends, family, coworkers, etc.)

Q24 For the following two questions, please consider the content that you consume (i.e., read, watch, or listen to) online.

Which of the following types of content do you consume online? Please select all that apply.

- News (either local, national, or international)
- Entertainment stories, pictures, and video (memes, dances, jokes, etc.)
- Celebrity gossip
- Sports information
- Weather information
- Food or recipes

- Shopping content
- Other

Q25 Of the previously mentioned categories, please rank the topics in the order you spend the most time consuming online (1 being the most time spent with that content).

- _____ News (either local, national, or international)
- _____ Entertainment stories, pictures, and video (memes, dances, jokes, etc.)
- _____ Celebrity gossip
- _____ Sports information
- _____ Weather information
- _____ Food or recipes
- _____ Shopping content
- _____ Other

Q26 For the following two questions, please consider the content that you interact with (read, comment on, like/up-vote, share, save, etc.) online.

Which of the following types of content do you interact with online? Please select all that apply.

- News (either local, national, or international)
- Entertainment stories, pictures, and video (memes, dances, jokes, etc.)
- Celebrity gossip
- Sports information
- Weather information
- Food or recipes
- Shopping content
- Other

Q27 Of the previously mentioned categories, please rank the topics in the order you spend the most time interacting with them online (1 being the most time spent with that content).

- _____ News (either local, national, or international)
- _____ Entertainment stories, pictures, and video (memes, dances, jokes, etc.)
- _____ Celebrity gossip
- _____ Sports information
- _____ Weather information
- _____ Food or recipes
- _____ Shopping content
- _____ Other

Q28 Which of the following activities do you do when interacting with content online? Please select all that apply.

- Like posts
- Comment on posts
- Share posts publicly on social media site or forums (Reddit)
- Share posts privately via messaging service
- Discuss posts with people offline
- Create original content

Do nothing

Q29 Have you ever encountered content that you think could be misinformation or false news?

- Yes
- No
- Unknown

Q30 For the following questions, the phrase "the message" is used repeatedly. We use this term to mean any posting that you could see on- or off-line that is discussing something newsworthy, political, or controversial. The exact meaning of the message is not important, however, try to consider messages that are more serious in nature and could potentially have an impact on your life or others.

Q31 Please provide a short (think 5 to 10 words) description of what "threat to identity" means to you.

Q32 Please provide a short (think 5 to 10 words) description of what "threat to way of life (and/or culture)" means to you.

Q33 Please provide a short (think 5 to 10 words) description of what "identity affirmation" means to you.

Q34 Please provide a short (think 5 to 10 words) description of what "victim affirmation" means to you.

Q35 Please provide a short (think 5 to 10 words) description of what "victimization" means to you.

Q36 Please drag the options below to rank the following options in order of importance: I am most likely to share a message (e.g. re-post/retweet, email, etc.) when it (the message)...

- ___ makes me emotional (scared, happy, shocked, etc.)
- ___ poses a threat to my identity
- ___ poses a threat to my way of life (and/or culture)
- ___ affirms/speaks to my identity (i.e., who I am and/or what I represent)
- ___ affirms that I am being targeted for who I am or what I represent
- ___ conveys the need to fight back against a threat to me or what I represent

Q37 Please drag the options below to rank the following options in order of importance: I am most likely to respond to a message (e.g., comment, quote tweet, etc.) online when it (the message)...

- ___ makes me emotional (scared, happy, shocked, etc.)
- ___ poses a threat to my identity
- ___ poses a threat to my way of life (and/or culture)
- ___ affirms/speaks to my identity (i.e., who I am and/or what I represent)
- ___ affirms that I am being targeted for who I am or what I represent
- ___ conveys the need to fight back against a threat to me or what I represent

Q38 Please drag the options below to rank the following options in order of importance: I am most likely to donate my time and/or money to a cause or movement if their message,,,

- makes me emotional (scared, happy, shocked, etc.)
- poses a threat to my identity
- poses a threat to my way of life (and/or culture)
- affirms/speaks to my identity (i.e., who I am and/or what I represent)
- affirms that I am being targeted for who I am or what I represent
- conveys the need to fight back against a threat to me or what I represent

Q39 For the following question, please think back to the question you just responded to.

Thinking about the top three (3) factors that you chose as being most important to you, when you compare them two factors at a time, as shown below, which factor is more important to you when you consider only those two factors and no other factors?

Comparing only between Your First and Second Most Important Factors:

Comparing only between Your First and Third Most Important Factors

Comparing only between your Second and Third Most Important Factors

Factor 1	Factor 2	Factor 1	Factor 3	Factor 2	Factor 3
----------	----------	----------	----------	----------	----------

"I am most likely to donate my time and/or money to a cause or movement if their message,,"

0	0	0	0	0	0
---	---	---	---	---	---

Q40 For the immediately previous question, please describe what you mean by donating your time and/or money (For example, I would donate 20 hours per week for this; or I would donate at least \$[dollar value] for this; etc.)

Q41 Please drag the options below to rank the following options in order of importance: I will definitely donate my time and/or money to a cause or movement if their message,,,

- makes me emotional (scared, happy, shocked, etc.)
- poses a threat to my identity
- poses a threat to my way of life (and/or culture)
- affirms/speaks to my identity (i.e., who I am and/or what I represent)
- affirms that I am being targeted for who I am or what I represent
- conveys the need to fight back against a threat to me or what I represent

Q42 For the following question, please think back to the question you just responded to.

Thinking about the top three (3) factors that you chose as being most important to you, when you compare them two factors at a time, as shown below, which factor is more important to you when you consider only those two factors and no other factors?

Comparing only between Your First and Second Most Important Factors:

Comparing only between Your First and Third Most Important Factors

Comparing only between your Second and Third Most Important Factors

Factor 1	Factor 2	Factor 1	Factor 3	Factor 2	Factor 3
"I will definitely donate my time and/or money to a cause or movement if their message,,,"					
0	0	0	0	0	0

Q43 Please describe what you mean by "will definitely donate time and/or money." (For example, I would donate 20 hours per week for this; or I would donate at least \$[dollar value] for this; etc.)

Q44 Please rate the following statements on whether you agree or disagree.

For this question, please treat each statement as an independent case without relation to any other statements.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

I am most likely to donate my time and/or money to a cause or movement if their message elicits an emotional response.

0 0 0 0 0

I am most likely to donate my time and/or money to a cause or movement if their message presents a threat to my identity.

0 0 0 0 0

I am most likely to donate my time and/or money to a cause or movement if their message presents a threat to my way of life (and/or culture).

0 0 0 0 0

I am most likely to donate my time and/or money to a cause or movement if their message affirms/speaks to my identity (i.e., who I am and/or what I represent).

0 0 0 0 0

I am most likely to donate my time and/or money to a cause or movement if their message affirms that I am being targeted for who I am or what I represent.

0 0 0 0 0

I am most likely to donate my time and/or money to a cause or movement if their message motivates me to fight back against a threat to me or what I represent.

0 0 0 0 0

Q45 Please rate the following statements on whether you agree or disagree.

For this question, please treat each statement as an independent case without relation to any other statements.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

I will definitely donate my time and/or money to a cause or movement if their message elicits an emotional response.

0 0 0 0 0

I will definitely donate my time and/or money to a cause or movement if their message presents a threat to my identity.

0 0 0 0 0

I will definitely donate my time and/or money to a cause or movement if their message presents a threat to my way of life (and/or culture).

0 0 0 0 0

I will definitely donate my time and/or money to a cause or movement if their message affirms/speaks to my identity (i.e., who I am and/or what I represent).

0 0 0 0 0

I will definitely donate my time and/or money to a cause or movement if their message affirms that I am being targeted for who I am or what I represent.

0 0 0 0 0

I will definitely donate my time and/or money to a cause or movement if their message motivates me to fight back against a threat to me or what I represent.

0 0 0 0 0

Q46 Please drag the options below to rank the following options in order of importance: I am most likely to share a message (e.g., re-post/retweet, email, etc.) if the message conveys...

- ___ the problem is getting out of hand
- ___ the world would be better if something is done and worse if nothing is done
- ___ nothing is being done to fix the problem
- ___ that I am doing the right thing
- ___ it will increase my reputation

Q47 Please drag the options below to rank the following options in order of importance: I am most likely to respond to a message (e.g., comment, quote tweet, etc.) online if the message conveys...

- ___ the problem is getting out of hand
- ___ the world would be better if something is done and worse if nothing is done
- ___ nothing is being done to fix the problem
- ___ that I am doing the right thing
- ___ it will increase my reputation

Q48 Please drag the options below to rank the following options in order of importance: I am most likely to donate my time and/or money to a cause if its messaging conveys...

- ___ the problem is getting out of hand
- ___ the world would be better if something is done and worse if nothing is done
- ___ nothing is being done to fix the problem
- ___ that I am doing the right thing
- ___ it will increase my reputation

Q49 For the following question, please think back to the question you just responded to.

Thinking about the top three (3) factors that you chose as being most important to you, when you compare them two factors at a time, as shown below, which factor is more important to you when you consider only those two factors and no other factors?

- Comparing only between Your First and Second Most Important Factors:
- Comparing only between Your First and Third Most Important Factors
- Comparing only between your Second and Third Most Important Factors

	Factor 1	Factor 2	Factor 1	Factor 3	Factor 2	Factor 3
"I am most likely to donate my time and/or money to a cause if its messaging conveys..."						
	0	0	0	0	0	0

Q50 Please describe what you mean by "most likely to donate my time and/or money." (For example, I would donate 20 hours per week for this; or I would donate at least \$[dollar value] for this; etc.)

Q51 Please drag the options below to rank the following options in order of importance: I will definitely donate my time and/or money to a cause if its messaging conveys...

- the problem is getting out of hand
- the world would be better if something is done and worse if nothing is done
- nothing is being done to fix the problem
- that I am doing the right thing
- it will increase my reputation

Q52 For the following question, please think back to the question you just responded to.

Thinking about the top three (3) factors that you chose as being most important to you, when you compare them two factors at a time, as shown below, which factor is more important to you when you consider only those two factors and no other factors?

- Comparing only between Your First and Second Most Important Factors:
- Comparing only between Your First and Third Most Important Factors
- Comparing only between your Second and Third Most Important Factors

	Factor 1	Factor 2	Factor 1	Factor 3	Factor 2	Factor 3
"I will definitely donate my time and/or money to a cause if its messaging conveys..."						
	0	0	0	0	0	0

Q53 Please describe what you mean by "will definitely donate my time and/or money." (For example, I would donate 20 hours per week for this; or I would donate at least \$[dollar value] for this; etc.)

Q54 Please rate the following statements on whether you agree or disagree.

For this question, please treat each statement as an independent case without relation to any other statements.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

I am most likely to donate my time and/or money to a cause if its messaging conveys the problem is getting out of hand.

0	0	0	0	0
---	---	---	---	---

I am most likely to donate my time and/or money to a cause if its messaging conveys the world would be better if something is done about it (and worse if nothing is done).

0	0	0	0	0
---	---	---	---	---

I am most likely to donate my time and/or money to a cause if its messaging conveys nothing (or not enough) is being done to fix the problem.

I am most likely to donate my time and/or money to a cause if its messaging conveys "I am doing the right thing".

I am most likely to donate my time and/or money to a cause if its messaging conveys doing so will increase my reputation.

Q55 Please rate the following statements on whether you agree or disagree.

For this question, please treat each statement as an independent case without relation to any other statements.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

I will definitely donate my time and/or money to a cause if its messaging conveys the problem is getting out of hand.

I will definitely donate my time and/or money to a cause if its messaging conveys the world would be better if something is done about it (and worse if nothing is done).

I will definitely donate my time and/or money to a cause if its messaging conveys nothing (or not enough) is being done to fix the problem.

I will definitely donate my time and/or money to a cause if its messaging conveys "I am doing the right thing".

I will definitely donate my time and/or money to a cause if its messaging conveys doing so will increase my reputation.

--- End of Survey ---

Appendix B: Review of the Finalized Influence-to-Action Model (I-AM)

The *Influence-to-Action Model (I-AM)* remained the same as the finalized *Influence-to-Action Model (I-AM)* presented in the Year 1 Final Report. Function 1, below, provides the function for the I-AM, and Table 18, also below, provides the variable names associated with each variable notation in the function:

$$I_{IA} = f(E, T_i, T_c, A_i, A_v, V, T_p, F_a, R_l, G_{io}, S_v)$$

Function 1: Finalized Influence-to-Action Model (I-AM) Function

Variable Notation	Variable Name
Impact of Influence Operations	
I_{IA}	Influence Operation - Influence-to-Action
Individual (Internal) Level Factors	
E_c	Emotional Appeal
T_i	Threats to Identity
T_c	Threats to Way of Life (Culture)
A_i	Identity Affirmation
A_v	Victim Affirmation
V	Victimization
Societal (Structural) Level Factors	
T_p	Persistent and Increasing Threats
F_a	Clear Alternative Future (World will be better by doing something about it)
R_l	Purported Lack of Response
G_{io}	Clearly Identified In-/Out-Group (It is the right thing to do for the "team")
S_v	Social Validation

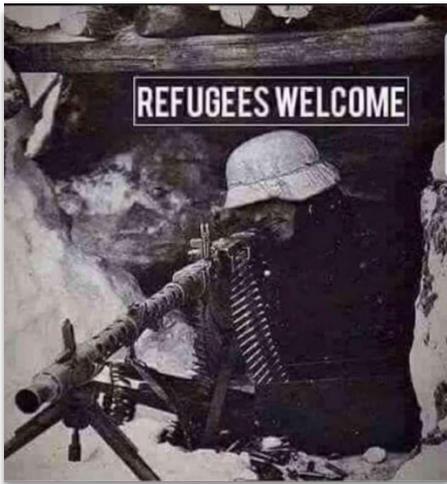
Table 18: Finalized Influence-to-Action Model (I-AM) Variable List

Appendix C: Blank Influence-to-Action Campaign/Narrative Impact Assessment Tool

<i>Influence-to-Action Campaign / Narrative Impact Assessment Tool</i> (version 0.1b)														
Administrative Information			Individual (Internal) Level Variables					Societal (Structural) Level Variables					Campaign / Narrative Impact Index	
Ref. Num.	Campaign / Narrative Name	Date-Time Group	<u>Emotional Appeal</u>	<u>Threat to Identity</u>	<u>Threat to Culture / Way of Life</u>	<u>Identity Affirmation</u>	<u>Victim Affirmation</u>	<u>Victimization</u>	<u>Persistent / Increasing Threat (Things are getting out of hand)</u>	<u>Clear Alternative Future (I can help make the world a better place)</u>	<u>Purported Lack of Response (Not enough is being done)</u>	<u>Clearly Defined In- / Out-Group(s) (It is the right thing to do for the "team")</u>		<u>Social Validation (Everyone else is doing it; It increases my reputation)</u>
														0.00
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Appendix D: Sample of Tool Artifacts and Test Results

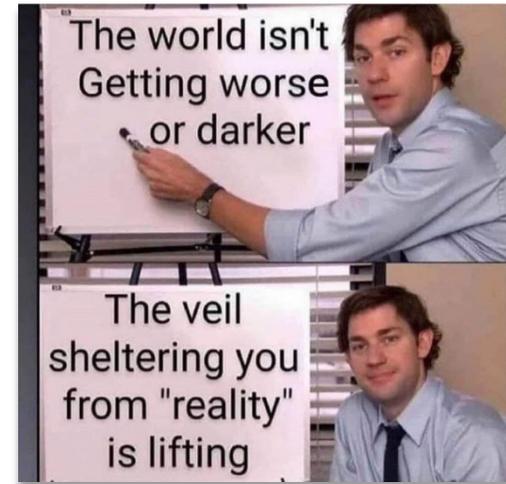
Influence-to-Action Assessment Tool v0_1a Artifacts



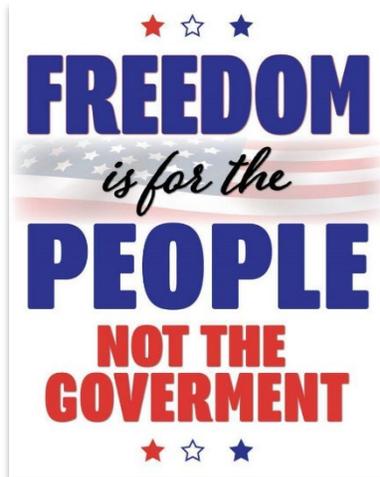
IMEG001 – “Refugees Welcome”



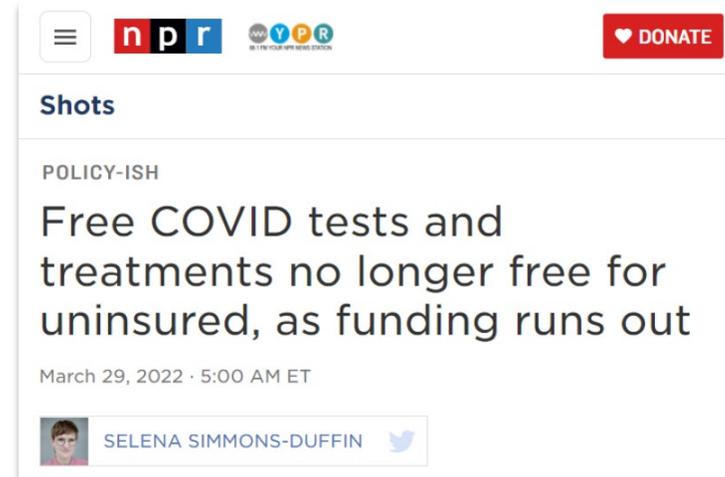
IMEG002 – “Keep Your Country Clean”



IMEG003 – “The world isn’t Getting worse...”



IMEG004 – “Freedom is for the People...”



IMEG005 – “Free COVID Tests...”

Influence-to-Action Assessment Tool v0_1a Results

<i>Influence to Action Campaign / Narrative Impact Assessment Tool (version 0.1a)</i>														
Administrative Information			Individual (Internal) Level Variables						Societal (Structural) Level Variables					Campaign / Narrative Impact Index
Ref. Num.	Campaign / Narrative Name	Date-Time Group	Emotional Appeal	Threat to Identity	Threat to Culture / Way of Life	Identity Affirmation	Victim Affirmation	Victimization	Persistent / Increasing Threat (Things are getting out of hand)	Clear Alternative Future (I can help make the world a better place)	Purported Lack of Response (Not enough is being done)	Clearly Defined In- / Out-Group(s) (It is the right thing to do for the "team")	Social Validation (Everyone else is doing it; it increases my reputation)	
IMEG001-CSB	"Refugees Welcome"	4/13/2022	3	2	2	2	1	2	2	1	1	2	2	11.38
IMEG002-CSB	"Keep Your Country Clean"	4/13/2022	2	2	2	2	2	3	1	2	1	2	2	12.25
IMEG003-CSB	"The world isn't getting worse...."	4/13/2022	3	1	1	2	2	0	1	1	0	1	0	7.79
IMEG004-CSB	"Freedom is for the People...."	4/13/2022	2	3	2	1	1	1	2	1	0	0	0	7.95
IMEG005-CSB	"Free COVID Tests...."	4/13/2022	1	0	1	0	1	0	2	0	1	1	0	5.18
														0.00
														0.00
														0.00
														0.00
														0.00

Appendix E: Influence-to-Action Assessment Tool Instructions

Instructions		
Usable artifacts	This tool has been designed to be used across a variety of artifact types including images (e.g., memes, screen-shots, etc.), short-form writing (e.g., tweets, comments, etc.), blogs or news articles, long-form writing (e.g. journal articles, books, etc.), audio, and video, as well as forms of mixed-media (to include comments on videos, chat between users, etc.). There is no minimum number of artifacts required to make this a useful tool. It can be used as a quick check for a very small number of artifacts or used to aggregate and understand very large numbers of artifacts.	
Finding and storing artifacts	Compile a selection of artifacts to be used for coding. It is helpful for the person compiling the artifacts not be the person coding, but is not required. It is important to make sure that the artifacts to be coded are stored somewhere that they can be accessed later, in case the artifacts are removed from their original source.	
<u>Familiarize yourself with the variable definitions</u>	Please read through the definitions of each variable, paying particular attention to the differences between those with similar names or similar themes (e.g., victimization v. victim affirmation). Make sure that you are familiar with the definitions of these terms and use the provided examples to enhance your understanding.	
<u>Read through the codebook</u>	Read through the codebook. The scorings are generally consistent across the board in regard to the simplified coding schema of 0 = no; 1 = maybe; 2 = yes, indirect; 3 = yes, direct, however there are nuances for each variable, so a close examination is necessary. Note that the scorings of 0 and 1 are the same for all internal variables and the scoring of 0 is the same for all structural variables. The variables are all generally similar across variables for the scorings of 2 or 3 and are primarily based in whether the specific variable is implied or directly stated within the artifact.	
Understand your specific purpose and goal for using the tool	This tool has been designed to be used for a variety of purposes depending on the desired outcome of use. Some examples are described below:	
	One artifact for multiple narratives	This tool can be used to compare the effectiveness of singular artifacts across a range of narratives to determine what messaging may be more prolific than others in terms of generating action* within a population subset. For example, the tool could be used to look at a variety of artifacts coming from one twitter profile or a specific hate-group to determine where their counter-messaging campaigns should focus.
	Multiple artifacts for one narrative	The tool can be used to compare artifacts within a campaign or group of narratives to help determine what messaging may be more prolific in terms of generating action* within the campaign's targeted population
	Multiple artifacts for multiple narratives based around a specific theme, movement, or event	The tool can additionally be used with for more complicated analysis using multiple artifacts across multiple narratives, but for comparative purposes should be focused on a specific theme, movement, or event. The tool used in this manner can help analysts narrow down their focus on more specific types of messaging within a broader or global event. For example, this tool could be used to analyze artifacts with different messaging, from different angles or sources, and directed at different audiences, but with the overall theme of COVID-19 vaccine development.

Instructions			
Important reminders	1. When coding, only use what is provided by the artifact. Do not infer potential meaning from the intended target audience or possible emotional responses from either the intended audience or opposing groups. 2. It is helpful to have multiple analysts code at least a sample of the artifacts to ensure consistent coding throughout. 3. Have the variable definitions and codebook available during coding in order to ensure consistent coding across the variables.		
Coding	Begin coding by going through the tool one variable at a time for each artifact, coding your scoring 0-3 for each variable and providing justification for that score. The aggregate scoring will be automatically calculated at the far right of the tool and will provide a composite score for the artifact that is color-coded as described below.		
Ranges and ranking	The tool automatically calculates a composite score for each artifact on the right, based on statistical weights that were determined by an American general population survey conducted by START at the University of Maryland.** The scores are sorted into three categories, marked by the color of the cell, with red having the highest score range and blue the lowest score range, as listed below. These color coding is designed to provide an easy visualization for the analysts on where the artifact scored on the scale for the tool as well as easy comparison between the artifacts on how they scored compared to each other.		
	Range:	1st Tier = 14.301-21.45	2nd Tier = 7.151-14.30
Analyzing results	The ranges of scores and tiers indicate the potential for that artifact to sway consumers of the artifact into action. * The 1st tier (red) indicates a higher likelihood of action being taken as a result of consuming the artifact. The 2nd tier (yellow) indicates some potential for action and the 3rd tier (blue) indicates the lowest potential for action occurring from consuming that particular artifact. When looking across various artifacts, these ranges/tiers provide a ranking of artifacts that can inform analysts of what types of artifacts/messaging to focus their attention on or to further investigate.		

* Action refers to an outwardly observable act that is in direct/indirect response to the influence conveyance tool(s) (i.e., messaging) being presented to the target. For this research, term Action can be used interchangeably with the term mobilization. Further, we conceptualize “action” on a continuum of activities that range from “low intensity” active online participation to “high intensity” violence in the physical world.

** For more information on the survey or the weighting of the variables please contact Dr. Steve Sin at sinss@umd.edu