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IDENTIFYING INFLUENCERS FOR PSYOP

by

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Social media has become one of the primary modes of communication throughout the world, especially in developed countries. Nearly every user of social media in its various forms or applications has an audience he or she can influence and a set of influencers from which he or she receives information. U.S. Psychological Operations (PSYOP) personnel focus on influencing foreign target audiences in their audience's own language but have been slow to adapt to the use of social media as a means of influence. Drawing from principles used in influencer marketing, we ask, How can U.S. PSYOP forces and their partners best identify social media influencers with whom they can partner in their effort to change the behavior of foreign target audiences? Through this study, we identified the main factors for influence on social media using both quantitative and qualitative analysis and developed a decision-making tool to identify the key communicators, in particular social media influencers, who can elicit the desired behavioral change in a target audience. The seven-category influencer scorecard we created provides a low-tech, situationally adaptable method for identifying influencers with whom U.S. PSYOP can partner to execute a PSYOP series.

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ABSTRACT

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TABLE OF CONTENTS

I. INTRODUCTION....1
A. BACKGROUND....1
B. PROBLEM....2
C. RESEARCH QUESTION....4
D. LITERATURE REVIEW....4
1. The Connection between Influencer Marketing and Psychological Operations....4
2. The Marketing Industry Perspective on Influencers....5
3. Academic Research on Influencer Marketing....7
4. Perspective C: Related Topics in DOD Doctrine and PSYOP....9
E. THE "GAP": TYING INSIGHTS FROM THE MARKETING INDUSTRY AND ACADEMIA TO PSYOP....10
F. APPROACH....11
1. Approach Overview....11
2. Case Studies....12
3. Developing an Influencer Identification Scorecard....12
4. Interviews....14

II. TWITTER INFLUENCE IN THE 2011 EGYPTIAN REVOLUTION....15
A. INTRODUCTION....15
B. CASE STUDY SOURCES AND LITERATURE REVIEW....16
C. SOCIAL NETWORK ANALYSIS....18
D. AGGREGATED NETWORK SOCIOGRAM AND DESCRIPTION....24
E. SOCIAL NETWORK ANALYSIS INSIGHTS....28
F. REGRESSION ANALYSIS AND OPEN-SOURCE DATA ANALYSIS....29
1. Sources....29
2. Hypothesis....30
3. Regression Equation....30
4. Data Visualization....31
G. REGRESSION ANALYSIS AND RESULTS....36
H. INFERENCES FROM THE RESULTS....39
I. 2011 EGYPTIAN REVOLUTION CONCLUSION....40

III. LEARNING FROM THE FAILURES OF FYRE FESTIVAL TO ENHANCE TRUST AND INFLUENCE FOR SOCIAL MEDIA INFLUENCERS 43
A. INTRODUCTION 43
B. BACKGROUND 43
C. LITERATURE REVIEW 46
1. Influencers 46
2. Influencer Marketing 48
D. LESSONS LEARNED: TRUST, ENGAGEMENT, AND AUTHENTICITY 50
E. POTENTIAL APPLICATIONS 54
F. FYRE FESTIVAL CONCLUSION 56
G. FYRE FESTIVAL KEY TAKEAWAYS 57
1. Marketing Professionals Know How to Sell 57
2. Digital Media Is Essential to Effectively Reaching Many Target Audiences 57
3. Lessons Learned from Fyre Festival 58
4. Offensive, Mass, and Maneuver 58
5. Economy of Force, Simplicity and Legitimacy 59
6. Reach Potential by Employing Influencers 59

IV. THE INFLUENCER SCORECARD 61
A. SCORECARD OVERVIEW 61
B. ALIGNMENT WITH THE PSYOP OBJECTIVE 68
C. FOLLOWERS 69
D. POTENTIAL REACH AMONG THE TARGET AUDIENCE 73
E. INTERACTION/ENGAGEMENT RATE 74
F. TIMES SHARED AND MENTIONS 75
G. POST FREQUENCY 76
H. INFLUENCER SCORECARD CONCLUSION 78

V. CONCLUSION 79
A. LIMITATIONS 80
B. SUGGESTED FUTURE RESEARCH 81

APPENDIX. SCORECARD USE AND IMPLEMENTATION 83
A. SOCIAL MEDIA INFLUENCERS: ROLES AND APPLICATIONS 83
B. WHY USE THE INFLUENCER SCORECARD 83

C. SCORECARD CATEGORIES AND THEIR IMPLEMENTATION 84
1. Establish the Baseline 84
2. Analysis and Ranking 87
D. CATEGORIES 89
1. Alignment with the Desired Behavior 89
2. Followers 90
3. Potential Reach 92
4. Interaction and Engagement Rate 93
5. Shares and Mentions 94
6. Post Frequency 95
E. CONSIDERATIONS 97

LIST OF REFERENCES 99

INITIAL DISTRIBUTION LIST 105

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LIST OF FIGURES

Figure 1. Influencer Tier Chart....7

Figure 2. January-March 2011 #Jan25 Mentions Sociogram....19

Figure 3. January-March 2011 #Jan25 Retweets Sociogram....20

Figure 4. Retweets 317-core Sociogram, Colored by Louvain Grouping....22

Figure 5. Mentions 359-Core Sociogram Colored by Louvain Grouping....23

Figure 6. Aggregated Network Sociogram, Louvain Grouping, In-Degree Sizing....25

Figure 7. 2010 Global Internet Penetration Using the World Bank's World Development Indicators Data....32

Figure 8. Accounts Associated with *#Jan25* by Country....32

Figure 9. Times an Account's Post with *#Jan25* Was Retweeted by Country, Log Transformed....33

Figure 10. Retweeted per Capita Controlled for by Internet Penetration, Log Transformed....33

Figure 11. Retweeted per Capita Controlled for by Internet Penetration, No Log Transformation....34

Figure 12. Influencer Tier Identification....48

Figure 13. Influencer Marketing Benchmark Report 2021—Annual Growth and Value of Influencer Marketing....50

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LIST OF TABLES

Table 1. Centrality and Prestige Data Analysis 27

Table 2. Country-Level Times Retweeted with Population and Internet Penetration Controls 35

Table 3. Linear Regression with Times Retweeted, Times Mentioned, and Followers Count as Dependent Variables 38

Table 4. Baseline Influencer Scorecard 65

Table 5. Adjustable Influencer Scoring Matrix 66

Table 6. Influencer Comparison Scorecard Example 67

Table 7. Baseline Scorecard Example 85

Table 8. Adjustable Influencer Scoring Matrix 86

Table 9. Influencer Comparison Scorecard Example 88

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LIST OF ACRONYMS AND ABBREVIATIONS

API	application programming interface
CARVER	criticality, accessibility, recuperability, vulnerability, effect, recognizability
DB	desired behavior
PSYOP	psychological operations
PO	psychological operations objective
SNA	social network analysis
SPO	supporting psychological operations objective
SOF	special operations forces
TA	target audience
USG	United States government
GPC	great power competition
DDR	disarmament, demobilization, and reintegration
UGC	user generated content
MOE	measures of effectiveness

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I. INTRODUCTION

A. BACKGROUND

Social media has become one of the primary modes of communication in the way people receive information throughout the world, especially in developed countries. Regardless of one's preferred method of communication, statistics show that 53% of the world receives information through this medium.[1] Social media creates a near-instant line of communication from influencers to their audiences anywhere in the world and permits interaction within groups based on interests. Nearly every user of social media in its various forms or applications has an audience he or she can influence, and a set of influencers from which he or she receives information.

Though many influencer marketing websites and blogs offer definitions of the term influencer, they often focus on the ability of an individual to affect product sales. Werner Geyser writing at *Influencer Marketing Hub* defines an influencer as, "someone who has: the power to affect the purchasing decisions of others because of his or her authority, knowledge, position, or relationship with his or her audience."[2] The *Cambridge Dictionary*'s two definitions seem to capture a better range of options for the term. It defines influencer as: "1. Someone who affects or changes the way people behave; or 2. a person who is paid by a company to show and describe its products and services on social media, encouraging other people to buy them."[3] In this thesis, we prefer the first of these two definitions while retaining the social media aspect of other definitions to specify the domain in which the individual purveys their information. We focus on broadly influencing action over just influencing sales. Thus, throughout this thesis we refer to influencer as

[1] "Social Media Users," DataReportal, accessed March 13, 2021, https://datareportal.com/social-media-users.

[2] Werner Geyser, "What Is an Influencer? - Social Media Influencers Defined," *Influencer Marketing Hub* (blog), March 14, 2017, https://influencermarketinghub.com/what-is-an-influencer/.

[3] *Cambridge Dictionary*, s.v. "influencer," accessed November 5, 2021, https://dictionary.cambridge.org/us/dictionary/english/influencer.

someone who attempts to persuade others to change their behavior through activity on social media or other internet-based platforms.

U.S. Psychological Operations (PSYOP) personnel focus on influencing foreign target audiences in their audience's own language. Even at social media's current reach, and certainly if it continues to grow, U.S. PSYOP must make effective use of social media to reach many potential target audiences. While PSYOP units and personnel have used social media with varying degrees of success, a consensus or doctrine on how to best leverage the medium does not yet exist.

Understanding how to effectively reach target audiences through social media can prove extremely difficult because it requires action from the audience. The audience decides who they follow on social media based on their interests. One way to reach a foreign target audience on social media is to partner with the key communicators who already have the attention of the audience. Brands and companies increasingly employ this tactic through influencer marketing.[4] This method uses a "word of mouth" approach from a trusted source while also reaching large portions of the target audience (at least as many as those who follow the influencer on social media). Combining influencer marketing research with the qualities U.S. PSYOP looks for in key communicators may help in developing a framework for identifying and reaching target audiences through social media.

B. PROBLEM

Elements of the United States government (USG) have the capability to engage with and influence target audiences and compete in the rapidly evolving global information environment. This can be accomplished by drawing from existing doctrine and experience with traditional key communicators while employing new technologies with which potential target audiences frequently interact. Unfortunately, to date, U.S. military attempts to utilize social media as an influence platform have seen varying degrees of success due to cumbersome bureaucratic processes, the desire to unilaterally create content, and the

[4] "20 Surprising Influencer Marketing Statistics," *Digital Marketing Institute* (blog), accessed February 6, 2021, https://my.digitalmarketinginstitute.com/blog/20-influencer-marketing-statistics-that-will-surprise-you.

failure to adapt doctrine and training to match what commercial and political marketing employ to function in the current and future information environments. As the House of Representatives Armed Services Committee put it:

> The committee remains concerned with the Department of Defense's ability to effectively monitor and utilize social media analytic tools to support awareness of the operating environment for force protection, operational security, and other missions. The committee believes that the lack of clearly defined policies is hampering the ability to use such Publicly Available Information (PAI) to understand adversarial sentiment and narrative messaging in theaters of active hostilities, as well as monitoring for non- and semi-permissive environments, and areas of potential future activity. While there are some technology capabilities that currently exist that could support these activities, including many that can be leveraged from the commercial sector, the committee believes that the Department of Defense is not effectively leveraging these tools because of a fundamental lack of policy, doctrine, and procedures that delineate how such tools might be used. In the lack of such guidance, the committee believes that the Department is abdicating this space to adversaries that have no compunction to limit their actions, and in fact actively exploit it to achieve their strategic goals of recruitment, fundraising, and strategic messaging.[5]

These USG entities have missed the mark and need to learn from the private sector and from their adversaries. They must develop strategies that increase their efficacy regarding social media influence and gain influence over critical foreign target audiences for great power competition (GPC) and the continuing war on terror. Utilization of social media influencers as key communicators for influence operations is a logical step toward achieving desired influence objectives, such as participation in a country's political process, disarmament, demobilization, and reintegration (DDR), or greater awareness of disinformation techniques.

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[5] U.S. House of Representatives, Committee on Armed Services, *Report on H.R. 4909, National Defense Authorization Act for Fiscal Year 2017, with Additional Views*, Report 114–537 (Washington, DC: U.S. House of Representatives, 2016), 246, https://www.congress.gov/114/crpt/hrpt537/CRPT-114hrpt537.pdf.

C. RESEARCH QUESTION

Drawing from principles used in influencer marketing, how can U.S. PSYOP forces and their partners best identify social media influencers with whom they can partner in their effort to change the behavior of foreign target audiences?

D. LITERATURE REVIEW

1. The Connection between Influencer Marketing and Psychological Operations

U.S. Military Psychological Operations (PSYOP) units and personnel do not sell commercial products, which suggests a limited relationship between marketing and PSYOP. Yet they ultimately share the same objective: to influence attitudes and behavior of their target audiences. PSYOP seeks attitude and behavior change in line with U.S. National Security interests (e.g., disarmament and demobilization from terrorist organizations, the support of host nation governments, participation in resistance movements against authoritative regimes, disengagement, and de-radicalization, etc.), while marketing aims to convince consumers to buy products and services. Most of the concepts and techniques that work for one work for both. Since more marketers exist than PSYOP personnel and companies spend billions of dollars in marketing annually, PSYOP personnel must learn new and innovative techniques from commercial marketing to ensure operational effectiveness in a rapidly evolving information environment.

Over the past decade, companies have increasingly turned to social media influencer marketing (influencer marketing) to sell products.[6] PSYOP also uses key communicators to influence target audiences but has not specifically addressed social media in doctrine.[7] To identify effective social media influencers (influencers) among a target audience which could be leveraged by PSYOP forces, one must first understand what

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[6] *Digital Marketing Institute* (blog), "20 Surprising Influencer Marketing Statistics."

[7] Department of the Army, *Military Information in Conventional Operations*, ATP 3-53.2 (Washington, DC: Department of the Army, August 2015), https://armypubs.army.mil/ProductMaps/PubForm/Details.aspx?PUB_ID=105460, 4–7.

makes an effective influencer and what makes influencer marketing an effective tool to change the behavior of a target audience. This literature review will address the principles of influencer marketing from the perspective of marketing specialists, academic research, and from the PSYOP community.

2. The Marketing Industry Perspective on Influencers

Companies and marketing agencies gain a competitive advantage by developing systems to analyze the effectiveness of social media advertising. Due to the value of the information obtained from these systems, much of the data and formulas become proprietary. While academia plays a role in understanding effective marketing techniques, marketing industry perspectives also prove valuable. Charles Taylor, professor of marketing at Villanova University, states in the *International Journal of Advertising*, "in a field like advertising, it is very important to follow the popular press, especially advertising trade publications and various business periodicals in order to know what industry trends are creating a need for additional research that can help inform real world managers in addition to advancing theory."[8]

Some notable statistics demonstrate the rise of influencer marketing and corporate interest in the strategy. Seventy-four percent of companies claim they have used influencer marketing and 49.2% of companies currently devote at least 10% of their marketing budgets to it.[9] Also, *SocialPubli's 2020 Influencer Marketing Report* states, "89.2% of marketing professionals believe influencer marketing is effective."[10] Insider Intelligence and the *Digital Marketing Institute* both predict a continued rise in influencer marketing, predicting companies will spend $22 billion on it by 2022, a tenfold increase to the $2

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[8] Charles R. Taylor, "The Urgent Need for More Research on Influencer Marketing," *International Journal of Advertising* 39, no. 7 (October 2, 2020): 889, https://doi.org/10.1080/02650487.2020.1822104.

[9] *2020 Influencer Marketing Report: A Marketer's Perspective*, *SocialPubli* (blog), accessed February 6, 2021, https://socialpubli.com/blog/2020-influencer-marketing-report-a-marketers-perspective/.

[10] *SocialPubli* (blog), *2020 Influencer Marketing Report*.

billion spent in 2017.[11] These figures show that most businesses use influencer marketing and have seen enough value returned to spend more on it, but they do not explain the strategy for selecting their influencers or what makes it effective.

Big Commerce's article on Influencer Marketing Statistics identified five categories that make a quality influencer: quality of content (the influencer has a strategy to market the product), target audience (influencer's audience matches business's target audience), engagement rate (reactions and comments from the audience), on-brand messaging (a "good fit" between the product, the influencer, and the influencer's focus), and budget (the company can afford the influencer).[12] *SocialPubli*'s *2020 Influencer Marketing Report* interviewed 200 industry professionals and found: "The top three metrics marketers use to measure influencer marketing success are reach (48.7%), engagement rate (47.5%) and sales/lead generation (44.5%)."[13] Insider Intelligence also stressed the importance of reach and defined an inverse relationship between follower count and "targeted reach, cost-effectiveness, engagement, authenticity, and accessibility."[14] Additionally, Instagram influencers receive the greatest share of marketing money, while Facebook and YouTube come in second and third.[15]

Confirming the inverse relationship above, 88% of marketers prefer to work with influencers who have fewer than 100,000 followers, which is identified as a mid-tier influencer, as indicated in Figure 1.[16] While each of the articles viewed the industry from a different perspective, in aggregate, they show the potential impact an influencer can have

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[11] *Digital Marketing Institute* (blog), "20 Surprising Influencer Marketing Statistics;" "Influencer Marketing: Social Media Influencer Market Stats and Research for 2021," Insider Intelligence, January 6, 2021, https://www.insiderintelligence.com/insights/influencer-marketing-report.

[12] "Influencer Marketing Statistics," *Big Commerce* (blog), accessed February 6, 2021, https://www.bigcommerce.com/blog/wp-content/uploads/post-pdfs/BigCommerce-influencer-marketing-statistics.pdf.

[13] *SocialPubli* (blog), *2020 Influencer Marketing Report*.

[14] Insider Intelligence, "Influencer Marketing."

[15] Insider Intelligence, "Influencer Marketing."

[16] *SocialPubli* (blog), *2020 Influencer Marketing Report*.

on a brand's target audience. The stronger the relationship between the influencer and his or her audience, the more likely they will convince the audience to buy products they use and endorse. Figure 1 shows the six influence tiers, as defined by the blog *Mediakix,* which we will use throughout this thesis (many other sources agree on these tiers or come close to agreement, though some vary).

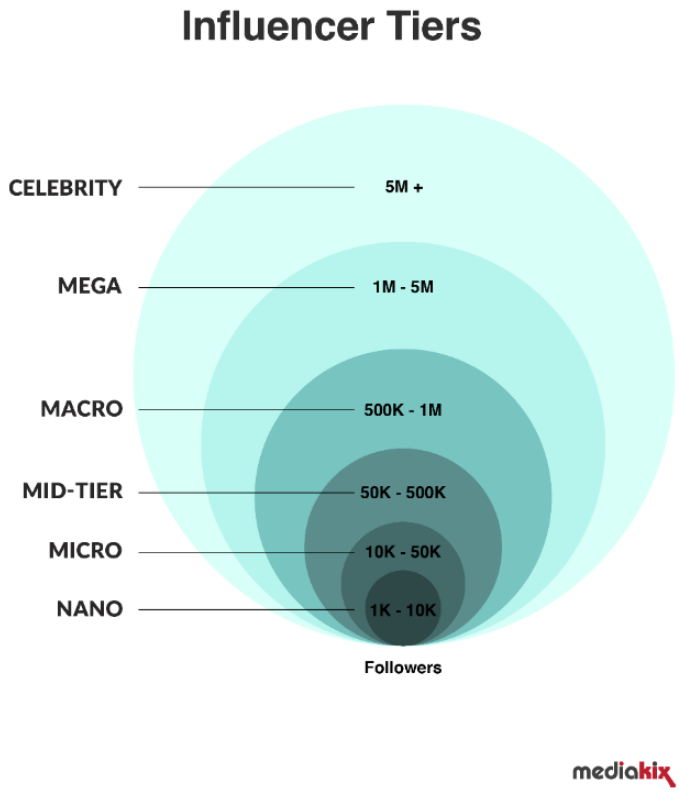

Figure 1. Influencer Tier Chart[17]

3. Academic Research on Influencer Marketing

The industry perspective shows what the practitioners look for in influencers, but academic perspectives generally give greater depth into a specific topic with more

17 "Influencer Tiers for the Influencer Marketing Industry," *Mediakix* (blog), accessed October 7, 2021, https://mediakix.com/influencer-marketing-resources/influencer-tiers/.

transparency and thorough analysis of data. The academic perspective can provide evidence for or against ideas found in industry.

Traditionally, companies and brands have used celebrities to market their products, but Schouten, Janssen, and Verspaget found that survey respondents "identify more with influencers than celebrities, feel more similar to influencers than celebrities, and trust influencers more than celebrities."[18] Uzunoğlu and Kip confirmed the value of the connection between the influencer and their audience and highlight the importance of interaction between the two, which leads to trust and mutual understanding.[19] Likewise, Janusz Wielki argued that effectiveness of influencers includes "trust in a given person being an authority, the credibility of the message communicated and the link between the message and a specific person."[20] Uzunoğlu and Kip as well as Wielki also stressed the importance of the "word of mouth" or "electronic word of mouth" (eWOM) nature of influencer recommendations.[21] Additionally, Chopra, Avhad, and Jaju emphasized the importance of choosing appropriate influencers, the ultimate aim of this thesis.[22] They suggest "focusing on identifying the right influencers" for a marketing relationship by starting with the target audience.[23] This information should relate to PSYOP in a

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[18] Alexander P. Schouten, Loes Janssen, and Maegan Verspaget, "Celebrity vs. Influencer Endorsements in Advertising: The Role of Identification, Credibility, and Product-Endorser Fit," *International Journal of Advertising* 39, no. 2 (February 17, 2020): 258, https://doi.org/10.1080/02650487.2019.1634898.

[19] Ebru Uzunoğlu and Sema Misci Kip, "Brand Communication through Digital Influencers: Leveraging Blogger Engagement," *International Journal of Information Management* 34, no. 5 (October 2014): 592–602, https://doi.org/10.1016/j.ijinfomgt.2014.04.007.

[20] Janusz Wielki, "Analysis of the Role of Digital Influencers and Their Impact on the Functioning of the Contemporary On-Line Promotional System and Its Sustainable Development," *Sustainability* 12, no. 17 (January 2020): 15, https://doi.org/10.3390/su12177138.

[21] Uzunoğlu and Misci Kip, "Brand Communication through Digital Influencers," 598; Wielki, "Analysis of the Role of Digital Influencers and Their Impact on the Functioning of the Contemporary On-Line Promotional System and Its Sustainable Development," 4.

[22] Anjali Chopra, Vrushali Avhad, and Sonali Jaju, "Influencer Marketing: An Exploratory Study to Identify Antecedents of Consumer Behavior of Millennials," *Business Perspectives and Research* 9, no. 1 (January 1, 2021): 87, https://doi.org/10.1177/2278533720923486.

[23] Chopra, Avhad, and Jaju, "Influencer Marketing: An Exploratory Study to Identify Antecedents of Consumer Behavior of Millennials," 88.

remarkably similar way due to the common theme of influencing target audiences to take an action, and warrants study on PSYOP partnerships with influencers.

4. Perspective C: Related Topics in DOD Doctrine and PSYOP

In the Seven Step PSYOP Process (I. Planning; II. Target Audience Analysis; III. Series Development; IV. Product Development and Design; V. Approval; VI. Production, Distribution, and Dissemination; VII. Evaluation), PSYOP practitioners determine the medium and dissemination platform during Step III: Series Development after determining how the Target Audience (TA) receives information in Step II: Target Audience Analysis (TAA).[24] For media such as television or radio, the doctrine provides guidance during Step VI: Product Development and Design, on identifying the best stations to reach the audience. Current doctrine does not show how to reach the TA through social media.[25]

Army and joint doctrine do not directly address leveraging influencers, but they do mention key communicators or similar concepts in forty publications.[26] Most of these references devote little space to key communicators and instruct PSYOP practitioners and other military personnel to identify key communicators, target them (primarily non-lethal targeting), and employ them. Army Field Manuals 1–02.1 and 3–53 define a key communicator as, "an individual to whom the target audience turns most often for an analysis or interpretation of information and events."[27] Influencers meet this definition for many target audiences across the world, especially when comprised of younger generations, such as Generation Z and Millennials. If the commercial marketing industry

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[24] Department of the Army, *Psychological Operation Process Tactics, Techniques, and Procedures*, FM 3-05.301 (Washington, DC: Department of the Army, 2014), 2–22 - 2–23.

[25] Department of the Army, Psychological Operation Process Tactics, Techniques, and Procedures, 6–9 - 6–17.

[26] Alexander Wingate, "Key Communicators Doctrine Review" (unpublished spreadsheet, February 1, 2021).

[27] Department of the Army, *Operational Terms,* FM 1-02.1 (Washington, DC: Department of the Army, 2019), https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN31809-FM_1-02.1-000-WEB-1.pdf, 1–61; Department of the Army, *Military Information Support Operations*, FM 3-53 (Washington, DC: Department of the Army, 2013), https://armypubs.army.mil/ProductMaps/PubForm/Details.aspx?PUB_ID=102936.

remains relevant and continues to grow, behavior change in non-commercial endeavors, such as countering terrorism and other national-security related issues, may also benefit from leveraging influencers as key communicators.

One previous NPS thesis looked specifically for lessons learned from influencer marketing in order to apply them to PSYOP. Andrew Sadoun used case studies from Occupy Wall Street, Pepsi, and Coca-Cola to evaluate the successes and failures of influencer marketing campaigns.[28] To identify key influencers for PSYOP objectives, he suggested using social media tracking software to identify a social network and identify the most central nodes or those that inform the target audience. This research provides important groundwork for this thesis to build on because it made the connection between influencer marketing and PSYOP. It also opens an opportunity for further study and specificity in identifying key influencers by applying the factors for success found in industry and academic research.

E. THE "GAP": TYING INSIGHTS FROM THE MARKETING INDUSTRY AND ACADEMIA TO PSYOP

If PSYOP practitioners determine in TAA that the TA receives their information from social media, PSYOP practitioners have two choices to reach the TA: produce their own social media content or work with another entity (business, partner force, key communicator, etc.) to do so. PSYOP doctrine does not address how to reach the TA through social media the way it does with television, radio, and print media. This thesis will analyze one-way PSYOP practitioners could accomplish that task—identifying social media influencers who already reach the TA and with whom the U.S. Department of Defense may want to pursue a partnership.

The commercial marketing industry and academic research have identified several key factors PSYOP personnel should consider for identifying and selecting influencers with whom to partner, such as reach, target audience, trust, credibility, quality of content, consistency, and the best platform(s) to reach a target audience. For the commercial

[28] Andrew A Sadoun, "PSYOP and Social Networks" (master's thesis, Naval Postgraduate School, 2018), 108, https://calhoun.nps.edu/handle/10945/61259.

marketing industry, much of the math weighing these factors remains proprietary, but even where academic studies have produced valuable insights, the scope of the studies available have not yet shown how to grade influencers in their value as partners to U.S. government entities or the Department of Defense. A gap exists in identifying and weighing the most relevant factors for PSYOP identification of key influencers.

The military often uses weighted averages to aid in decision making for such tasks as risk management, targeting (criticality, accessibility, recuperability, vulnerability, effect, and recognizability [CARVER]),[29] and wargaming courses of action. Identifying and weighing the most relevant factors for PSYOP and influencer partnerships may enable a scoring system for this task. Gathering relevant data and analyzing it for potential use by PSYOP personnel will address this gap and begin the process of improving upon vague doctrine for identifying and employing key communicators.

F. APPROACH

1. Approach Overview

To answer the research question of, "how can U.S. PSYOP forces and their partners best identify social media influencers to change the behavior of foreign target audiences?," this thesis uses both quantitative and qualitative approaches. We analyze case studies of social media influencers who mobilized their followers to action and will develop a decision-making tool for identifying the key communicators who influence a target audience to achieve a specific end. The case studies and literature review focused on influencer marketing will inform the scoring system for identifying influencers for partnership with U.S. and allied PSYOP units. This proves especially important for the qualitative aspects of the scorecard which cannot be measured through social media metrics but can be determined through logical reasoning.

[29] Joint Chiefs of Staff, *Countering Threat Networks*, JP 3-25, (Washington, DC: Joint Chiefs of Staff, 2016), www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_25.pdf, IV–12.

2. Case Studies

This study will assess the social media landscape surrounding two social media campaigns—campaigns that inspired people to act—by analyzing influential individuals and networks within both cases. The first case is the 2011 Egyptian revolution that was part of the Arab Spring. Egyptian activists used social media to organize and rally protestors to march in Tahrir Square, which resulted in the successful ouster of Hosni Mubarak as Egyptian president. The second case is the failed 2017 Fyre Festival, which successfully used social media to hype the festival and sell all tickets but failed to land the promised musicians and provide the facilities and experience promised to attendees. Using primary (e.g., social media stats) and secondary (e.g., scholarly and news articles and related analysis) source material, we evaluated these two cases to identify relevant factors that led to successful behavior change in the target audiences.

We also used two different approaches to the case studies. For the 2011 Egyptian revolution we used Twitter's "Academic" API data to collect historical data as well as leveraged social network analysis (SNA) to examine influencers in this context.[30] The case study of the Fyre Festival shows the potential effect of influencer marketing and the lessons to be learned from the event. Through these case studies we sought to identify key factors which made these influencers' campaigns successful in order to include them in the influencer scorecard.

3. Developing an Influencer Identification Scorecard

As mentioned previously, many companies that use social media influencers (large corporations as well as digital marketing specialists) possess unique proprietary algorithms to identify influencers with whom to partner. In this thesis, we develop a simple scorecard to measure an influencer's potential for partnering with U.S. Department of Defense organizations, other U.S. Government agencies, and the U.S. military's allies and partners. This identification process will ideally measure key factors that make a social media

[30] Christopher Barrie and Justin Chun-ting Ho, "AcademictwitteR: An R Package to Access the Twitter Academic Research Product Track v2 API Endpoint," *Journal of Open Source Software* 6, no. 62 (June 7, 2021): 3272, https://doi.org/10.21105/joss.03272.

persona influential as well as its compatibility with PSYOP objectives (POs). Once the influencers have been scored and ranked, U.S. PSYOP personnel or other organizations can determine how best to use the information to develop partnerships (research that lies outside the scope of this thesis, but which other researchers are currently pursuing).

While we can measure some of the relevant factors that the literature review deems significant to the success of an influencer (reach, number and positivity of reactions, engagement rate, shares, mentions, and post frequency), other factors prove more subjective (alignment with the desired behavior). To develop a useful scorecard, we combined measurable and quantifiable data available across several social media platforms with an approach for qualitative analysis of non-measurable information.

To measure quantitative factors that determine success of an influencer within a region or target audience, the authors used data analysis and social network analysis tools (particularly Gephi), the assistance of professors in the Naval Postgraduate School's CORE Lab, free social media analysis tools, R and R-Studio, and interviews with experts on social media influence techniques.[31] This thesis isolates and weighs the most relevant measurable statistics and develops a separate criterion for scoring and weighing relevant qualitative attributes.

Due to the differences in social media applications, measuring across platforms proves difficult (e.g., comparing a Twitter influencer against a TikTok influencer), so a ranking on one platform will not hold the same weight as a ranking on another platform. For this reason, it is important to group influencers according to the platform and to develop a scoring system that can be used for any social media application, but not many at the same time. Grouping and weighing influencers according to individual platforms is important since platform popularity and impact varies across the globe.[32] In the world of social media, new platforms can arise and quickly overtake others, and regional popularity

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[31] Christopher Barrie and Justin Chun-ting Ho, "AcademictwitteR: An R Package to Access the Twitter Academic Research Product Track v2 API Endpoint."

[32] Vincenzo Cosenza, "World Map of Social Networks," *Vincos Blog* (blog), January 2021, https://vincos.it/world-map-of-social-networks/.

can shift even faster than global popularity. Understanding regional trends and preferences of target audiences will allow analysts and planners using the influencer scorecard to better manage their time and find influencers that can maximize effectiveness. Presence across multiple platforms may improve or decrease an influencer's overall effectiveness, but this should be considered after the initial scoring.

4. Interviews

We conducted a targeted interview with Clint Watts and Graham Shellenberger who are currently at the helm of a private-sector strategic analysis and consulting company, Miburo Solutions.[33] Mr. Watts is a former Army officer and FBI agent who helped expose Russia's involvement in the 2016 U.S. presidential election. Mr. Watts and Mr. Shellenberger study misinformation, disinformation, and social media influence and use their unique understanding of the USG and private sector to inform their studies and develop workable strategies to inform their clientele. This interview enhanced our understanding of current practices and trends that impact the use and effectiveness of internet-based key communicators. Through these interviews, we gained understanding about how DOD personnel conduct training and learn about the various tools and software they currently use. We also increased understanding of effective tools and practices used by the private sector to successfully identify the most influential and effective key communicators on social and digital media.

[33] Clint Watts, "The National Security Challenges of Artificial Intelligence, Manipulated Media, and 'Deepfakes,'" § U.S. House of Representatives – Permanent Select Committee on Intelligence (2019), https://intelligence.house.gov/uploadedfiles/clint_watts_-_house_select_committee_on_intelligence_-_ai__deep_fakes_-_13_june_2019.pdf.

II. TWITTER INFLUENCE IN THE 2011 EGYPTIAN REVOLUTION

A. INTRODUCTION

The Egyptian revolution of 2011 represented one of the first times in history that social media played a significant role in organizing and coordinating protests and gaining global recognition for a national uprising. Fawaz Rashed claimed, "We used Facebook to schedule the protests, Twitter to coordinate, and YouTube to tell the world."[34] Recent scholarship, such as Clarke and Kocak's 2020 article in the *British Journal of Political Science*, has confirmed the role of social media in the revolution, stating that, "Facebook was used for (1) movement recruitment and (2) protest planning and coordination, while Twitter was important for (3) providing live updates about protest logistics on the day of the event."[35]

On Facebook, Wael Ghonim, the former marketing director for Google-Middle East and North Africa, started a group to organize protests. On Twitter, after Egyptians began to gather in Tahrir Square, *#Jan25* became the rallying cry for others to join their ranks.[36] This message quickly spread throughout the world as the revolution and calls for the removal of Egyptian President Hosni Mubarak intensified. Many prior articles covered the importance of the Facebook page Ghonim created to organize the protests and the role of the social media platforms in the revolution.[37]

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[34] "Egypt Five Years on: Was It Ever a 'Social Media Revolution'?," *The Guardian*, January 25, 2016, http://www.theguardian.com/world/2016/jan/25/egypt-5-years-on-was-it-ever-a-social-media-revolution.

[35] Killian Clarke and Korhan Kocak, "Launching Revolution: Social Media and the Egyptian Uprising's First Movers," *British Journal of Political Science* 50, no. 3 (July 2020): 1025–45, https://doi.org/10.1017/S0007123418000194.

[36] "Wael Ghonim: Creating A 'Revolution 2.0' In Egypt," NPR.org, February 9, 2012, https://www.npr.org/2012/02/09/146636605/wael-ghonim-creating-a-revolution-2-0-in-egypt.

[37] Jose Antonio Vargas, "How an Egyptian Revolution Began on Facebook," *New York Times*, February 17, 2012, https://www.nytimes.com/2012/02/19/books/review/how-an-egyptian-revolution-began-on-facebook.html; Sam Gustin, "Social Media Sparked, Accelerated Egypt's Revolutionary Fire," *Wired*, accessed September 30, 2021, https://www.wired.com/2011/02/egypts-revolutionary-fire/.

We chose this case because it involved a successful social media campaign to bring about regime change and has publicly available data (tweets). Few other social media-driven coup attempts have succeeded, and many (especially more recent) attempts involve encrypted and private communication that cannot be compiled in the same way as Twitter data. This case study will attempt to determine who was vital to the spread of the information on Twitter, from what locations influence originated (i.e., did users in Western countries assist more in the spread of information about the revolution than those in Egypt and surrounding countries?), and how this information can assist in developing an influencer scorecard.

B. CASE STUDY SOURCES AND LITERATURE REVIEW

Many other publications have covered the role of social media in the revolution. Lotan et al. documented the flow of information between and among groups surrounding the protests and how the information can rapidly spread across the globe.[38] Clarke and Kocak's piece showed how Facebook and Twitter "facilitated the staging of a large, nationwide and seemingly leaderless protest on 25 January 2011, which signaled to hesitant but sympathetic Egyptians that a revolution might be in the making."[39] Each of these articles cover important pieces in creating a holistic picture of social media's role in the revolution. This case study seeks to determine the most influential Twitter accounts by analyzing retweets and mentions of *#Jan25*.

The data for this chapter comes from a Twitter API data pull of *#Jan25* from January to March 2011, compiled by the Naval Postgraduate School's (NPS) CORE Lab at the request of the author.[40] The data were compiled from two available categories associated with *#Jan25*, "mentions" and "retweets," as well as available attribution data

[38] Gilad Lotan et al., "The Revolutions Were Tweeted: Information Flows during the 2011 Tunisian and Egyptian Revolutions," *International Journal of Communication* 5, no. 0 (September 2, 2011): 1.

[39] Clarke and Kocak, "Launching Revolution," 1025.

[40] "Twitter Search," Twitter, accessed May 6, 2021, https://twitter.com/explore.

from each of the accounts involved.[41] The attribution data included the Twitter username, number of followers, number of accounts the user was following, when the account was created, and the user's self-reported name, location, and description. Protesters, news media, and supporters of the 2011 Egyptian revolution used *#Jan25* and other social media capabilities to spawn the revolution and bring awareness to a global audience, including through mainstream media. The hashtag's purveyors used Twitter to publicly increase the spread of information in Egypt and across the world and encourage the protests that led to the revolution.

Additional inspiration for this case study came from a 2012 article by Dr. Sean Everton, Rob Schroeder, and Russell Shepherd, "Mining Twitter Data from the Arab Spring."[42] Their work concluded that, "activists' uses of Twitter may have facilitated the framing of grievances in ways that resonated with their target audience. In an examination of a subgroup of primarily Arab-speaking Twitter users, we found that not only did traditional media and activists appear to play a large role in framing the events in Egypt, but so did a fake Twitter account impersonating Egyptian President Hosni Mubarak."[43] The data used in this case study comes from a recent API pull of just *#Jan25* tweets in the first three months of 2011. *#Jan25* was specific to the revolution, whereas other prominent hashtags, like *#Egypt* or *#Mubarak*, were not. The first three months of 2011 was the time leading up to the fall of the Mubarak government and would not capture many uses of the hashtag for remembrance purposes (anniversaries, etc.).

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41 "*Mention*: Mentions in a tweet indicate that the post mentions another user. To make this reference to a username, users use the symbol @ followed by the specific username they refer to (@username). Mentions are placed anywhere in the body of the tweet;" "*Retweet*: Retweets refer to the tweets that are re-distributed. When a user finds a tweet interesting, then he or she can re-post it by using the retweeting functionality. The retweeting is considered a powerful tool for disseminating information. The tweet that is shared remains unchanged and is usually marked with the abbreviation RT followed by the author's username (RT@username). The retweet may also contain a short comment;" Anastasia Giachanou and Fabio Crestani, "Like It or Not: A Survey of Twitter Sentiment Analysis Methods," *ACM Computing Surveys* 49 (June 30, 2016): 2, https://doi.org/10.1145/2938640.

42 Rob Schroeder, Sean Everton, and Russell Shepherd, "Mining Twitter Data from the Arab Spring," *Combating Terrorism Exchange* 2.4 (2012): 54–64.

43 Schroeder, Everton, and Russell, 54.

C. SOCIAL NETWORK ANALYSIS

As viral networks go, the compiled data is robust and includes information which can prove difficult to analyze at a macro level. How much did celebrities play a role in spreading news about the revolution? Were Twitter and Facebook important for mobilizing Egyptians, the ones who could join the protests, or were they more important for turning international attention to Egypt and the rest of the Arab Spring? Social network analysis (SNA) expert Dr. Sean Everton defines SNA as: "a collection of theories and methods that assumes that the behavior of actors (whether individuals, groups, or organizations) is affected by (1) their ties to others and (2) the networks in which they are embedded."[44] It looks at the actors, or nodes, and their links to other actors to understand interactions. In this case, we can analyze and filter interactions between people (and bots) through their Twitter accounts to better understand which accounts had the most influence on Twitter using *#Jan25* during the Egyptian revolution.

Protesters and activists used the *#Jan25* Twitter hashtag abundantly during the early months of 2011 to organize protests during the 2011 Egyptian revolution. Between January and March, 110,182 Twitter accounts (nodes) used *#Jan25* in conjunction with a "mention" 783,327 times and with a "retweet" 689,848 times. Sociograms, visual depictions of the nodes and links which comprise a network, are often used in SNA to provide a visual representation of the size and composition of a network. Figure 2 represents the mentions network and Figure 3 depicts the retweets network. Dots or circles are used for individual nodes, and the ties (retweets or mentions) between nodes are shown as lines. Due to the hundreds of thousands of tweets represented by these two figures, the networks become extremely dense in the center, making them hard to analyze. As one reviewer indicated, they look like "weird art pieces."

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[44] Sean F. Everton, *Networks and Religion: Ties That Bind, Loose, Build-up, and Tear Down*, Reprint edition (New York: Cambridge University Press, 2018), 49.

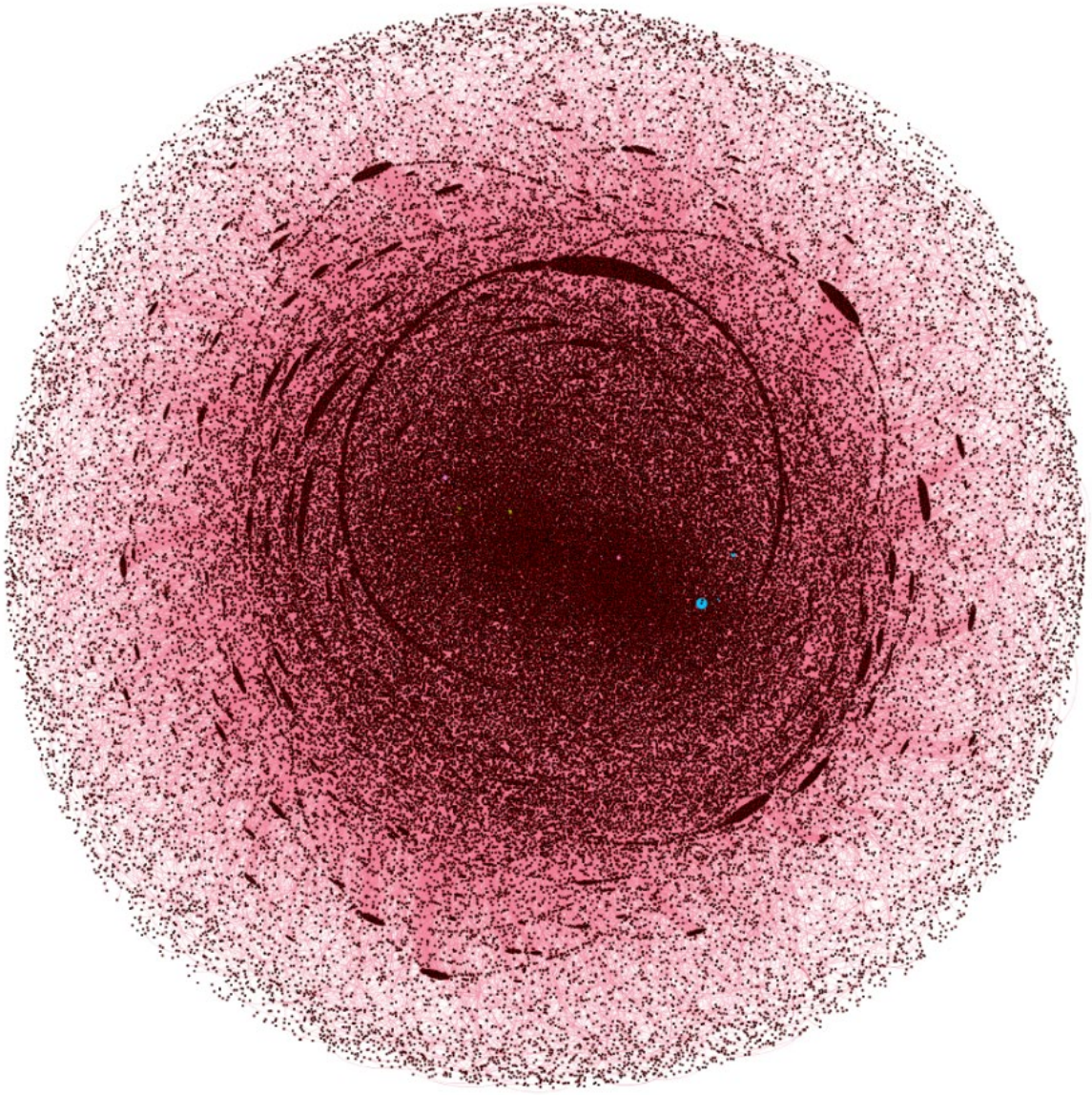

Figure 2. January-March 2011 #Jan25 Mentions Sociogram

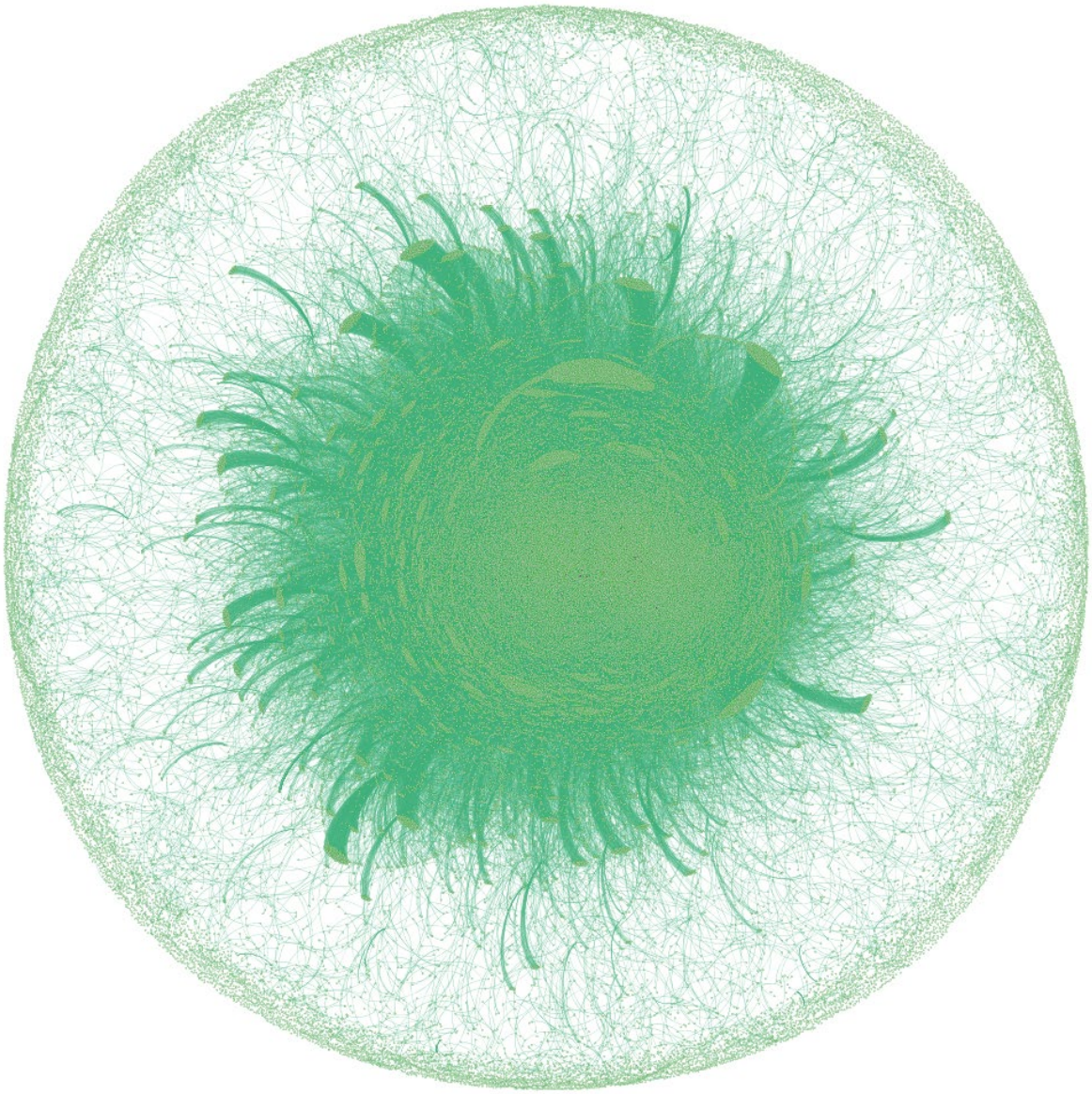

Figure 3. January-March 2011 #Jan25 Retweets Sociogram

Filtering for the most connected accounts mentioned or retweeted in conjunction with *#Jan25* helped determine which actors (social media users) influenced the network most. To achieve a more manageable network size, we used a k-core filter to reduce the network to about 100 actors. In social network analysis, the k-core relates to the number of ties an actor has for the relation analyzed, and it highlights the extent to which they are embedded in a network.[45] For instance, in a five-core, we would see a graph of all actors whose combinations of retweets and mentions ties (retweeted *#Jan25* tweets from others, mentioned others in *#Jan25* tweets, were retweeted when using *#Jan25*, or were mentioned by others when they used *#Jan25* in a tweet) equaled five or more.

We analyzed "mentions" and "retweets," so reducing to 100 actors meant we had to increase the k-core until only 100 actors remained. This required a 359-core for the "mentions" category and 317-core for "retweets." Additionally, a Louvain algorithm—a technique that detects communities within large networks—was used to sort these top 100 further into subgroups.[46] Figures 4 and 5 show the resulting retweets and mentions networks for those with at least 317 ties from retweets (retweeting others or times their original post was retweeted) and 359 ties from mentions (mentioning others or getting mentioned by others).

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[45] Daniel Cunningham, Sean Everton, and Philip Murphy, *Understanding Dark Networks: A Strategic Framework for the Use of Social Network Analysis* (Lanham, MD: Rowman & Littlefield, 2016), 120–23; Vladimir Batagelj and Matjaz Zaversnik, "An O(m) Algorithm for Cores Decomposition of Networks," *Advances in Data Analysis and Classification* 5, no. 2 (October 25, 2003), http://arxiv.org/abs/cs/0310049.

[46] Vincent D Blondel et al., "Fast Unfolding of Communities in Large Networks," *Journal of Statistical Mechanics: Theory and Experiment* 2008, no. 10 (October 9, 2008): P10008, https://doi.org/10.1088/1742-5468/2008/10/P10008.

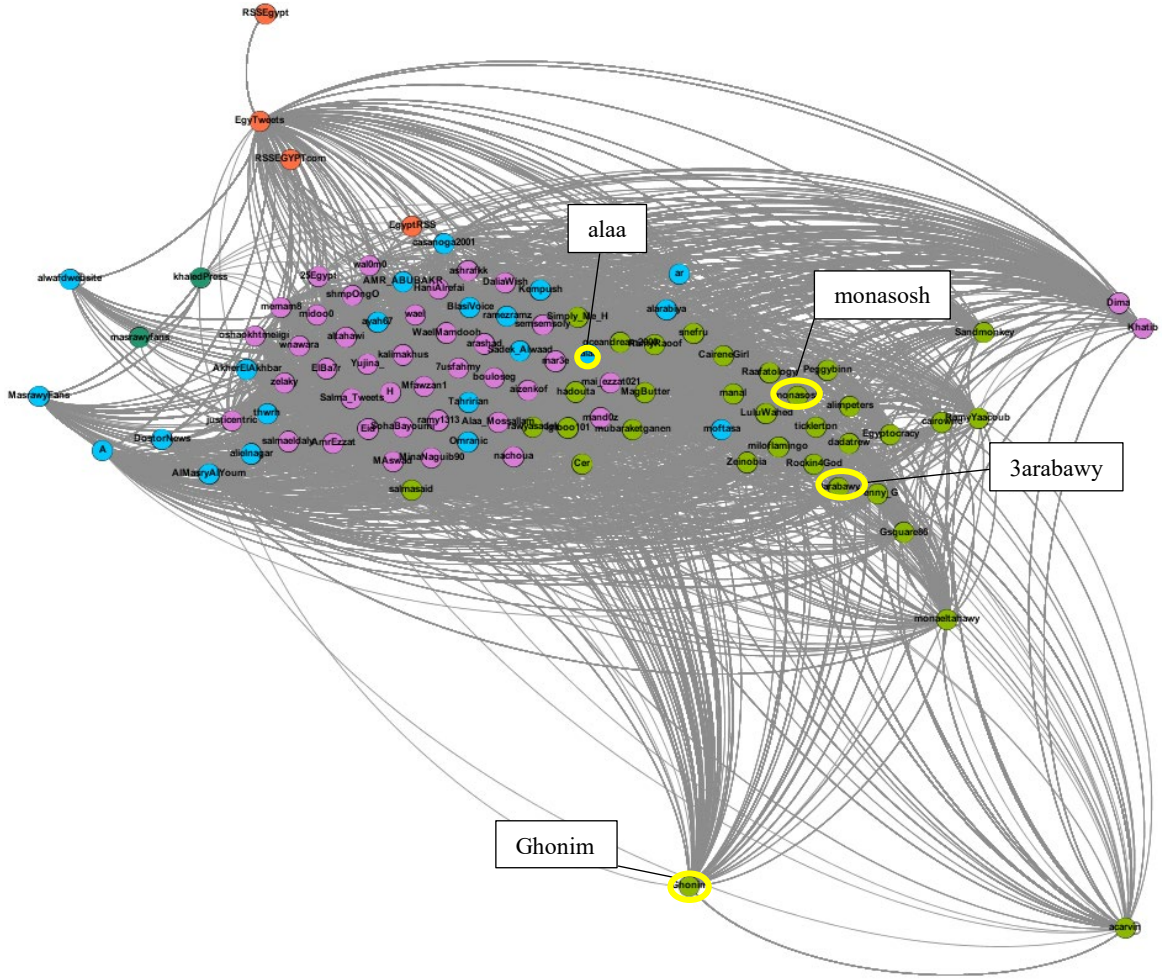

Figure 4. Retweets 317-core Sociogram, Colored by Louvain Grouping

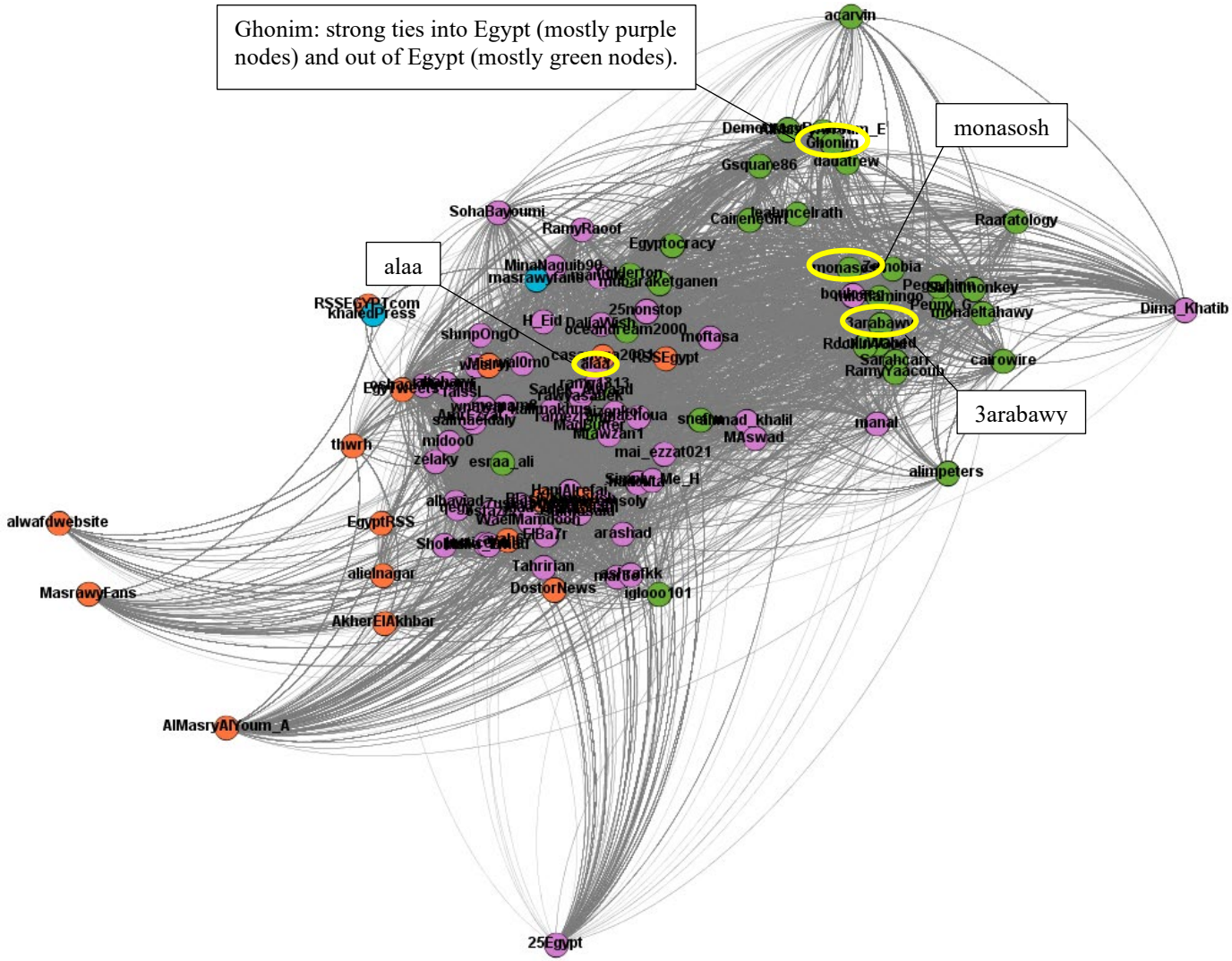

Figure 5. Mentions 359-Core Sociogram Colored by Louvain Grouping

While easier to view individual nodes and ties and to make inferences about node centrality, these graphs still do not clearly depict the users with greatest influence in the revolution. The network may include passionate activists who frequently retweet and mention other activists but do not have a significant audience themselves. It may also include users that receive many mentions from others but remain neutral or in opposition to the movement (such as news outlets).

The overlap between the 100 node mentions and retweets networks was relatively high, as eighty-two of the high-ties "mentions" nodes also appeared in the high-ties "retweets" group. The Louvain algorithm helped identified several groups in the two single relation networks, and these groups remain similar for both retweets and mentions. Green primarily consists of non-Egyptians or Egyptians with a large external audience tweeting in English, pink consists of mostly Egyptian nationals tweeting in Arabic (this likely includes those that coordinated the protests), blue nodes consist of Arabic news organizations and those mentioning or retweeting them (e.g., retweeting news coverage of the revolution and adding *#Jan25*, even if the initial tweet did not include the hashtag), while orange nodes are Twitter bots used to aggregate information about Egypt and the revolution. Of note, the former Google employee, Wael Ghonim (@Ghonim), has both outward or Western-facing and internal Egyptian ties. As a result, the Louvain algorithm grouped him with the English writers in the "retweets" data and with the Arabic media in "mentions" (writing in both languages and the credibility of his background made him a trusted source for insider information; he did no retweeting or mentioning, but his original posts were retweeted widely and were mentioned widely by others).

D. AGGREGATED NETWORK SOCIOGRAM AND DESCRIPTION

Aggregating the retweets and mentions networks provides further clarity about prestige and influence among Twitter users of *#Jan25* during the 2011 Egyptian revolution. Both relations provide evidence of influence on other Twitter users: they either wanted to share

someone's post (retweet) or they wanted another user to see their post (mention).[47] It matters little how much an influential user retweets and mentions others (out-degree), but it matters far more which users get retweeted and mentioned by others (in-degree). We aggregated the retweets and mentions networks in Gephi and ran several algorithms to determine centrality and prestige to determine the most influential members of the revolution (at least on Twitter). In the aggregated network sociogram, Figure 6, the nodes are sized by degree centrality with the biggest nodes demonstrating the highest in-degree centrality.

Figure 6. Aggregated Network Sociogram, Louvain Grouping, In-Degree Sizing

47 "How to Retweet," Twitter, accessed May 21, 2021, https://help.twitter.com/en/using-twitter/how-to-retweet; "How to Post Twitter Replies and Mentions," Twitter, accessed May 21, 2021, https://help.twitter.com/en/using-twitter/mentions-and-replies.

Determining prestige, authorities, in-degree centrality (algorithmic measures of influence and authority in networks), and Eigenvector centrality through Gephi helped us identify potential influence agents.[48] Cunningham, Everton, and Murphy describe indegree centrality as the "count of direct incoming ties" and indicates actors that are "highly sought after for resources or wisdom."[49] They also state that proximity prestige "accounts for all actors within an actor's input domain but weights closer neighbors higher than distant neighbors" and indicates "direct as well as indirect prestige" in the network.[50] Authorities are a variation on indegree centrality that looks at the relations of those actors sending ties to the actor measured (the hubs). "A good *hub* is an actor that points to many good *authorities*, and a good *authority* is one that is pointed to by many good *hubs*."[51] Lastly, Eigenvector centrality also takes into account the connectedness of one neighbor, or the ones tied to a focal actor. Those who score highest in Eigenvector centrality have many ties to other well-connected, central actors.

These centrality measures serve as the best way to measure influence using SNA, and correlation strengthens the case for influence. In the data collected, those who receive more retweets or mentions (others retweet their posts or "mention" their Twitter handle) are considered more prestigious as indicated by higher scores for these metrics.

Table 1 shows the results related to centrality and prestige for this aggregated network. These scores largely reinforce one another and provide a clear picture of the influential nodes among Twitter users in the 2011 Egyptian revolution using *#Jan25*. Users alaa (Alaa Abd El Fattah), monasosh (Mona Seif), 3arabawy (Hossam el-Hamalawy), Ghonim (Wael Ghonim), wael (Wael Khalil), RamyRaoof (Ramy Raoof), and several others have all publicized their involvement and leadership in the movement and the data show they held a high degree of authority and prestige among other users. These users ran

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[48] Jon M. Kleinberg, "Authoritative Sources in a Hyperlinked Environment," *Journal of the ACM* 46, no. 5 (1999): 604–32.

[49] Cunningham, Everton, and Murphy, *Understanding Dark Networks*, 146.

[50] Cunningham, Everton, and Murphy, *Understanding Dark Networks*, 146.

[51] Cunningham, Everton, and Murphy, *Understanding Dark Networks*, 146.

the Twitter handles that created a global groundswell of support and disseminated information about the revolution within Egypt and to the broader world. To confirm the earlier hypothesis that there were many highly active users included in the filtered network with low prestige, twenty-one users out of 114 in the aggregated network received a score of zero for in-degree centrality, meaning none of the other Twitter handles in the network retweeted or mentioned these users.

Table 1. Centrality and Prestige Data Analysis[52]

In-Degree	**Authorities**	**Proximity**	**Eigenvector Centrality**
alaa (83)	monasosh (0.168)	monasosh (0.738)	3arabawy (1.0)
monasosh (83)	alaa (0.167)	alaa (0.737)	alaa (0.937)
3arabawy (80)	3arabawy (0.165)	3arabawy (0.714)	monasosh (0.743)
wael (78)	wael (0.164)	wael (0.699)	wael (0.697)
Ghonim (75)	kalimakhus (0.1540)	Ghonim (0.672)	AlMasryAlYoum (0.412)
RamyRaoof (73)	justicentric (0.1538)	RamyRaoof (0.665)	DostorNews (0.245)
kalimakhus (72)	RamyRaoof (0.1537)	kalimakhus (0.659)	Cer (0.242)
justicentric (72)	Salmasaid (0.1533)	justicentric (0.659)	kalimakhus (0.229)
wnawara (71)	Cer (0.1523)	wnawara (0.655)	justicentric (0.190)
mand0z (71)	wnawara (0.1522)	mand0z (0.653)	AmrEzzat (0.181)

By looking at the SNA results, out of more than 100,000 Twitter users retweeting or mentioning *#Jan25* more than 1.5 million times, the accounts and tweets of these activists were the most influential in facilitating the rapid spread of *#Jan25* both inside Egypt and to Twitter users across the world.

[52] Adapted from Kleinberg, "Authoritative Sources in a Hyperlinked Environment."

E. SOCIAL NETWORK ANALYSIS INSIGHTS

By filtering for the most active accounts using *#Jan25* during the 2011 Egyptian Revolution, a core group of influential accounts emerged from a dataset with more than a million data points, and it matches verbal and written accounts of the organizers and coordinators of the protests. Additionally, Louvain grouping reveals several interesting groups: Twitter bots, media and reporters, external followers and activists, and internal stakeholders. The revolution seemed to provide a framework that other rebel groups could replicate in other countries to organize, coordinate, and achieve popular goals. Certainly, many hopeful revolutionary groups adopted portions of the framework, but few have succeeded, including the same Egyptian protesters when their goals went unrealized. Why? The world took notice of what happened in Egypt, and so did governments vulnerable to similar uprisings who learned lessons about how to react. Also, the success of deposing Mubarak was likely a "perfect storm" event difficult to replicate. The novelty of social media as a potential organizing platform for revolutions was also relevant.

Intelligence communities have made this form of organization on public social media platforms unlikely to succeed again, but that does not mean social media cannot help groups achieve revolution again. Instead, encrypted social media platforms have emerged as the ideal way to plan, share information, and organize groups. Unfortunately, social network analysts will find these networks more difficult to analyze due to their private nature. These networks also fail to reach the masses possible on the more public social media platforms.

The 2011 Egyptian revolution remains an important and relevant case study for the impact of social media and social media users on national uprisings since it contributed to a successful coup. Also, it provides insight into social media organization that may not be possible to obtain from many of the current social media platforms used for organizing and assembling groups since they tend to be less public. This case study does, however, reveal the unique nature of the event and the challenges and limitations that come from a leaderless coup. Though the world is a dynamic place, the nature and impulses of humans remain relatively constant. Like the 2011 Egyptian revolution, tomorrow's revolution somewhere in the world will bear many of the same marks as countless others that have

come before, but it will also demonstrate unique characteristics never seen before or again. The dataset obtained via the Twitter API was useful for SNA, but it also included attribute data, such as self-professed locations, which we also found valuable and have analyzed in the next section.

F. REGRESSION ANALYSIS AND OPEN-SOURCE DATA ANALYSIS

1. Sources

The SNA focused on retweets and mentions for determining the most influential accounts on Twitter, but it did not determine from where each account was tweeting and how that affected the spread of *#Jan25* and awareness of the Egyptian revolution. For this section, we used the same *#Jan25* retweets and mentions data compiled for the previous section of this chapter in addition to attribute data also compiled from the Twitter API such as location, number of followers, number following each account, and tweet count to draw additional inferences regarding the role of Twitter internally in Egypt and externally for global awareness.[53] Additional independent variables were gathered from the World Bank's World Development Indicators, such as population, gross domestic product (GDP) per capita, and internet use/internet penetration.[54] Democracy information came from the Global State of Democracy Indices.[55]

We do not have locations for each user because some Twitter users choose not to share this information, so we only included the accounts that listed a location that could be tied to a country to analyze country-level data. For many activists in Egypt, if they revealed too much information, it could make them targets of Mubarak government supporters, so

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53 "Twitter API for Academic Research," Twitter, accessed June 14, 2021, https://developer.twitter.com/en/products/twitter-api/academic-research.

54 "GDP (Current US$)," World Bank, accessed June 12, 2021, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=1W; "Population, Total," World Bank, accessed June 12, 2021, https://data.worldbank.org/indicator/SP.POP.TOTL; "Individuals Using the Internet (% of Population)," World Bank, accessed May 5, 2021, https://data.worldbank.org/indicator/IT.NET.USER.ZS.

55 "Data Set and Resources, The Global State of Democracy Indices," International Institute for Democracy and Electoral Assistance, accessed June 9, 2021, https://www.idea.int/gsod-indices/dataset-resources.

we think this could have made Egyptians more reluctant to reveal their location. Another relevant factor was the internet shutdown by the Mubarak government from January 28 to February 2, 2011.[56] Both factors could skew against the case for Egyptian accounts' activity in the January-March 2011 data collection window, but the results will not show this, so any sign of increased activity in Egypt relative to countries with higher internet penetration could strengthen the case for the following hypothesis.

2. Hypothesis

Twitter activity in Egypt influenced global awareness of the 2011 Egyptian revolution proportionately more than outside influence despite periodic internet outages and reluctance to reveal location (protesters' tweets were "heard" by the world and influenced global perception of the revolution).

3. Regression Equation

In the previous section of this chapter, we found that the in-degree score for retweets (times retweeted) aligned with prestige and influence of the overall network. For this reason, "times retweeted" was selected as the dependent variable for this project. Independent variables include "times mentioned," follower counts of the Twitter accounts analyzed, and whether a post came from an account in Egypt (as determined by the user's Twitter profile). Control variables included internet penetration by country, population by country, gross domestic product per capita by country, and level of democracy.

This section explores possible independent variables that affect the times retweeted and how much the use of Twitter from accounts in Egypt affected the available metrics surrounding *#Jan25*. This leads to the following hypothesis:

The statistical model used for regression analysis is:

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[56] Noam Cohen, "Egyptians Were Unplugged, and Uncowed," *New York Times*, February 21, 2011, https://www.nytimes.com/2011/02/21/business/media/21link.html.

Times Retweeted = log(Times Mentioned + 0.01) + log(population + 0.01) + internet penetration + log(GDPPC + 0.01) + democracy level + log(followers count + 0.01) + Egypt

"Times retweeted" reflects the number of times another Twitter account shared or "retweeted" the user's original post. "Times mentioned" is the number of times another user shared their own post with the user. "Followers count" is the number of other accounts who want to "follow" a particular user. "Population" is the 2010 population of the country the user identified in their profile information, if provided. "Internet penetration" is the 2010 percent of active internet users in the user's identified country. "Democracy level" reflects the 2010 level of democracy score as provided by the Global State of Democracy Indices.[57] "GDP per capita" is the GDP per person in the country claimed by the user. "Egypt" is a binary set with "0" values for all accounts not identifying themselves in Egypt and "1" values those that did. I used log transformation for metrics likely to result in heavy tails, but not those that were percentages (internet penetration), binary (Egypt), or a limited score (democracy level).

4. Data Visualization

To gain an understanding of the network and the interaction between the variables, we developed several maps, these are Figures 7–11. The maps portray the use of *#Jan25* by country, revealing a significant trend toward Arabic-speaking countries in North Africa and the Middle East, especially Egypt, as compared with English-speaking countries and Europe. Even without controlling for population and internet penetration, Egypt stands out from much of the rest of the world except the U.S. Egypt surpasses all other countries, as expected, with values five times as high or more than the United Kingdom, Germany, or the United States. Table 2, which follows these maps, includes the values for top seventeen countries by times retweeted controlling for population and internet penetration.

[57] International Institute for Democracy and Electoral Assistance, "Data Set and Resources, The Global State of Democracy Indices."

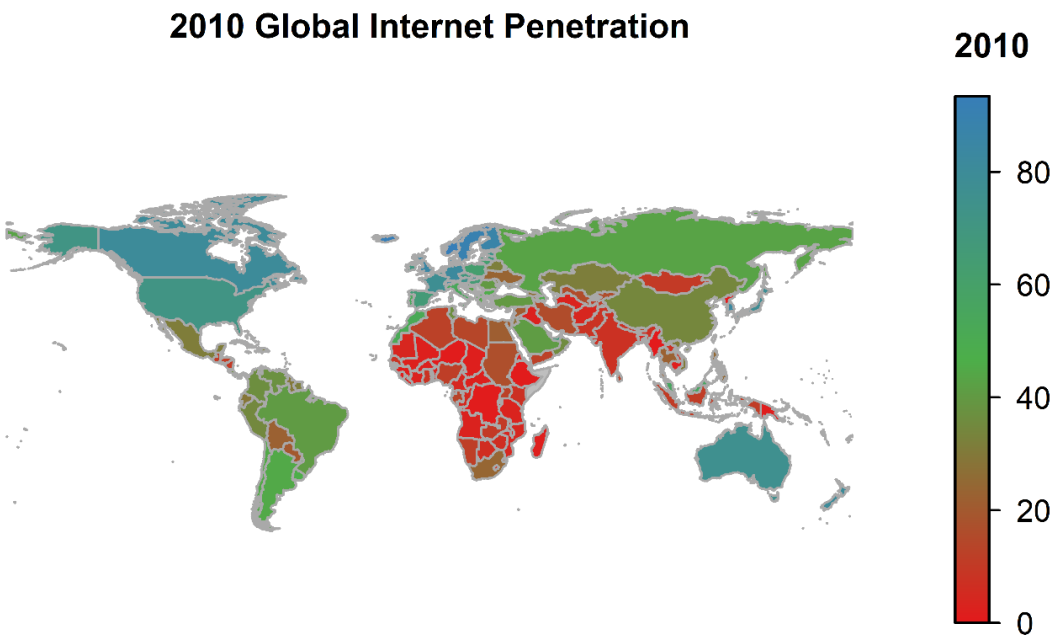

Figure 7. 2010 Global Internet Penetration Using the World Bank's World Development Indicators Data[58]

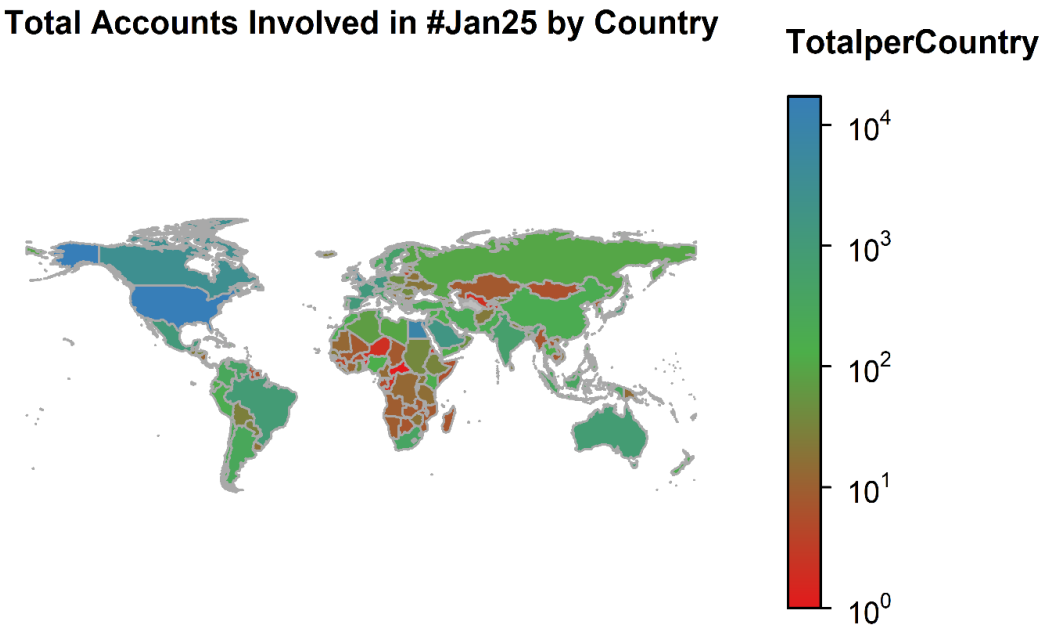

Figure 8. Accounts Associated with *#Jan25* by Country

[58] Adapted from World Bank, "Individuals Using the Internet (% of Population)."

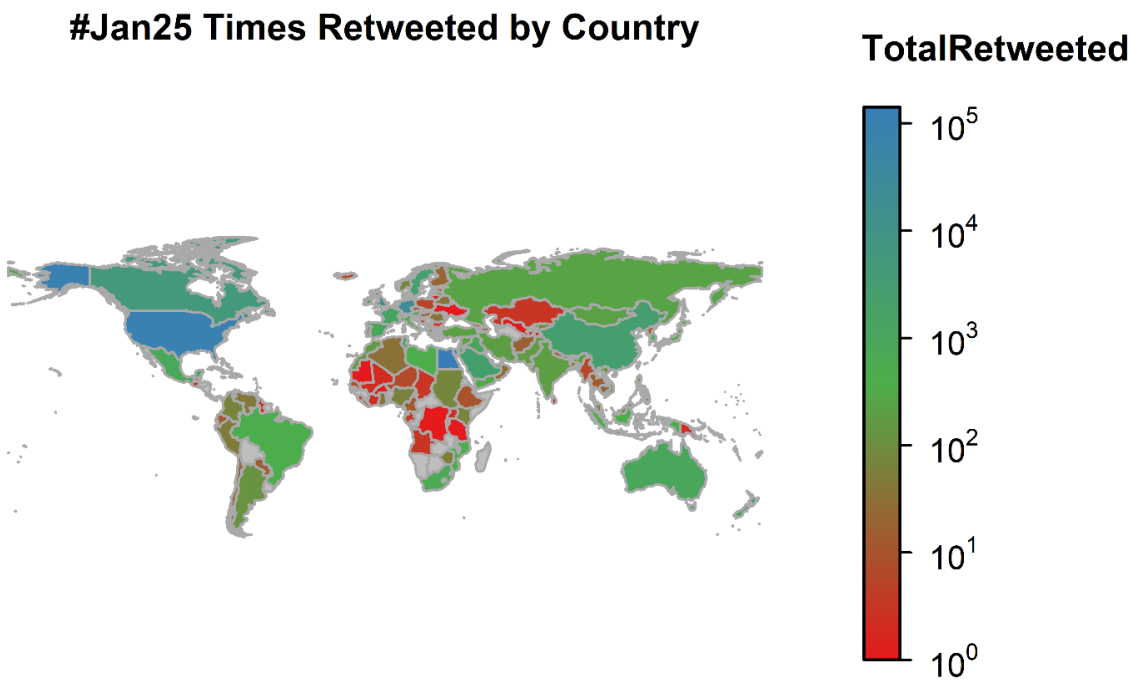

Figure 9. Times an Account's Post with *#Jan25* Was Retweeted by Country, Log Transformed

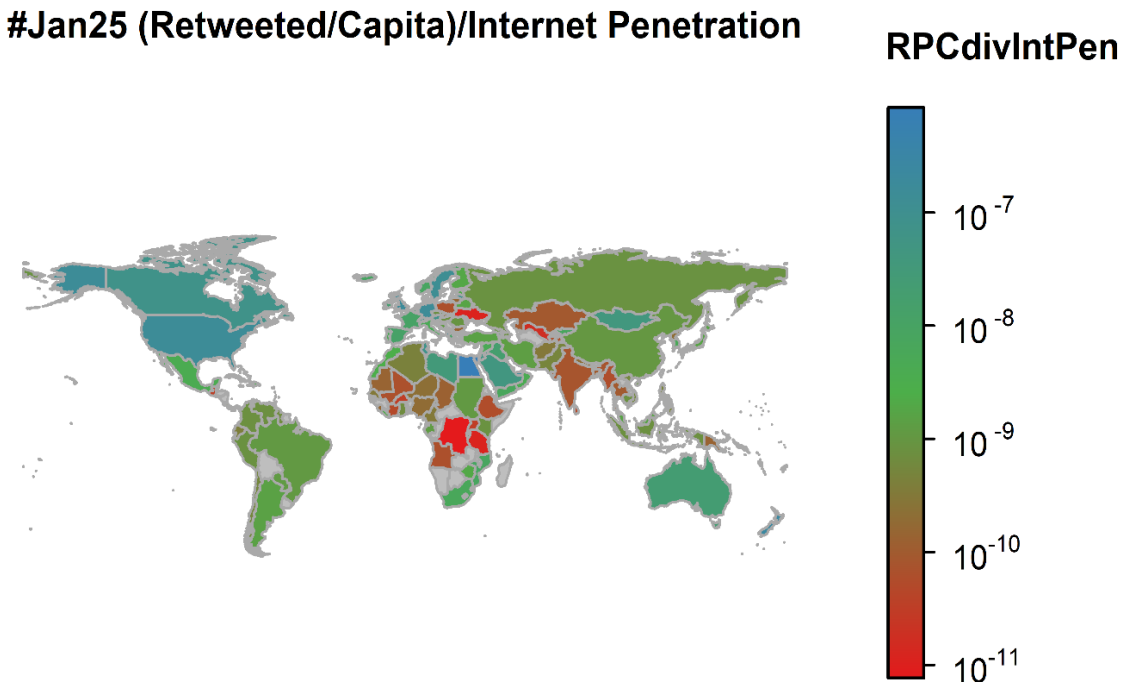

Figure 10. Retweeted per Capita Controlled for by Internet Penetration, Log Transformed

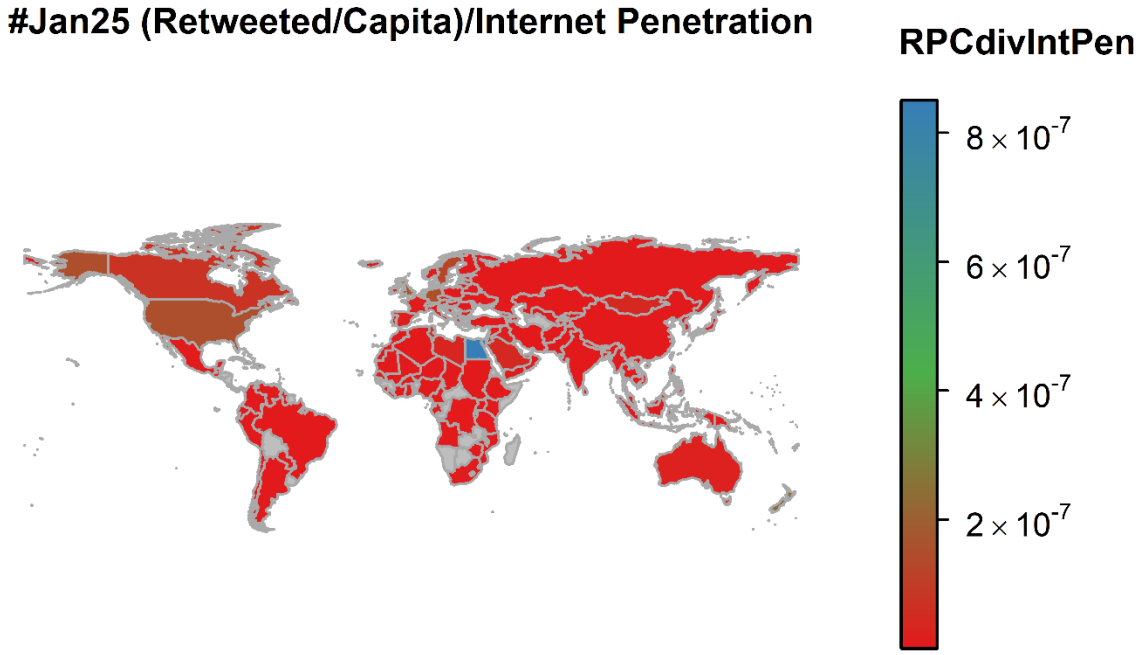

Figure 11. Retweeted per Capita Controlled for by Internet Penetration, No Log Transformation

Table 2. Country-Level Times Retweeted with Population and Internet Penetration Controls

Rank	Country Name	Total Retweeted	Population	Retweeted per Capita	Internet Penetration	RPC / Int. Pen.
1	Egypt	141512	82761235	0.00170988	21.6	8.51E-07
2	Qatar	2316	1856327	0.00124763	69	6.21E-07
3	Andorra	93	84449	0.00110126	81	5.48E-07
4	Guam	139	159444	0.00087178	54.04	4.34E-07
5	Bahrain	1067	1240860	0.00085989	55	4.28E-07
6	Kosovo	949	1775680	0.00053444	NA	2.66E-07
7	New Zealand	2121	4350700	0.00048751	80.46	2.43E-07
8	Albania	1342	2913021	0.00046069	45	2.29E-07
9	United Arab Emirates	3666	8549988	0.00042877	68	2.13E-07
10	United Kingdom	22288	62766365	0.00035509	85	1.77E-07
11	Germany	25647	81776930	0.00031362	82	1.56E-07
12	USA	94601	309321666	0.00030583	71.69	1.52E-07
13	Kuwait	748	2991884	0.00025001	61.4	1.24E-07
14	Sweden	2303	9378126	0.00024557	90	1.22E-07
15	Lebanon	1208	4953061	0.00024389	43.68	1.21E-07
16	Latvia	459	2097555	0.00021883	68.42	1.09E-07
17	Bahamas	76	354942	0.00021412	43	1.07E-07

G. REGRESSION ANALYSIS AND RESULTS

We conducted three negative binomial regressions, with "times retweeted," "times mentioned," and "followers count" as the dependent variables to determine if tweets from Egypt had any statistical significance. The independent variables included the other two analyzed variables (e.g., when "times retweeted" was the dependent variable, "times mentioned" and "followers count" were control variables), in addition to population,[59] internet penetration,[60] gross domestic product per capita (GDPPC),[61] democracy,[62] and "Egypt" to measure the significance of Twitter accounts that listed their location in Egypt. We log transformed times mentioned (as independent variable), times retweeted (as independent variable), population, and GDPPC to account for heavy tails. See Table 3 for a full list of results and coefficients.

The negative binomial regression for "times retweeted" yielded p-values less than 0.01 (99% confidence) for "times mentioned," population, internet penetration, followers count, and "Egypt," all indicating positive correlation. Egypt had the highest coefficient with 0.808. Democracy also had a statistically significant p-value at less than 0.05 (95% confidence), but the correlation was negative (likely due to the lower levels of democracy in Egypt and other Arabic-speaking countries most concerned with the Arab Spring).

The "times mentioned" negative binomial regression yielded the fewest statistically significant correlations. There were, however, strong confidence relationships ($p<0.01$) with the log transformed times retweeted and "Egypt" (accounts professing their location as Egypt or Egyptian cities). The coefficient for Egypt was the highest at 5.012. This indicates that times mentioned using *#Jan25* were most affected by whether or not the account was in Egypt and with the number of times the account also was retweeted.

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[59] World Bank, "Population, Total."

[60] World Bank, "Individuals Using the Internet (% of Population)."

[61] World Bank, "GDP (Current US$) – World."

[62] International Institute for Democracy and Electoral Assistance "Data Set and Resources, The Global State of Democracy Indices."

The negative binomial regression with "followers count" as the dependent variable yielded high confidence ($p<0.01$) results for times mentioned (negative), times retweeted (positive), population (positive), democracy (negative), and Egypt (negative). Internet penetration (negative) and GDPPC (positive) were also statistically significant ($p<0.05$). The many negative correlations (times mentioned, democracy, Egypt, and internet penetration) indicate that the average follower count in Egypt was less than in the rest of the accounts, accounts with lower follower counts were mentioned more than those with higher follower counts when *#Jan25* was used, but they also tended to be from countries with less than average democracy and lower than average internet penetration. This could indicate that Twitter members in the broader Arab-speaking world using *#Jan25* often had (slightly) higher follower accounts than the overall average. Journalists from the Arab world and Twitter bots may also have contributed to these results, since the SNA indicates many of these were among the top 100 accounts for times retweeted and times mentioned.

Table 3. Linear Regression with Times Retweeted, Times Mentioned, and Followers Count as Dependent Variables

	TimesRetweeted	TimesMentioned	followers_count
	Negative Binomial (GAM)	Negative Binomial (GAM)	Negative Binomial (GAM)
	(1)	(2)	(3)
log(TimesMentioned + 0.01)	0.365***		-0.213***
	(0.025)		(0.037)
log(TimesRetweeted + 0.01)		1.737***	0.473***
		(0.166)	(0.018)
log(population + 0.01)	0.117***	0.240	0.349***
	(0.017)	(0.379)	(0.025)
internet penetration	0.007***	0.085	-0.009**
	(0.003)	(0.058)	(0.004)
log(GDPPC + 0.01)	-0.042	-1.014	0.162**
	(0.053)	(1.171)	(0.074)
Democracy	-0.022**	0.049	-0.053***
	(0.009)	(0.206)	(0.012)
log(followers_count + 0.01)	0.255***	-0.052	
	(0.007)	(0.108)	
Egypt	0.808***	5.012***	-1.659***
	(0.080)	(1.871)	(0.113)
Constant	0.423	-10.020	3.155***
	(0.432)	(9.051)	(0.610)
Observations	8,269	8,269	8,269
MAE	41.277	4.606	252,384.535
RMSE	369.195	175.433	2,051,178.971
AIC	57,463	983	170,259
BIC	57,526	1,046	170,322
Log Likelihood	-28,722.500	-482.635	-85,120.515
Note:			*p<0.1; **p<0.05; ***p<0.01

The key take-aways from these three regressions are: times retweeted and times mentioned were positively correlated with accounts in Egypt with strong confidence ($p<0.01$), yet the average followers count of accounts in Egypt using *#Jan25* was lower

than the average follower count for accounts not indicating Egypt as their location. Generally, we would expect to see those with a higher follower count receive more retweets and mentions, but this was not so, and it lends credibility to the case that accounts tweeting from Egypt had more influence on others' actions (like retweeting and mentioning) for *#Jan25* than did accounts listing themselves in other locations.

Additionally, these results also support the hypothesis for this section that Twitter users in Egypt influenced global awareness of the 2011 Egyptian revolution more than outside of Egypt users since there was a strong correlation between accounts in Egypt and times retweeted. Considering internet outages in Egypt, those who did not share their physical location for fear of government retribution, internet penetration, and total Twitter users in each of these countries only strengthens this case. Egyptians with Egypt listed as their location were retweeted over 141,000 times using *#Jan25*, compared to less than 95,000 times for the country with the second highest total, the United States.

H. INFERENCES FROM THE RESULTS

The results of open-source data analysis, including regression modeling of times retweeted for *#Jan25* posts surrounding the 2011 Egyptian revolution, suggest that, despite the global attention the revolution received, key communicators from within Egypt played a significant role in the influence of this hashtag in Egypt and throughout the rest of the world. Combined with other analysis of this data, such as social network analysis of the user network, this information helps make the case for determining the key communicators within the Egyptian network of protesters using Twitter to coordinate the 2011 Egyptian revolution.

The multiple forms of analysis used in this chapter to evaluate Twitter data on the 2011 Egyptian revolution suggest the potential for those involved in a conflict or event to gain credibility on social media for those topics. Accounts in Egypt and Egyptians tweeting about the revolution were among the most prestigious (in-degree centrality, prestige centrality, authorities) as measured by SNA, and accounts from Egypt had statistically significant positive correlation with retweets and mentions with *#Jan25*. The heat maps

also indicate that Egyptian accounts were far more likely to be retweeted when using *#Jan25*, especially when controlling for population and internet penetration.

I. 2011 EGYPTIAN REVOLUTION CONCLUSION

We can glean much from this case study in the development of an influencer scorecard. Retweets or shares serve as a strong metric of influence that usually indicate the sharer's support and acceptance of the post—to the point they want to share the message with their own followers. Follower counts combined with engagement rate also serve as important influence measures. Regardless of engagement rate, a low follower count will not yield significant influence, but significant engagement between social media users and their followers can significantly boost influence and spreading of messages. Additionally, the influencer's reach among the target audience determines if the influencer has access to the audience capable of achieving the desired behavior. For the 2011 Egyptian revolution, Western celebrities did not have significant reach among an Egyptian audience capable of joining protests (though they did help spread word of the revolution to global audiences), but the Egyptian micro and macro-influencers in Egypt organizing and rallying protestors in Arabic did.

In this case study we sought to identify the influencers of the 2011 Egyptian revolution, and most of those were on the pro-revolution side. Identifying influencers, at least when linked to U.S. PSYOP, must start with the PSYOP Objective (PO) and the desired behavior of the target audience. The U.S. did not specify a position for or against the rebels in this scenario, but we can observe those who had influence towards the rebels' objectives. The rebels had two main objectives: (1) deposing Hosni Mubarak through peaceful protests, and (2) establishing a democratic government in Egypt to grant Egyptians more freedom.

It appears that the influencers we identified in this study helped Egyptians successfully achieve the first goal, deposing Mubarak, but were less influential in bringing about a government that granted Egyptians more freedom; a separate objective with a separate target audience. For their first objective, the protesters needed to reach a target audience of primarily Cairo residents, and they did. For the second objective, they needed

to unify a target audience of voters across Egypt under a single presidential candidate and political party. Instead, Egypt elected Mohammed Morsi and the Muslim Brotherhood, who imposed more restrictions on the Egyptian people, leading to more protests and eventually a military takeover of the country. The Muslim Brotherhood was an established political party with reach throughout Egypt. The protestors were political novices set on ousting Mubarak, but not unified on post-coup politics.

This case reinforces the idea that each PSYOP objective requires its own evaluation, planning, selection of target audiences, target audience analysis, and identification of influencers capable of reaching the target audience.

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III. LEARNING FROM THE FAILURES OF FYRE FESTIVAL TO ENHANCE TRUST AND INFLUENCE FOR SOCIAL MEDIA INFLUENCERS

A. INTRODUCTION

The Fyre Festival was a failed music festival organized in 2016 and 2017 to promote a booking app for music performers, artists, and celebrities. The festival gained rapid interest due to an inventive and effective, yet unethical, social media marketing campaign that incorporated the employment of highly famous supermodels and celebrities.[63] While the festival was a criminal failure, as his criminally fraudulent handling of the Fyre Festival earned him a jail cell, it provided a grand opportunity to teach the world about the importance of consumer trust in products and brands and the impacts of social media influencers therein. This section will discuss the background of the Fyre Festival and its social media marketing campaign, analyze what happened with a focus on the fallout of its failure, derive lessons learned and their impact on marketing practices and trends, and most importantly for this thesis, discuss the potential utilization of social media influencers in related fields. Fyre Festival is a case study that indicates social media is a medium where the world gathers to interact and share ideas, and influencers provide a vehicle for interested entities to extend their reach to specific audiences, build trust, and gain influence to accomplish their individual and collective goals.

B. BACKGROUND

Fyre Festival, the brainchild of serial entrepreneur Billy McFarland, was to be the cultural experience of the 2010s decade. The idea was to cross Woodstock, the iconic 1960s music festival, with exclusivity and tropical luxury in the Bahamas. While such an event

63 Virginia Pellerano, "Il caso Fyre Festival: luci e ombre dell'influencer marketing" [The Fyre Festival Case: Lights and Shadows of Influencer Marketing]. (Rome, Italy, Libera Università Internazionale degli Studi Sociali [Free International University of Social Studies], 2020); Loren Grace Gilbert, Courtney Childers, and Brandon Boatwright, "Fyre Festival: The Good, the Bad, the Ugly and Its Impact on Influencer Marketing" (Knoxville, TN: University of Tennessee, Knoxville, May 2020), https://trace.tennessee.edu/utk_chanhonoproj/2320.

is certainly attainable, McFarland failure to manifest his dream music festival ended in a criminal conviction and a six-year prison sentence.[64] According to Peter and Sarah Stanwick, McFarland's business, Fyre Media, developed the Fyre app, an application designed to provide ordinary people with access to and booking of celebrities and musicians for private events.[65] To promote this app and its exclusive nature, he created the concept of an exclusive music festival that provided ordinary people an opportunity to live like a celebrity. To properly market this concept, he needed to reach ordinary people to fuel demand, something which he did indeed attain but proved to be totally unprepared to handle.

McFarland determined that his target audience for the festival was the millennial generation,[66] and as major consumers of social media, he knew that the best way to reach this audience was through social media marketing. To fit the exclusivity and luxury of the event, the marketing campaign began by using supermodels in a promotional video filmed in the Bahamas.[67] This initial phase of the campaign reached millions of people around the world creating a very real buzz about the event. Virginia Pellerano further describes the campaign, stating that these same models were employed as "Fyre Starters," a euphemism for the influencers employed to spark attention for the festival, to maximize hype surrounding the event and promote its exotic, luxurious and adventurous aspects.[68] Burnt orange was the color associated with the event, a theme that appeared when Fyre Media released the video and employed over 400 celebrities and macro influencers to post a burnt orange tile on Instagram with the hashtag *#FyreFest* and the link to the festival's website.

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[64] Audrey Conklin, "Fyre Festival Planner William 'Billy' McFarland Released from Solitary Confinement after Nearly 6 Months," Fox Business, April 17, 2021, https://www.foxbusiness.com/lifestyle/fyre-festival-mcfarland-solitary-confinement.

[65] Peter A. Stanwick and Sarah D. Stanwick, "Fyre Festival: The Party That Never Got Started," *American Journal of Humanities and Social Sciences Research* 03, no. 12 (2019): 138–42.

[66] Gilbert, Childers, and Boatwright, "Fyre Festival: The Good, the Bad, the Ugly and Its Impact on Influencer Marketing."

[67] *Fyre: The Greatest Party That Never Happened*, directed by Chris Smith, (2019; United States: Documentary, 2019), https://www.netflix.com/title/81035279.

[68] Virginia Pellerano, "Il caso Fyre Festival: luci e ombre dell'influencer marketing" [The Fyre Festival Case: Lights and Shadows of Influencer Marketing].

McFarland paid Kendall Jenner $250,000 for a single promotional post on Instagram, which "garnered 6 million individual impressions" according to Gilbert, Childers, and Boatwright.[69] This overall strategy and subsequent action attained over 300 million impressions within 24 hours, which indicates the number of times the posts were displayed to or viewed by the social media users.[70] Within 48 hours all general admission tickets sold out.

While the social media focused marketing campaign was wildly successful beyond anything previously seen in the marketing field, the execution of the actual event was an utter failure. It was a grand vision, but it lacked the planning and organizational expertise and leadership that such an event requires. The luxury accommodations guest expected turned out to be soaked disaster relief tents, along with the mattresses and bedding, from rain just before the guests arrived.[71] Reserved villa accommodations did not exist at the festival location. The initial arriving guests were essentially left to fend for themselves while the next round of guests was kept at the airport with minimal food, water, and sanitation services. The musical acts were cancelled due to the festival's inability to support the initial round of guests. As Gilbert, Childers, and Boatwright claim, the festival was less a failure and more a crisis as the guests were in physical danger from a lack of food, water, shelter, and basic hygiene services, and the Fyre Media company was in professional and financial ruin.[72] The grand vision-turned-disaster hurt many, but it offers an excellent opportunity for many more to learn from the experience, analyze the lessons learned, and apply them to the great benefit of the global marketing community others who stand to

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[69] Gilbert, Childers, and Boatwright, "Fyre Festival: The Good, the Bad, the Ugly and Its Impact on Influencer Marketing."

[70] Kayla Carmicheal, "Social Media Impressions vs. Reach: What's More Important?," Hubspot, November 22, 2019, https://blog.hubspot.com/marketing/impressions-vs-reach; Alex York, "Reach vs. Impressions: What's the Difference in Terms?," Sprout Social, August 7, 2020, https://sproutsocial.com/insights/reach-vs-impressions/.

[71] Smith, Fyre: The Greatest Party That Never Happened.

[72] Gilbert, Childers, and Boatwright, "Fyre Festival: The Good, the Bad, the Ugly and Its Impact on Influencer Marketing."

benefit from this highly influential and new form of key communicator such as those planners and practitioners of influence operations.

C. LITERATURE REVIEW

1. Influencers

It is important to understand not only the Fyre Media social media marketing campaign, but also how marketing was and is done on social media, especially concerning the niche role of influencer marketing. To understand influencer marketing, certain definitions must be clarified. Exploringyourmind.com provides a simple, yet clear definition of a social media influencer in its *Psychology Today* article "The Phenomenon of Influencers in Social Networks." It states that "an influencer is a person with a social media account and a community of followers they can influence" and goes on to demonstrate they can be celebrities, in the traditional sense, bloggers, and YouTube and/or Instagram personalities.[73] Influencer Marketing Hub goes deeper in its explanation of an influencer, stating that an influencer is someone who has "a following in a distinct niche, with whom he or she actively engages."[74] There is no doubt, given the title of influencer, that these people wield significant power over their audience. A power that companies and brands have successfully tapped into to their own benefit, that of the influencer, and arguably to the benefit of consumers.

It is not a random phenomenon that people, or users, attach to influencers. Rather, there is a logical and quantifiable explanation found in the social network analysis (SNA) field of study. Renowned network theorist Albert-László Barabási uses the term "preferential attachment" to illustrate human behavior that is much related to how marketers seek out the right influencers to market their products or brands on social

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[73] "The Phenomenon of Influencers in Social Networks," *Exploring Your Mind* (blog), 2020, https://exploringyourmind.com/the-phenomenon-of-influencers-in-social-networks/.

[74] "What Is Influencer Marketing: An in Depth Look at Marketing's Next Big Thing," Influencer Marketing Hub, April 13, 2021, https://influencermarketinghub.com/what-is-influencer-marketing/.

media.[75] He states that, "In real networks new nodes tend to link to the more connected nodes," and that, "Due to preferential attachment new nodes are more likely to connect to the more connected nodes than to the smaller nodes." Essentially, well connected nodes, which in this case are influencers, will draw the attention of other nodes, or users, that have smaller number of connections as they seek the information held by the larger node. In SNA, the node with a higher degree of connectivity is called a hub, and these hubs, according to Barabasi, are the facilitators of the development and growth of scale-free networks, or networks that have the potential to grow at exponential rates.[76] In the case of social media, these hubs are a role that are held by influencers and sought after by marketers to increase exposure of their products and brands to potential and returning customers to increase their conversion and sale rates. They are also a tool that can be utilized for influence operations to ensure a specific target audience receives the communications that seek to evoke a desired behavior.

Influencers are divided into numerous categories to help understand their potential reach and niche. A typical discussion about influencers will reference six primary categories as outlined by mediakix.com (Figure 12):

- **Nano-Influencers** – Social media users with **1,000-10,000** followers who engage a small, niche audience.
- **Micro-Influencers** – Social media users with followings between **10,000-50,000** who hold an impressive status with a wider audience.
- **Mid-Tier Influencers** – Social media users with **50,000-500,000** followers who have climbed the ranks among a large audience.
- **Macro-Influencers** – Social media superstars with followings between **500,000-1,000,000** who have earned premiere status as social media noisemakers.
- **Mega-Influencers** – Social media powerhouses with **1,000,000-5,000,000** followers who have attained followership that puts them in a category similar to celebrities.

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[75] Albert-László Barabási, *Network Science* (Cambridge, UK: Cambridge University Press, 2016), http://networksciencebook.com/.

[76] Albert-László Barabási, *Network Science* (Cambridge, UK: Cambridge University Press, 2016), http://networksciencebook.com/.

- **Celebrities** – Well-known personalities whose fame translates into prestigious social media status with **more than 5,000,000** followers.[77]

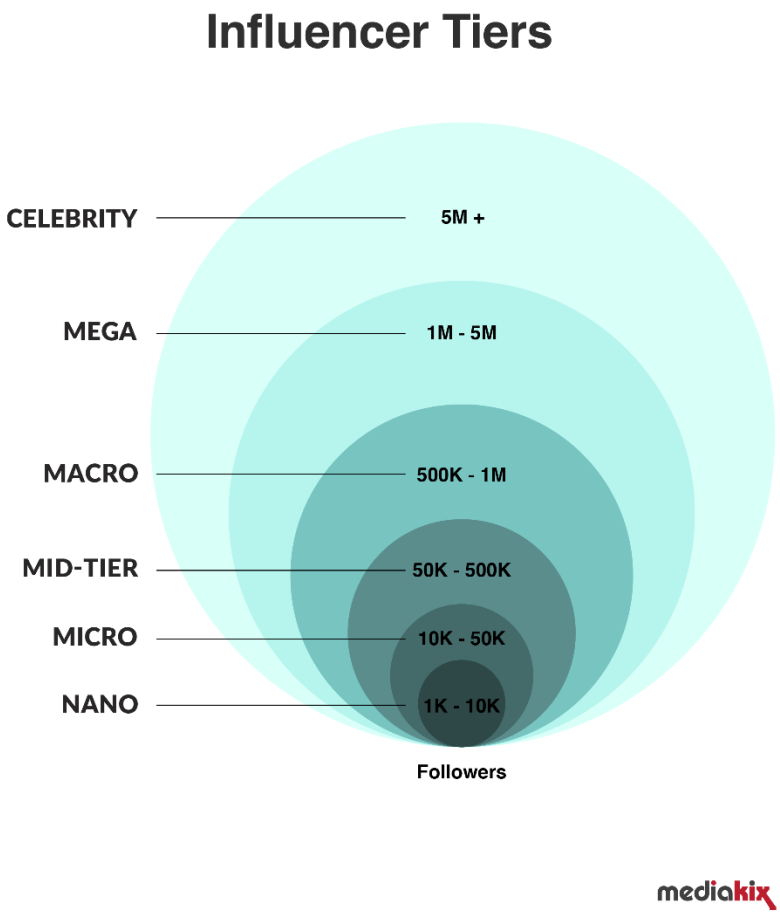

Figure 12. Influencer Tier Identification

2. Influencer Marketing

Influencer marketing changed how the marketing field engages with potential consumers in a significant way. Influencer Marketing Hub defines influencer marketing as involving "a brand collaborating with an online influencer to market one of its products or services. Some influencer marketing collaborations are less tangible than that – brands

[77] "What Constitutes an Influencer?," *Media Kix* (blog), accessed June 6, 2021, https://mediakix.com/blog/influencer-definition-marketing/.

simply work with influencers to improve brand recognition."[78] Insider Intelligence's "Influencer Marketing" states that this marketing strategy considers two primary ways to categorize influencers: reach and niche.[79] Reach has a significant role to play as its general rule states that "targeted reach, cost-effectiveness, engagement, authenticity, and accessibility all go up as follower count goes down." This may seem counter-intuitive, but it can greatly impact the effectiveness of efforts to influence target audiences to engage in desired behaviors that help organizations achieve their objectives. PSYOP practitioners may consider an influencer's reach when seeking partnership. Niche is also important as it can help indicate an influencer's alignment with desired behaviors and their potential to be perceived as authentic within a given message or narrative.

Fyre Festival provides examples that support the relationship of influencer status, follower trust, and the success of the marketing campaign. Gilbert et al. identify a "peculiarity" that "lies in the lack of big-name brands that choose to promote with mega influencers on the celebrity scale."[80] Essentially, big brands tend to employ mid-tier to micro influencers in their influencer marketing campaigns vice macro and mega influencers. This trend does not match the approach of Fyre Media which employed mostly mega-influencers in its marketing campaign. The campaign reached its target audience in record fashion and drove rapid sales, but it also ruined trust with Fyre Media and tarnished the mega influencer reputations.

While the concept of using social media to enhance marketing existed prior to Fyre Festival, the Fyre Media influencer marketing campaign opened a pandora's box for the marketing community that continues to evolve and earn billions of dollars annually for brands worldwide. According to "The State of Influencer Marketing 2021: Benchmark Report by Influencer Marketing Hub," the global market value of influencer marketing grew to $13.8

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78 "What Is Influencer Marketing: An in Depth Look at Marketing's Next Big Thing."

79 "Influencer Marketing: Social Media Influencer Market Stats and Research for 2021," Insider Intelligence, January 6, 2021, https://www.insiderintelligence.com/insights/influencer-marketing-report.

80 Gilbert, Childers, and Boatwright, "Fyre Festival: The Good, the Bad, the Ugly and Its Impact on Influencer Marketing."

billion in 2021.[81] This growth was directly impacted by the lessons learned from the Fyre Festival marketing campaign, which taught marketers about scaling their partnerships with influencers in a manner that allows them to reach their target audiences in a manner that will avoids the unmanageable outcomes. Essentially, they should not over-promise on services and products then underdeliver when they get the attention of the consumers.

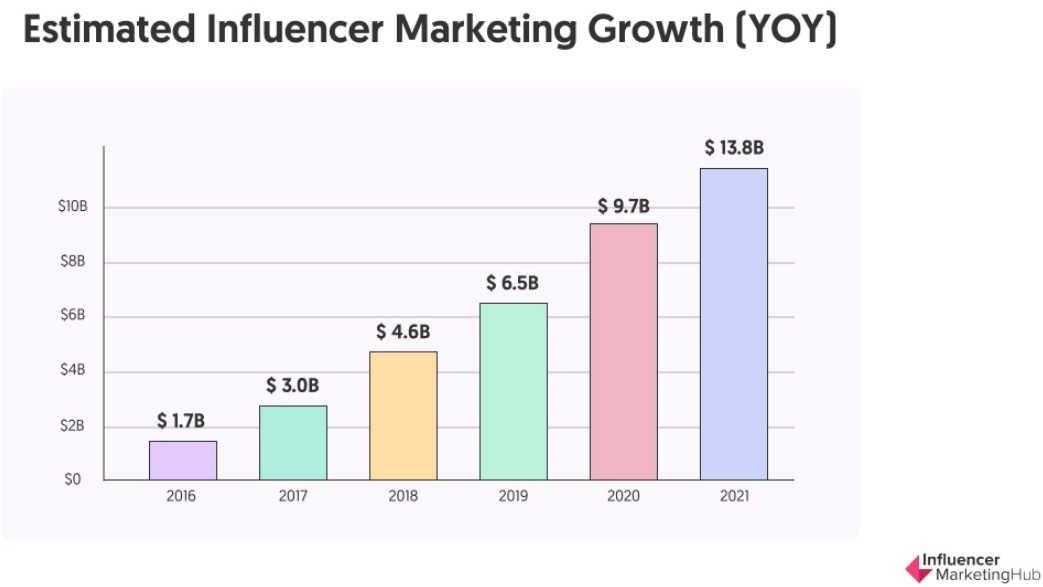

Figure 13. Influencer Marketing Benchmark Report 2021—Annual Growth and Value of Influencer Marketing

D. LESSONS LEARNED: TRUST, ENGAGEMENT, AND AUTHENTICITY

One such lesson learned is the impact of the relationship between social media influencers/posts and the followers or target audience of the posts. The Federal Trade Commission (FTC) deeply analyzed the actions of Fyre Media and its Fyre Starters and found that only one of these Starters appropriately noted that the posts on Fyre Festival were an advertisement for which she received monetary compensation.[82] While this was

[81] "The State of Influencer Marketing 2021: Benchmark Report," Influencer Marketing Hub, February 2021, https://influencermarketinghub.com/influencer-marketing-benchmark-report-2021/.

[82] Stanwick and Stanwick, "Fyre Festival: The Party That Never Got Started."

not required by law at the time of the posting, it facilitated state (FTC) mandates for influencers to reveal their role with a brand from which they receive compensation.

Many reports on the Fyre Festival discuss how the inclusion of the FTC mandated declaration of post sponsorship on social media impacts the relationship between the influencer and their audience. According to the Italian marketing researcher Virginia Pellerano, most social media consumers view the inclusion of an advertisement indicator, such as hashtags #ad and #sponsored, as a positive aspect of their relationship with influencers they follow.[83] She states that the pairing of transparency and honesty is a fundamental element of building a trusting and authentic relationship between influencer and follower. A likely contributor to increased trust, despite state regulation, is the fact that followers can interact with influencers to understand more about specific brands and their products. They also have long-term voluntary relationships with influencers, which facilitates the feeling of authenticity in these relationships and increases follower trust in an influencer's recommendation about a product or brand.

While the mega and celebrity tiers of Fyre Starters were successful in their role to attract attention and boost ticket sales for Fyre Festival, this brand-to-influencer relationship demonstrates the risk involved for companies seeking to employ this tier of influencer in their influencer marketing campaigns. As previously mentioned, Gilbert et al. provide insight into this type of relationship and the often-negative impact it can have on a brand's reputation. They discuss the common assumption that a large following for an influencer correlates with partnership opportunities with bigger brands.[84] This may not actually be the case as brands have begun to recognize the value of micro-to-macro level influencers due to the trusting, authentic relationship they have with their followers. Mega-to-celebrity level influencers have lower interaction with their followers and tend to have less trusting, authentic relationships. Gilbert, Childers, and Boatwright. claim that smaller companies with little to lose may seek to employ mega-to-celebrity level influencers, as

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[83] Virginia Pellerano, "Il caso Fyre Festival: luci e ombre dell'influencer marketing" [The Fyre Festival Case: Lights and Shadows of Influencer Marketing].

[84] Gilbert, Childers, and Boatwright, "Fyre Festival: The Good, the Bad, the Ugly and Its Impact on Influencer Marketing."

they have no reputation to compromise. What Fyre Festival teaches on this topic is that, at least part of the problem was the danger of employing celebrity-level influencers. Fyre Media's use of this influencer tier is a real-world example of the theoretical risk involved with the tier. This is not to say that this tier should be avoided, as the benefits are also demonstrated by this case study. Rather, this particular case stands as a reminder to ensure that the risks involved with this tier are mitigated to avoid a similar outcome to the experience of Fyre Media.

Partnership at the mega and celebrity level drew too much attention too quickly, the Fyre Festival organizers grew too confident, and they were too ill-prepared to fulfil their promises to their customers. This failure temporarily damaged the reputations of some of the mega and celebrity level influencers, but Fyre Media paid the ultimate price for its mistakes. This is not stating that partnership at this level is a bad decision, as many companies continue to do so. The message here is that careful consideration must be paid to the example of Fyre Media's overall approach to their marketing and execution of the Fyre Festival. For anyone seeking to partner with influencers, especially PSYOP practitioners, this is a lesson to analyze and understand to prevent stepping into the same pitfalls Fyre Media encountered in its failure to maintain trust in its partnerships and the negative effects its failures had on the reputations of its partners. Preparedness and self-awareness are important for any organization seeking partnership with influencers, but due to the heightened exposure found with mega and celebrity-level partnerships, organizations should consider Fyre Media's experience, assess their own position, and plan for contingencies before taking such a step.

The failure of Fyre Festival, despite its perception of success in social media marketing, drew the attention of the marketing industry to analyze what happened and understand the potential for effective influencer marketing approaches. According to Pellerano, 79% of consumers claim that user generated content (UGC) is the most authentic content that companies can use to promote their products and brands to influence potential

consumer decision-making processes.[85] UGC is used as a social proof by brands, as it shows their products in content generated by a consumer of the product. Social proof, one of Cialdini's principles of influence,[86] allows followers to look to an influencer to decide what to believe and how to act. This stimulates compliance by making someone believe that others are also in compliance. As influencer-follower relationships at this level are more authentic and trusting, followers tend to form a shared identity with the influencer, which amplifies the effectiveness of Cialdini's principle of influence, social proof.

The trend has evolved since Fyre Festival and has found that micro and macro level influencers are the premier level to engage with for influencer marketing, whether for marketing campaigns, long-term brand awareness and reputation management, or both. While the mega through celebrity levels draw considerable attention to brands and products, the price for individual posts is simply too much and proves cost ineffective for most brands. PSYOP practitioners can apply this to cost-benefit analyses when planning their operations that incorporate influencer partnerships. There are times that mega to celebrity-level influencers may be appropriate to achieve the desired behavior with the TA. However, it is likely that budgets and operational effectiveness will point PSYOP planners toward influencers at lower levels.

Pellerano examines the strengths and weaknesses of both macro and micro influencers. She finds that macro influencers have elevated reach, which provides brands an opportunity to maximize their exposure with potential customers and grows brand awareness.[87] This, however, must be monitored, as important principles of influencer marketing lose strength as reach grows. More strengths that come with macro influencers are experience, professionalism, time optimization, and strong personal brand. The weaknesses she identifies are diminished trust in the influencer-follower relationship due

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[85] Virginia Pellerano, "Il caso Fyre Festival: luci e ombre dell'influencer marketing" [The Fyre Festival Case: Lights and Shadows of Influencer Marketing].

[86] Robert B. Cialdini, *Influence: The Psychology of Persuasion*, Revised (New York, NY: Harper Collins, 2007).

[87] Virginia Pellerano, "Il caso Fyre Festival: luci e ombre dell'influencer marketing" [The Fyre Festival Case: Lights and Shadows of Influencer Marketing].

to reduction in engagement and authenticity. The cost for these influencers also rises with their status, rendering them less cost effective for many brands.

Much like macro influencers, micro influencers present brands with influencer-follower relationships based on authenticity and trust. This occurs over time and is developed through frequent interaction and exposure. Pellerano's examination of micro influencers reveals that they typically fit into a niche role and appeal for niche brand partnerships. This niche role offers an appearance of expertise and authenticity surrounding their actual use of the brands they present in their posts. This authenticity and related trust often contribute to conversion of potential consumers to consumers. Micro influencers are also much more cost effective, as they do not demand nearly as high compensation as their macro influencer brethren. The limitations found regarding micro influencers are their reduced reach, increased time commitment, and limited experience in the field.

E. POTENTIAL APPLICATIONS

It is no secret that governments sponsor operations to influence populations of people at home and abroad. The focus for this section is on those operations that target specific foreign audiences to achieve operational and strategic objectives for the sponsor government. More prominent examples of governments that engage in such activities are described by Cohen and Bar'el in their work, "The Use of Cyberwarfare in Influence Operations."[88] This work compares the influence approaches of the United Kingdom (UK), The European Union (EU), Israel, the United States, Russia, and the North Atlantic Treaty Organization (NATO). They introduce *cyber perception warfare* as "integrating the use of technology in the for real-world influence via the internet," most especially when there is no assigned constraints or boundaries. While the analysis they provide is valuable, as it reveals tools for identifying online influence operations, it presents a gap, as its focus is the identification of specific patterns and changes that mostly lead to the identification

[88] Daniel Cohen and Ofir Bar'el, "The Use of Cyberwarfare in Influence Operations" (Tel Aviv: Yuval Ne'eman Workshop for Science, Technology and Security, October 2017), https://icrc.m.tau.ac.il/sites/cyberstudies-english.tau.ac.il/files/media_server/cyber%20center/cyber-center/Cyber_Cohen_Barel_ENG.pdf.

of troll-based operations. This gap offers an opportunity to exploit the lessons learned from Fyre Festival and subsequent changes in influencer marketing.

As trust is an ever-important principle in influencer marketing, the same would prove vital to influence operations that incorporate the use of real-life influencers on social media. However, the current mindset regarding internet-based influence is heavily focused on the use of trolls, hackers, and content produced by government sponsored actors to flood the information environment with misleading and false information.[89] This claim is supported by Arild Bergh's writing in 2019:

> What differentiates a social media-based influence operation from other social media activities that try to influence users is that a) it is initiated and (in part) directed by a larger organisation or state actor; b) it has ultimate goals that it hides from the target population. What distinguishes a social media-based influence operation from other influence operations is that a) it avoids any need to use intermediaries; b) the content mixes with other, mundane content and c) the content created is accessible outside the influence operation context afterwards.[90]

While he makes many accurate points in this argument, his third point is overly absolute in nature and misses an opportunity to strengthen the efficacy and acceptability of influence operations by removing a tool from the influence arsenal.

The employment of real-life influencers, or intermediaries as Bergh puts it, whether through overt or clandestine relationships, is an underused approach for government sponsored influence operations. The trusting, authentic relationships cultivated by influencers with their followers online, and sought out by influencer marketing agencies, can be leveraged to support meaningful social media-based influence operations. When the situation calls for it, used in combination with the other techniques presented by Bergh, whether to strengthen ideas, attack divisions, or perpetuate conspiracies, influencer-centric operations can be an effective tool used to achieve operational and strategic objectives.

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[89] This is a claim that is supported by academic literature, but also reflects my professional observations from over half of my career in the Army served in the Psychological Operations Regiment.

[90] Arild Bergh, "Social Network Centric Warfare – Understanding Influence Operations in Social Media," FFI-Rapport (Norwegian Defense Research Establishment (FFI), October 4, 2019), https://ffi-publikasjoner.archive.knowledgearc.net/handle/20.500.12242/2623.

As is often the case even for influencer marketing, the challenge is finding the right influencer. According to Influencer Marketing Hub, 78% of survey respondents found at least medium difficulty in finding appropriate influencers for their industries.[91] This is actually an improvement over the previous year's numbers, which suggests that the processes and tools used to identify influencers may have improved. Brands that seek influencers to promote brand awareness and reputation may be a starting point for analysis by planners of social media-based influence operations that incorporate real-life influencers. Even if a network of potentially effective influencers is found, there is likely a significant bureaucratic maze to navigate in the effort to contact, recruit, and measure effectiveness of these influencers, a point that must be addressed to maximize the effectiveness of social media influencer support to influence operations.

F. FYRE FESTIVAL CONCLUSION

While Fyre Festival did not invent influencer marketing, it did start the fire that continues to burn in the form of influencer marketing advances. The artifacts of Fyre Festival are generally easy to spot in the current social media environment; all it requires is to open a social media site or app and advertisement declarations are nearly immediately visible. In the effort to enhance brand performance and awareness, trust within established social networks found on social media has proven to be among the most important elements of marketing campaigns that influence target audiences in favor of brand objectives. To maintain authenticity in the influencer-follower relationship, influencers have advocated for maximal autonomy regarding their content and subsequent engagement. While this may be difficult for marketing traditionalist to give up creative control and relationship management to an outside entity, influencer nodes are necessary to establish ties with a network of potential customers and promoters of their brands.

Trust and authenticity between influencers and their network of followers likely prove even more vital for government sponsored influence operations that seek to employ them. These principles also extend to the relationship between the influencer and the

[91] Influencer Marketing Hub, "The State of Influencer Marketing 2021: Benchmark Report."

sponsor government, demonstrating the power of trust and authenticity, whether perceived or real, have over influence in networks. Trust's role in influence is a highly studied topic and research supports the importance of trust regarding one's ability to influence others. Charles Stangor offers that communicators may be perceived to be trustworthy because they are knowledgeable about products they sell or "make us feel good about ourselves" when receiving their messages.[92] The influencers employed by Fyre Media were perceived as experts in luxury and lavish lifestyles, which increased their trustworthiness and ability to influence the target audience to engage in the desired behavior, the purchase of tickets to Fyre Festival. Due to their social stature, mega influencers recovered from their involvement with Fyre Media, but micro and macro influencers may find it more difficult to recover from involvement with fraudulent or unsavory partners; an important consideration for PSYOP practitioners when seeking, developing, and maintaining partnerships with influencers.

G. FYRE FESTIVAL KEY TAKEAWAYS

1. Marketing Professionals Know How to Sell

- Marketing professionals are experts at reaching potential customers and converting them into purchasers and loyal customers of the products and brands they see to sell and promote. Fyre Festival, while a failure as an event, provided these marketing professionals and researchers with ample data to inform and evolve marketing practices on digital media, and especially on social media using influencers.

2. Digital Media Is Essential to Effectively Reaching Many Target Audiences

- We live in a world where digital/virtual interaction is commonplace. To effectively reach a target audience and accomplish U.S. military and government objectives, the communication methods need to meet

[92] Charles Stangor, "Changing Attitudes Through Persuasion (Chapter 4: Attitudes, Behavior, and Persuasion)," in *Principles of Social Psychology – 1st International Edition* (Victoria, BC: BCcampus, 2014), https://opentextbc.ca/socialpsychology/chapter/changing-attitudes-through-persuasion/.

accessibility, usability, and familiarity requirements of the target audience(s).

- To ignore this fact is to waste opportunities to engage target audiences in a meaningful, effective manner that supports U.S. military and government objectives.

3. Lessons Learned from Fyre Festival

- Lessons learned from Fyre Festival enable the implementation of the principles of joint operations through the employment of social media influencers in support of inform and influence operations.

- Objective and Unity of Command: Fyre Festival employed numerous influencers working under the guidance of the event organizer whose objective was to reach the target audience, generate excitement and interest, and ultimately sell tickets.

- Military planners and subject matter experts executing inform and influence operations ensure that influencers understand expectations and work toward a specified objective within the parameters set by the military commander. Unifying multiple influencers under a specific objective enhances the likelihood to achieve desired outcomes.

4. Offensive, Mass, and Maneuver

- Employing multiple influencers with connections to the target audience enabled Fyre Festival organizers to create an aggressive marketing campaign that ensured the target audience saw and engaged with their message early and often. This was supported using multiple social media influencers with many followers, which allowed for the massing of the message onto the target, offering the event organizers space greater control of their marketing narrative.

- The employment of influencers, in support of inform and influence activities, allows for the concentration of influence effects on a specified target audience to gain the initiative and relative control of the associated narrative. Careful selection and tactful employment of these influencers can support massing in the information environment to increase TA exposure to intended messages while diluting the effects of adversarial messaging. This relative control of the specified information environment offers greater opportunity to expand inform and influence activities and related operations in the information environment to include operations in that require maneuver and interaction in the physical domain.

5. Economy of Force, Simplicity and Legitimacy

- Fyre Festival's social media marketing campaign employed few resources while supporting a simple plan and rapidly reached millions of potential customers. The content used, in combination with the delivery mechanism (Fyre Starters) created a narrative that promoted the legitimacy of the event as a luxury music festival in an exotic location.

6. Reach Potential by Employing Influencers

With so few military personnel to engage large and/or multiple target audiences, partnership with influencers has the potential to reach small and large audiences alike. Their messages fit within given parameters but come from their own content creation, which offers authenticity and legitimacy. These influencers also can have direct engagement with target audiences and build trust and influence within these digital communities, a difficult task for military influence professionals due to lack of personnel availability, access to the TA, and known governmental affiliation. When employing social media influencers, PSYOP professionals greatly expand their role as a force multiplier, achieving effects in the information environment with limited military presence.

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IV. THE INFLUENCER SCORECARD

A. SCORECARD OVERVIEW

Given the importance of social media influencers in the modern information environment and their translational value for PSYOP, the primary output from this research is the creation of a user-friendly tool that will enable PSYOP planners and practitioners to identify target audience relevant key communicators, or influencers, on social media (i.e., we view influencers as the key communicators of social media). This tool, developed in the form of a scorecard, is designed to be effective and easy to use for military planners and decision-makers alike. For pragmatic purposes, the tool does not require advanced social network analysis or expertise in a specific computer program. Those analytic methods help inform important influence metrics, but the scorecard proposed in this research represents a "cheat sheet" to quickly narrow down the top influencers of the TA. This scorecard does not replace the potential for using contracted or paid influencer marketing tools, when available. These tools, however, include complex proprietary algorithms designed to connect businesses with potential influencers to reach a TA and are not always available to PSYOP. the scorecard will also factor in military-specific points of interest whereas marketing-focused tools and algorithms may not. Thus, the scorecard offers the PSYOP practitioner a simple, unique way to identify influencers specifically for PSYOP partnership in influence operations.

Scorecards have been used by the military for several other purposes. They provide a quick and effective way to differentiate between two or more options. They are used in wargaming, targeting, and other applications. The military's scoring for targeting, delineated by the acronym CARVER (criticality, accessibility, recuperability, vulnerability, effect, and recognizability) served as the model for our influencer scorecard. ATP 3-60 provides a scoring guide in the form of a table, with values from one to five in all six categories.[93] This table details how to assign value and provides examples of each

[93] Department of the Army. *Targeting,* ATP 3-60 (Washington, DC: Department of the Army, 2015), https://armypubs.army.mil/epubs/DR_pubs?DR_a/pdf/web/atp3_60.pdf.

score. The user of this scorecard then adds up the values in each category and the highest score indicates the best target. The targeting working group does not dismiss other available information and blindly follow the numbers, but this largely objective scoring method helps to remove bias and group preferences and provide justification for action on the target. The influencer scorecard also has a table by which to objectively measure scores for each category.

Selecting the categories for the scorecard involved analysis of marketing agencies that focus on influencer marketing, the case studies on the 2011 Egyptian revolution and the Fyre Festival, and interviews. The categories needed to be measurable through easy-to-obtain information on the social media platforms themselves or through free social-media analytics websites. Due to this, we had to leave out categories that we could not measure easily in exchange for those we could. "Trust" in the influencer from their followers was one of the categories we wanted to include but could not (at least directly) since this cannot be easily measured without additional surveys. However, several other measurable categories serve as indicators of trust.

In the introduction, we quoted SocialPubli's stat on the three most important metrics for marketing agencies to measure success in influencer marketing: reach, engagement rate, and sales/lead generation.[94] Due to this, we include potential reach and engagement rate in our scorecard. Sales/lead generation does not apply to PSYOP, but a member of the target audience (TA) performing the desired behavior is the PSYOP equivalent. Therefore, we include a category on the influencer's alignment with the PSYOP objective (PO).

In Chapter Three, the case study on the Fyre Festival, we discuss the importance of followers. An influencer's follower count indicates potential for both reach and spread of a message, but high follower counts are not always ideal (as discussed in the "Followers" section). We include followers count as a category in the scorecard due to its relevance for reaching people with a message.

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[94] SocialPubli (blog), 2020 Influencer Marketing Report.

In Chapter Two, the case study on the 2011 Egyptian revolution, we analyzed retweets (shares) and mentions. These two indicators required decisions on behalf of followers to share a message from an influencer or mention an influencer in their own message. These decision-based measurable metrics indicate action on behalf of followers, which is an influence measure of effect (MOE). We include these two categories because those who get retweeted or mentioned more have demonstrated influence on their followers.

Influence through media, especially social media, requires content. One cannot easily influence an audience through media without repeated production of relevant content. Some users of social media do not regularly generate content, and this limits their potential to influence their followers. In our interview with Clint Watts, he demonstrated the importance of the concept of the frequency at which an influencer publishes content, which convinced us to include this as a category in the scorecard because of the great difference in potential influence between those who post frequently and those who do not.[95]

The influencer scorecard therefore has seven categories: alignment with the desired behavior, followers, potential reach among the TA, interaction rate, times shared, mentions, and post frequency. We chose to weight each category evenly to avoid an overly complex scoring and weighting system. As a result, this scorecard will also use a 1–5 scoring system. Additionally, we believe that the value of certain categories may change based on the situation. For example, in some instances a PSYOP practitioner may want to adjust scoring to prioritize nano-influencers or micro-influencers even though they may not receive the highest score on the baseline scorecard. In another example, they may not want to partner with someone who strongly supports the desired behavior if the target audience is skeptical of anyone who strongly supports those initiatives. A PSYOP professional may prefer in that instance to assign a higher value to influencers who hold a neutral stance. Due to these situationally dependent factors that merit flexibility, we have created both a baseline

[95] On September 10, 2021, we spoke with Clint Watts (former Army officer, business owner, misinformation/disinformation expert) regarding the application of influencer marketing to psychological operations.

influencer scorecard and an adjustable scorecard. Next, we turn to the details of each scorecard element before providing a comprehensive example.

Tables 4, 5, and 6 show the Baseline Influencer Scoring Matrix, the fillable Adjustable Influencer Scoring Matrix, and an example of the Influencer Comparison Scorecard. We will provide an explanation for the use of these three tables throughout the rest of the chapter.

Table 4. Baseline Influencer Scorecard

Baseline Influencer Scorecard							
VALUE	ALIGNMENT WITH DESIRED BEHAVIOR	FOLLOWERS	POTENTIAL REACH Shared demographic qualities between TA and influencer.	ENGAGEMENT RATE (top score receives 100%, not direct engagement rate)	TIMES SHARED (top score among accounts analyzed receives 100%)	MENTIONS (top score among accounts analyzed receives 100%)	POST FREQUENCY (How often an influencer posts across SM platforms)
5	Recent posts supporting the desired behavior	50,000-500,000	6	90-100%	80-100%	80-100%	3+ ppd on 3+ platforms
4	Likely to support the desired behavior	500,000-1 million	5	70-90%	60-80%	60-80%	1-2 ppd on 3+ platforms / 3+ ppd on 1-2 platforms
3	Neutral to the desired behavior	10,000-50,000; 1-5 million	3-4	50-70%	40-60%	40-60%	Avg 1 ppd 2+ platforms / multiple ppd on 1 platform
2	Likely to oppose the desired behavior	1,000-10,0000	2	30-50%	20-40%	20-40%	2+ ppw on 1-2 platforms / 1 ppw on 3+ platforms
1	Opposed to the desired behavior, hostile to the US or the TA	>5 million	0-1	0-30%	0-20%	0-20%	< 1 ppw across relevant platforms

Table 5. Adjustable Influencer Scoring Matrix

Adjustable Influencer Scoring Matrix							
VALUE	ALIGNMENT WITH DESIRED BEHAVIOR	FOLLOWERS	POTENTIAL REACH Shared demographic qualities between TA and influencer.	ENGAGEMENT RATE (top score receives 100%, not direct engagement rate)	TIMES SHARED (top score among accounts analyzed receives 100%)	MENTIONS (top score among accounts analyzed receives 100%)	POST FREQUENCY (How often an influencer posts across SM platforms)
5							
4							
3							
2							
1							

Table 6. Influencer Comparison Scorecard Example

Influencer Scorecard (hypothetical example scores)								
INFLUENCER	ALIGNMENT WITH DESIRED BEHAVIOR	FOLLOWERS	POTENTIAL REACH Shared demographic qualities between TA and influencer.	ENGAGEMENT RATE (top score receives 100%, not direct engagement rate)	TIMES SHARED (top score among accounts analyzed receives 100%)	MENTIONS (top score among accounts analyzed receives 100%)	POST FREQUENCY (How often an influencer posts across SM platforms)	TOTAL
@******	5	2	2	4	3	2	3	21
@--------	2	3	3	1	4	3	4	20
@+++++	4	4	5	3	2	4	3	25
@>>>>>	2	5	5	4	3	3	5	27
@$$$$$	1	3	4	2	4	4	4	26

B. ALIGNMENT WITH THE PSYOP OBJECTIVE

While influencer marketing tools and algorithms can and should be used when PSYOP practitioners have the opportunity and funding necessary, this metric distinguishes the Influencer Scorecard from those products and tools because it looks specifically at the socio-political issues and biases of the influencers analyzed to determine whether their content aligns with the PSYOP objective (PO). FM 3-53 states,

> Psychological objectives are statements of a measurable response that reflects the desired attitude or behavior change of a selected foreign target audience as a result of Military Information Support operations. Psychological objectives are specifically developed to change or reinforce the behavior of selected foreign targets and TAs in order to help achieve the larger objectives of the supported force or agency and, ultimately, U.S. national objectives.[96]

The PSYOP professional's mission revolves around the PSYOP series, or operational plan he or she conducts in support of the PO and supported command or agency, and this scorecard was designed to contribute to the building of a series, specifically Step 3: Series Development, where, among many other considerations, the PSYOP professional determines how they (or their partners) will attempt to communicate with the TA to achieve a desired behavior.

The influencers with whom U.S. PSYOP professionals choose to partner do not need to support all U.S. National Security interests and goals, but they should be willing to partner with U.S. PSYOP to influence the target audience to achieve the desired behavior change, the PO, for the PSYOP series. Reducing incidents of violence, promoting acts of resistance against authoritarian regimes, reducing incidents of human rights abuses, and deterring cyber warfare; these are all examples of objectives a PSYOP unit may seek to partner with an influencer as a part of the series designed to change the behavior of a foreign TA. As with anything, the U.S. military takes on risk in associating with any external individuals or groups, but the potential benefits may outweigh the risks. Some

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[96] Department of the Army, *Military Information Support Operations*, FM 3-53 (Washington, DC: Department of the Army, 2013), https://armypubs.army.mil/ProductMaps/PubForm/Details.aspx?PUB_ID=102936.

influencers may align with the PO, but the U.S. military may not want to associate with them due to their reputation (e.g., known human rights abusers, hostile acts toward U.S. personnel, etc.). As always, planners and commanders at all levels should assess the risk versus benefit before proposing or approving any series, in addition to its media and dissemination methods. It is quite possible that analysis will point toward partnerships that may not make sense on the surface, but if an accord can be struck the influence potential that some influencers carry with certain TAs, even those that seem to be at odds with the USG, might make such partnerships worth seeking and should not be rules out entirely.

Scoring influencers on alignment with the PO requires analysis of several aspects of the influencer, including previous posts, public reputation, and consultation with intelligence professionals. The top score of 5 in the baseline scorecard goes to influencers with recent posts supporting the PO (e.g., if decreasing incidents of violence among the TA is the objective, supporting posts would include anything advocating non-violence or condemning acts of violence by the TA), who have a good reputation with the TA, and no derogatory marks from intelligence or previous hostility toward the U.S. A score of 4 goes to those likely to support the PO based on previous posts, perceived biases, and other known details about the influencer. A score of 3 goes to neutral influencers with no perceived biases or leanings toward or against the PO. Influencers perceived to have a slight bias against the PO would receive a 2. Influencers with derogatory marks from intelligence, previous hostility toward the U.S., or recent posts against the PO receive a score of 1.

C. FOLLOWERS

When one thinks about influencers, they generally have a type of person in mind—maybe the Kardashian/Jenner family or Logan Paul, the influencer who fought professional boxing champion, Floyd Mayweather, in an exhibition for a large payout and to further his status as a top influencer. Some people think about relatively young celebrities (teens to thirties) and personalities who have cultivated a large following on social media due to their attractiveness and antics. To many people and among many demographic groups, the

term has a negative connotation.[97] Despite one's feelings toward these polarizing influencers, however, most people have accounts on social media and follow others, such as friends, family, and influencers (hence the "social" part of social media). Roughly four and a half billion people worldwide use social media. This represents 57% of the world's population and 93% of global internet users.[98]

Not all social media platforms use the same terms when referring to those who can view one's original content. On Facebook there are both friends and followers, on Instagram, Twitter, and TikTok they are simply called followers, on China's WeChat there are friends, followers, and fans, on YouTube there are subscribers, and on the Russia-based VKontakte there are both friends and followers. We include all of these designations when counting "followers." For the influencer scorecard, a follower is one who can view an influencer's original content.

Social media exists to bring people together, to follow others, share information, and interact through the internet. Whether intentional, desired, or not, social media users influence and are influenced by others. Even if one participates in social media just to engage with family and friends and share pictures, they still have followers and follow others. For most social media users, their follower counts remain relatively small, confined primarily to the people they know and have met in real life, even if life has separated them geographically. The average social media user does not meet one of the six influencer tiers defined by mediakix.com:

1. nano-influencer – 1k-10k followers
2. micro-influencer – 10k-50k followers
3. mid-tier influencer – 50k-500k followers
4. macro-influencer – 500k-1m followers
5. mega-influencer – 1m-5m followers
6. celebrity influencer – 5m+ followers[99]

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[97] Hannah Ewens, "How the Word 'Influencer' Lost All Meaning," Vice, July 5, 2021, https://www.vice.com/en/article/dyvxn7/how-the-word-influencer-lost-all-meaning.

[98] Simon Kemp, "Digital 2021 July Global Statshot Report," DataReportal, accessed July 21, 2021, https://datareportal.com/reports/digital-2021-july-global-statshot.

[99] *Media Kix* (blog), "What Constitutes an Influencer?"

Some people and companies do try to reach broader audiences for a myriad of reasons: to sell a product, to gain fame, for philanthropy, social activism, for politics, or for religious outreach, just to name a few. Social media platforms provide a personal and interactive element that is difficult to reproduce in such geographically disparate and otherwise disconnected groups. Regular users can engage with the people and brands of interest to them, whether through one-click reactions, sharing content (to or from the influencer), or through written feedback as a public comment or private message.

As expected, more is not always better, and engagement rates go down with more followers. Nano-influencers have the highest engagement rates (5% for those with 1–5k followers), but the engagement rates quickly fall for the micro and mid-tier categories (about 1.5%), whose accounts receive a slightly lower engagement rate than mega influencers and celebrities (1.6%).[100] By multiplying these engagement rates by the number of followers, however, the potential impact does rise as the number of followers increases, but so do the costs to the businesses and marketers who seek out influencers to help sell their product (celebrities command higher rates to endorse products). Also, this engagement rate shows follower engagement with the influencer, not influencer engagement with the follower.

Other factors make influencers with large followings less appealing for partnership with U.S. PSYOP practitioners, as well. High-profile influencers may not want to partner with a U.S. government entity due to the polarizing nature of the relationship (while some of their audience may strongly support the U.S., others may not). Conversely, a partnership with a celebrity or mega-influencer may prove detrimental to U.S. PSYOP and their units if negative information about the influencer becomes public.

One final factor relevant to follower count is the size of the target audience and the potential level of engagement influencers can have with their followers. U.S. PSYOP series usually seek a narrow target audience whose potential behavior change can help the unit

[100] Statista Research Department, "Engagement Rates among IG Influencers Worldwide 2020," Statista, accessed July 21, 2021, https://www.statista.com/statistics/992887/growth-engagement-rate-influencers-followers/.

achieve a mission-related objective. Influencers with moderate follower counts can engage more with their followers, and they are less likely to have followers spread across the world. Therefore, it is more likely their followers will align closely with the PSYOP target audience.

Considering the aforementioned factors, we assigned the following scores to the influencer categories in the baseline scorecard: nano-influencer, 2; micro-influencer, 3; mid-tier influencer, 5; macro-influencer, 4; mega-influencer, 3; celebrity, 1. However, the PSYOP Detachment may determine that a nano-influencer has the most potential to effect change in the Target Audience (TA), while a Theater Special Operations Command PSYOP Planner may attempt to partner with a celebrity for a country-wide or regional series with a broad TA. For this reason, the situationally dependent adjustable scorecard allows for adjustment.

To perform a check on these data, we looked up the number of Instagram influencers in a conflict-relevant country, Ukraine, on starngage.com. We chose this site because it demonstrates the simplicity of the tools needed to fill out the scorecard, as it is free of charge and provides relevant filtering for Instagram: accounts by country, number of followers (i.e., influencer type), and topic (e.g., technology, education, fashion, health and fitness). We do not endorse any site for filtering influencers because they can change, and some will be better for certain social media. We suggest searching for the best filters at the time for the specific context.

Ukraine has more than 1000 micro-influencers, 73 mid-tier influencers (a score of 5 for the baseline scorecard), 47 mega-influencers (score of 3), and 4 celebrity influencers.[101] With just this information, it seems plausible that one or more of the mid-tier influencers might partner with U.S. PSYOP personnel or, preferably and more likely, local partners of U.S. PSYOP, and reach a significant audience (500k-1 million followers).

[101] "Top 1000 Instagram Influencers in Ukraine in 2021," StarNgage, accessed July 24, 2021, https://starngage.com/app/global/influencer/ranking/ukraine?page=1.

D. POTENTIAL REACH AMONG THE TARGET AUDIENCE

For psychological operations, achieving the desired behavior change among the TA remains the key objective and the prime determinant of success. An influencer scorecard for PSYOP practitioners must ensure the influencer can reach a sufficient portion of individuals within the TA to achieve this desired result. Unfortunately, few tools available provide demographic data about one's followers, but we can identify certain characteristics (usually demographic-related information) in the influencer based on their profile and posts that indicate details about their audience. The point of the potential reach factor is to link influencer demographics with target audience demographics to determine their potential to reach the TA. Some of these characteristics include language, nationality, age, interests, posting details, and location. Target Audience Analysis will cover these same details for the Target Audience.

The influencer who shares the most of these characteristics with the Target Audience should receive the highest score for reach. In the baseline scorecard, a reach score of 5 goes to the influencer who:

1. Shares the TA's nationality
2. Posts primarily in the TA's language
3. Comes from the same place as the TA
4. Shares interests with the TA
5. Shares information and opinions about the TA's location (local politics, events, concerns for the area, etc.)
6. Falls within the TA's age window

A 4 goes to influencers with five of these six characteristics. A 3 goes to influencers with three or four of these characteristics, a 2 to those with two, and a one for those with one or none of these characteristics.

We recommend using the adjustable option for reach dependent on the unique factors of the PSYOP series. In some locations, gender of the influencer may affect their persuasion of the target audience. Likewise, religion or religious faction may affect the

ability of the influencer to sway with the TA. PSYOP practitioners should take all the available and relevant demographic links between the TA and the influencer and adjust the scorecard to reflect shared qualities between the two. That is, if there are nine potential links, eight or nine could garner a 5, six or seven a 4, four or five a 3, two or three a 2, and zero to one a 1.

E. INTERACTION/ENGAGEMENT RATE

The interaction or engagement rate measures the number of reactions and comments per follower per post.[102] Engagement rates serve as key determinants of an influencer's influence on their followers. Ostensibly, the more followers interact with the influencer's posts, the more influence takes place. The followers were presumably influenced by the post to take an action, whether that included "liking" it, commenting on it, or using another reaction.

However, several factors make the engagement rate less than optimal at determining influence. Influencers who post frequently may get more total reactions, but fewer per post, driving down their engagement rate. Alternatively, a celebrity may only post sporadically but achieve a high rate of reaction when they do post. Finally, negative reactions count toward the engagement rate, not against it (e.g., if a polarizing figure is followed by supporters and dissenters, the engagement rate treats all reactions the same), so it is not purely a metric of positive reactions.

Engagement rates vary based on the platform, so we do not recommend comparing influencers across different platforms. For social media sites such as Facebook and LinkedIn, many consider a 2% engagement rate desirable (above average), for TikTok, successful influencers garner 10% or more, and on Twitter, successful engagement rates are around 0.1%.[103] For this reason, comparing the potential influencers against each other

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[102] The term post, when discussing the scorecard and not specific social media platforms, is a generic term to indicate the publishing of content. This is to reduce confusion regarding platform-specific terminology for "post" and other forms of publishing content.

[103] Adina Jippa, "2021 Social Media Industry Benchmarks," *Socialinsider* (blog), January 19, 2021, https://www.socialinsider.io/blog/social-media-industry-benchmarks/.

provides a more universal option. In the baseline metric, the influencer with the highest engagement rate scores a 5, and scores for the remaining influencers depend on engagement rate compared to that of the highest evaluated. 90–100% receives a 5 (those with comparable engagement rates to the highest do not get penalized), 70–90% receives a 4, 50–70% scores a 3, 30–50% for a 2, and 0–30% for a 1 (low engagement rates highlight the inability of the influencer to elicit a response from their followers). For example, if evaluating five Instagram influencers with engagement rates of 8.1%, 6.4%, 4.2%, 2.1%, and 1.5%, the 8.1% would receive a 5 (8.1% ÷ 8.1% = 100%), the 6.4% would receive a 4 (6.4% ÷ 8.1% = 79%), the 4.2% would receive a 3 (4.2% ÷ 8.1% = 52%), and the 2.1% and 1.5% would receive a 1 (26% and 19%, respectively).

Though this should reduce the variance in scores based on the nature of different social media platforms, the user may still choose to adjust the metric dependent on their situation. For instance, if an outlier with an arbitrarily high engagement rate (like adding a 17% engagement rate to the ones above) dwarfs that of all other potential influencers, leading them to all fall towards the bottom of the scale (all the others would be a 1 or 2 in the new scenario due to the "heavy tail"), one could widen or shorten score bands accordingly to account for the variability among the other potential influencers.

F. TIMES SHARED AND MENTIONS

Similar to times retweeted and times mentioned from the chapter covering the 2011 Egyptian revolution, times shared and mentions provides a more cross-platform perspective that covers content promoting and identifying other users. Sharing allows a user to re-post on their page what someone else originally posted. This can cause an exponential spread or ripple effect when a post or a video gets shared again and again. Many have termed this effect "going viral," referring to the way the content can spread like a virus. Achieving a viral spread on one post, while desirable to most influencers because it leads to more followers in the near term, does not guarantee future success.

As earlier chapters suggest, the times shared metric may be one of the biggest determinants of influence on social media since the user has to decide to do something—share the content with all their followers. Sharing does not guarantee endorsement, but

most people share content with which they agree, and it does show the ability for a message to spread.

Content originators control mentions whereas content consumers control sharing. While sharing lets a user disseminate content of another user, mentions allow a user to gain the attention of another user and link the other user to the originator's content. Mentions show others that the two users have a connection, sometimes strong (e.g., when one tags someone who appears in a picture or video with them) and sometimes weak (e.g., when a non-influencer tags their favorite athlete in their post showing their support). Receiving mentions does measure the popularity of a social media user, which matters for gaining influence among the target audience, especially when social media users from among the TA mention a key communicator with influence on their group. On most platforms, the user mentioned has a choice to allow the mention to show up on their page or not. When using the scorecard, only the mentions received and shared will be visible for each potential influencer, so this is the metric included in the scorecard.

Due to the vast differences in sharing and mentions across platforms and audiences, the PSYOP professional should generate scores based on a comparison between potential influencers. Using the same timeframe as before, the practitioner would add up all of the times an original post was shared from each influencer during the window analyzed, convert the number into a percentage of the greatest number of times shared, and then assign scores. Similarly, for mentions, the practitioner would look at all of the times mentioned over the course of the window and convert those to a percentage of the greatest number of mentions. Twenty percent increments form the difference between scores in the baseline metric for both, thus 80–100% scores a 5, and 0–20% scores a 1.

G. POST FREQUENCY

The importance of an influencer's post volume or frequency cannot be understated. Influencers who frequently produce content with which their followers can interact or consume are more likely to maintain influence with those followers than influencers who post less frequently. In a 2016 article, Iblasi, Al-Qreini, and Bader stated, "Every post you make on a social media platform is an opportunity for customers to convert. Every blog

post, image, video, or comment you share is a chance for someone to react, and every reaction could lead to a site visit, and eventually a conversion."[104] While influence operations are not interested in conversion in the commercial sense of turning a prospective customer into a one-time or repeat customer, this model of post frequency provides an important measurement for influence operations on social media. An influential person for a TA that rarely posts on social media is not the ideal key communicator for that platform. PSYOP practitioners should consider said key communicator for their influence operations, but they should also consider the platform for which the key communicator is most influential. When seeking out influencers to engage their target audience, PSYOP professionals should strongly consider the rate at which influencers post on social media platforms used most commonly used by the target audience.

One does not necessarily need to consider only one platform. An influencer that can reach a target audience and reinforce a message across multiple social media platforms has the potential to increase their influential effect on a TA. Clint Watts encouraged us to consider some factors in our approach to post frequency. Influencers who collaborate with other influencers can increase their potential reach, grow their follower numbers, and broaden their potential to influence a TA.[105] Those influencers who fit into a model of "intra-engagement" can create a snowball effect that sustains conversation on a particular topic, maintains the attention of a TA, and increases the influential effectiveness of partnership with influencers. Different situations call for different levels of partnership, but since post frequency is important to increasing potential influence, PSYOP professionals should consider using multiple influencers to increase total post frequency.

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[104] Walid Nabil Iblasi, Sulaiman Ahmad Al-Qreini, and Dojanah M.K. Bader. "The Impact of Social Media as a Marketing Tool on Purchasing Decisions (Case Study on SAMSUNG for Electrical Home Appliances)." *International Journal of Managerial Studies and Research (IJMSR)* 4, no. 1 (January 2016): 14–28.

[105] On September 10, 2021, we spoke with Clint Watts (former Army officer, business owner, misinformation/disinformation expert) regarding the application of influencer marketing to psychological operations.

H. INFLUENCER SCORECARD CONCLUSION

Just like using CARVER for targeting, once a PSYOP team has calculated all the scores for each influencer, they can add all six categories together for each influencer and create a list from highest to lowest, with highest score indicating the scorecard's most desirable influencer with whom to partner. This enables the team to separate their top candidates for partnership knowing that analysis has helped them sort through many candidates in a mostly objective way, reducing their own potential biases and steering them toward influential social media users likely to help in achieving the PSYOP objective. Whether using the baseline influencer scorecard or the situation dependent influencer scorecard, a clearer understanding of the influencer landscape around the TA will emerge.

Plugging numbers into either an algorithm or a scorecard will not guarantee success for a marketing campaign or a PSYOP series, but PSYOP teams looking to leverage influencers can benefit from an analysis tool that helps them sort through large amounts of data and social media posts. Our analysis in previous chapters informed the Influencer Scorecard but we did not use a mathematical formula to derive it for several reasons: 1. Algorithms and big data aggregators already exist and can perform many of the detailed analytics necessary with greater access to social media metrics (but the practitioner loses an understanding of the influencers they are analyzing and how each factor affects the score in a complex formula); 2. We intended the scorecard to serve as a rudimentary tool that any PSYOP practitioner can use with openly available information to help determine with which influencers they should partner; and 3. Scorecards like CARVER and this one help to focus analysis in order to make decisions; they are tools for the practitioner meant to be easily understood and used in conjunction with other means of analysis. When building a PSYOP series, if the PSYOP team determines they should partner with influencers of the TA on social media, this scorecard will provide direction and clarity about potential influencer partnerships. We highly recommend customizing the influencer scorecard based on the situation. We created the baseline as an anchor from which PSYOP teams will adjust to suit their own situation, location, and the social media platforms of the influencers they seek to identify.

V. CONCLUSION

This project analyzed important aspects of key communicators on social media that make them influential to a PSYOP team's target audience when designing a PSYOP series. Based on key insights from influencer marketing research, we designed a decision-making tool -- a scorecard -- that considers these influencer marketing factors and the national security-relevant details around which our military missions are based. While no standard tool fits every circumstance and every social media platform, the tool does provide a framework that enables analysts to form their own unique version of an influencer scorecard based on their series' situational context.

Empirical research in influencer marketing clearly points to the importance of followers, reach, engagement rate, credibility, and consistency. Research also suggests that social media influencers influence decisions from their followers, and brands are willing to pay for them to endorse their products. Social media differs from many previous marketing mediums because of the semi-personal engagement between the influencer and their followers made possible by this medium. These aspects were intentionally built into the scorecard.

To test the utility of the scorecard, we analyzed Twitter data from the 2011 Egyptian revolution to determine the key communicators of the revolution on Twitter and how they related to the protest organizers' primary target audience, Egyptians capable of joining the protests, and a secondary target audience, interested observers around the world. For both audiences, it appeared that credibility came from those in Egypt with first-hand knowledge of the situation. Social media enabled the message to spread through retweets of these credible participants' original posts. Instead of learning about the protests from journalists' reports, the world could learn about the issues and the protests directly from the smartphone or keyboard of the revolution's leaders and other Egyptian protestors. This case study helped us understand the importance of shares (retweets in this case) and mentions, two social media metrics that serve as measures of effectiveness (MOE)—followers take action due to an influencer's post, prestige, or authority on a topic.

In Chapter Three, we analyzed the failed Fyre Festival and took note of the social media success that generated the overwhelming interest in a company that had never previously produced an event. Using mega and celebrity influencers and their access to the company's target audience—potential festival-attendees—the organizers sold out the festival before it was properly planned. This informed our understanding of the importance of followers, reach, and the rapid ground-swell effect social media can have at driving interest. It also highlighted the importance of followers' trust in influencers and the perception of an influencer's authenticity. Trust and authenticity are important to influence on social media, but they are too intangible to measure and cannot be considered for categories on the scorecard. While they are difficult to measure as standalone categories, existing categories such as shares and engagement rate can provide PSYOP practitioners with indicators of a TA's trust and perception of authenticity in an influencer.

After analyzing and evaluating this information's relevance to military influence operations or PSYOP, we developed an influencer scorecard designed to include the most relevant factors for identifying influencers with whom to partner. We did not want to create an algorithm but something that every PSYOP practitioner could calculate on their own with widely available social media metrics. This scorecard does not require government contracts or paid subscriptions, and it creates a list of the influencers best suited for the PSYOP series for which it will be used. While a PSYOP team can add other categories, we prioritized followers, engagement rate, potential reach, shares, mentions, and alignment with the desired behavior. Instead of setting firm values, we stressed the importance of customizing the scorecard based on the specific factors of the PSYOP series.

A. LIMITATIONS

While the two cases we analyzed reveal important insights, examining a broader range of cases would strengthen our understanding of key communicator influence on social media platforms. From in-depth analysis of these limited examples as well as the available literature on influencer marketing, we attempted to draw inferences about how to apply the information to national security-related influence. Due to the variety of social media platforms, the strengths and capabilities of each, and the differing levels of privacy

and organization, we have concluded that our generalized approach and customizable scorecard provide a flexibility necessary due to our inability to provide definitive quantitative analysis that applies to every situation on every platform.

B. SUGGESTED FUTURE RESEARCH

The influencer scorecard, in its current form, provides the PSYOP practitioner with the rudimentary decision-making tool we sought to create. While it does incorporate evidence-based research to support its effectiveness, it would benefit from further research that incorporates both qualitative and quantitative analysis to improve its applicability and effectiveness in identifying key communicators. The inclusion of social media platforms not included in our original research would broaden the influencer scorecard's useability and effectiveness by broadening the diversity of potential target audiences that the PSYOP practitioner can access. Research related to this topic should not be limited solely to traditional social media but should include web-based forums where user-to-user communications occur to include messaging applications and online gaming.

As our research focused solely on the identification of key communicators on social media, further research is required in the analysis of these key communicators to determine which ones are the best fit for PSYOP partnership to influence target audiences. This research would benefit from understanding of social psychology, social network dynamics, and how to apply these principles to social media platforms to determine the potential to effectively influence target audiences. Subsequently, research into effective contact methods and the establishment, maintenance, and evaluation of relationships with these key communicators is necessary for their effective employment on social media platforms in support of influence operations. An understanding of political marketing and its use of social media to influence populations will benefit this subsequent research.

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APPENDIX. SCORECARD USE AND IMPLEMENTATION

A. SOCIAL MEDIA INFLUENCERS: ROLES AND APPLICATIONS

Key communicators hold an important position in society given their ability to present information to groups of people that impacts their perceptions, attitudes, and behaviors.[106] These impacts can be achieved in a rapid fashion, or they can be evoked over time with frequent, sustained messages. Sometimes the key communicator intends to achieve specific effects on an audience. Other times, the direct impacts and their second and third order effects may be achieved without the knowledge or intent of the key communicator.

With social media's reach and potential impacts as a communications platform, influencers across the various social media platforms play a major role in the transmission of information and how users interact with that information. They have added a complexity to the information environment that can be utilized by influence practitioners' existing knowledge about key communicators. Influencers can be employed to influence target audiences to achieve effects from the tactical to strategic level, in peacetime, during contingency operations, in support of combat operations, counterinsurgencies, across the spectrum of irregular warfare, and to support strategic competition. Sponsor attribution can come in white (overt sponsor attribution), gray (presumed but unproven attribution), and black (unknown attribution), adding complexity for those who seek to conduct influence operations via social media by partnering with influencers.

B. WHY USE THE INFLUENCER SCORECARD

The Influencer Scorecard offers influence practitioners a simple, flexible tool that aids in the identification of influencers who serve as key communicators for a specific target audience. The scorecard is designed to rank-order the best influencers with whom to partner to influence the target audience to achieve the desired behavior. For pragmatic purposes, this tool does not require advanced social network analysis or expertise in a

[106] Army Field Manuals 1–02.1 and 3–53 define key communicators as, "An individual to whom the target audience turns most often for an analysis or interpretation of information and events."

specific computer program, although these tools can greatly aid users conducting analysis of influencers. It is designed as a guide for identifying influencers for a specific TA while adhering to predetermined criteria deemed important by the user to achieve influence over a TA. Essentially, users determine which categories of data are most important to influence a specific TA using the baseline scorecard, analyze numerous influencers based on the scorecard criteria, and compare the resulting data using the adjustable scorecard template. This is influenced by target audience analysis (TAA), which improves a practitioner's understanding of the TA and enhances the reliability and efficacy of the scorecard.

C. SCORECARD CATEGORIES AND THEIR IMPLEMENTATION

1. Establish the Baseline

The scorecard has seven primary categories to consider for analysis and comparison of influencers. Those categories include an influencer's alignment with the desired behavior, their followers, potential reach within and beyond the target audience, the interaction or engagement rate with followers, both shares and mentions amongst followers and other influencers, and the frequency at which content is published, or posted, to social media platforms of interest.

Influence practitioners, based on TAA and understanding of the operational environment, will assign a score of 1 thru 5 with specified criteria that places quantifiable significance to each score, establishing a baseline from which to give measurement and rank to influencers of interest. Once this baseline is established, the analyst must then identify between 5 and 25 influencers to analyze to find quantifiable data for each scorecard category. This range can be adjusted as necessary.

Table 7 provides an example of the baseline scorecard. The baseline scorecard should be adjusted based on TAA, understanding of the operational environment, and the objectives of the mission. The baseline places the "50,000 to 500,000 followers" influencer tier in the top ranking, but a particular mission might benefit more from a smaller or larger tier. This highlights the flexibility of the scorecard and its reliance on the user to do the work necessary to implement it effectively. It is a guide that provides a framework for analysis and problem-solving. It is not a "fire-and-forget" or a "plug-and-play" tool.

Table 7. Baseline Scorecard Example

Baseline Influencer Scoring Matrix							
VALUE	ALIGNMENT WITH DESIRED BEHAVIOR	FOLLOWERS	POTENTIAL REACH Shared demographic qualities between TA and influencer.	ENGAGEMENT RATE (top score receives 100%, not direct engagement rate)	TIMES SHARED (top score among accounts analyzed receives 100%)	MENTIONS (top score among accounts analyzed receives 100%)	POST FREQUENCY (How often an influencer posts across SM platforms)
5	Recent posts supporting the desired behavior	50,000-500,000	6	90-100%	80-100%	80-100%	3+ ppd on 3+ platforms
4	Likely to support the desired behavior	500,000-1 million	5	70-90%	60-80%	60-80%	1-2 ppd on 3+ platforms / 3+ ppd on 1-2 platforms
3	Neutral to the desired behavior	10,000-50,000; 1-5 million	3-4	50-70%	40-60%	40-60%	Avg 1 ppd 2+ platforms / multiple ppd on 1 platform
2	Likely to oppose the desired behavior	1,000-10,0000	2	30-50%	20-40%	20-40%	2+ ppw on 1-2 platforms / 1 ppw on 3+ platforms
1	Opposed to the desired behavior, hostile to the US or the TA	>5 million	0-1	0-30%	0-20%	0-20%	< 1 ppw across relevant platforms

Table 8. Adjustable Influencer Scoring Matrix

Adjustable Influencer Scoring Matrix							
VALUE	ALIGNMENT WITH DESIRED BEHAVIOR	FOLLOWERS	POTENTIAL REACH Shared demographic qualities between TA and influencer.	ENGAGEMENT RATE (top score receives 100%, not direct engagement rate)	TIMES SHARED (top score among accounts analyzed receives 100%)	MENTIONS (top score among accounts analyzed receives 100%)	POST FREQUENCY (How often an influencer posts across SM platforms)
5							
4							
3							
2							
1							

2. Analysis and Ranking

Once the data for all categories is attained for each influencer of interest, the analyst then compares the data to the baseline and assigns a rank for each category with five (5) being the most favorable and one (1) the least. The results of the data input and scoring for each influencer on the scorecard allows the user to compare the influencers and determine those that are most likely to be the most effective key communicators for a TA of interest for an influence operation.

To effectively utilize the scorecard, the analyst must understand its categories, why they are important, and how to collect and incorporate data for each. Understanding of these categories will assist users in their analysis of influencers and the identification of those that are most beneficial to the influence of the TA.

Table 9. Influencer Comparison Scorecard Example

Influencer Scorecard (hypothetical example scores)								
INFLUENCER	ALIGNMENT WITH DESIRED BEHAVIOR	FOLLOWERS	POTENTIAL REACH Shared demographic qualities between TA and influencer.	ENGAGEMENT RATE (top score receives 100%, not direct engagement rate)	TIMES SHARED (top score among accounts analyzed receives 100%)	MENTIONS (top score among accounts analyzed receives 100%)	POST FREQUENCY (How often an influencer posts across SM platforms)	TOTAL
@******	5	2	2	4	3	2	3	21
@--------	2	3	3	1	4	3	4	20
@+++++	4	4	5	3	2	4	3	25
@>>>>>	2	5	5	4	3	3	5	27
@$$$$$	1	3	4	2	4	4	4	26

D. CATEGORIES

1. Alignment with the Desired Behavior

This category's focus is on how well an influencer aligns with the desired behavior an influence operation seeks to evoke from a TA. This cannot be measured by software, algorithms, and other influencer marketing tools available, either free or paid. To determine this alignment requires a deep understanding of the TA, the object of the influence operation, and the intent of the mission to which it is nested. This category is vital to the scorecard's efficacy as it ties the metrics of the remaining categories to the mission.

To measure this category requires a mix of quantitative and qualitative analysis of an influencer's published content, online reputation (and offline when applicable), and consultation with intelligence professionals to attain a deeper understanding of the influencer from an operational perspective. While quantitative data does contribute directly to this category, it relies heavily on qualitative data analysis. This does not detract from the scorecard's efficacy, but rather, it enhances the overall understanding of influencers and their ability to achieve influential effects on a TA.

To attain a high score, an influencer does not need to openly support the objectives of U.S. forces or even that of the USG. Instead, they must possess the ability to influence the TA toward the desired behavior. Users should frequently return to the question, "Can this influencer help evoke the desired behavior?" Risk to force, risk to mission, and other considerations are important as well, but partnering with influencers involves some risk, which makes the identification process so important to those seeking partnership with influencers.

Once enough data is collected and analyzed, the scoring process for the baseline data on "Alignment with the Desired Behavior" can begin.

- 5: The top score of 5 is reserved for influencers with recent and frequent posts that openly support and call for their followers to engage in the desired behavior. For example, if decreasing incidents of violence among the TA is the objective, supporting posts would include anything advocating non-violence or condemning acts of violence by the TA. These

influencers should also have a good reputation and be trusted by the TA while receiving little to no derogatory marks from the intelligence community.

- 4: A 4 is assigned to those influencers whose content generally supports the objectives of the influence operation and have a high probability to evoke the desired behavior from their followers that fall within the TA.

- 3: Influencers with little to no perceived bias regarding the mission objectives, but still have a favorable probability to evoke the desired behavior from some of the TA within their followership.

- 2: Influencers with perceived biases that do not align with the desired behavior.

- 1: Influencers with questionable to derogatory input from the intelligence community that are just as likely to influence their segment of the TA toward the desired behavior as they are to unwanted, even violent behavior against U.S. or partner forces.

2. Followers

Scorecard users may hold preconceived notions about influencers and what the "Followers" category might mean. There are many terms for this concept across social media platforms to include followers, subscribers, friends, and fans, among others. To be clear, a follower, in the context of this category, is a user on a social media platform that can view the original content of an influencer. Whether intentional, desired, or not, social media users influence and are influenced by others.

For most social media users, their follower counts remain relatively small, confined primarily to the people they know and have met in real life, even if life has separated them geographically. The average social media user does not meet one of the six influencer tiers defined by mediakix.com and is a widely accepted measurement across the industry:

1. nano-influencer – 1k-10k followers
2. micro-influencer – 10k-50k followers

3. mid-tier influencer – 50k-500k followers
4. macro-influencer – 500k-1m followers
5. mega-influencer – 1m-5m followers
6. celebrity influencer – 5m+ followers[107]

People and companies have numerous reasons to reach a broader audience and social media platforms provide a venue for which they can accomplish this task. These platforms, while they do not replicate real-world interaction, facilitate engagement between their users from the local to international level. This type of venue enables access to businesses, organizations, and people that could not be attained prior to the popularization of such a medium. This lends itself to be used by public, private, commercial, political, religious, and other actors to influence people in ways that help them achieve their own objectives. They can try to do it alone with their own accounts, but it helps to partner with social media users, influencers for this context, to reach a wider audience. The influencer's follower count is important, but it is also important to understand who follows the influencers and if those followers are part of the TA.

The size of the followership is always dependent upon the objective of the influence operation. Referring to the influencer tiers, more followers does not signify a better potential partner. If a nano or micro influencer has a large percentage of the TA within their followers, they may be more influential than a mega or celebrity tier influencer who can reach a large audience but may not be significantly influential to the specific TA. It is also important to consider the observed trend that an increase to the follower count correlates with a decrease in the influencer-to-follower engagement rate.[108] Influence operations typically target a narrow TA and influencers with moderate follower counts typically show higher engagement rates with their followers. Research that has produced such data leads to this suggested scoring model for the "Follower" category:

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[107] "Influencer Marketing Statistics," Big Commerce (blog), accessed February 6, 2021, https://www.bigcommerce.com/blog/wp-content/uploads/post-pdfs/BigCommerce-influencer-marketing-statistics.pdf.

[108] Statista Research Department, "Engagement Rates among IG Influencers Worldwide 2020," Statista, accessed July 21, 2021, https://www.statista.com/statistics/992887/growth-engagement-rate-influencers-followers/.

- 5: mid-tier influencer (50k-500k followers)
- 4: macro-influencer (50k-500k followers), micro-influencer (10k-50k followers)
- 3: mega-influencer (1m-5m followers)
- 2: nano-influencer (1k-10k followers)
- 1: celebrity-influencer (5m+ followers)

3. Potential Reach

Social media is an important communication platform due to its large global reach and the influence it has on so many potential target audiences. It offers an effective way to communicate to these TAs and influencers can amplify the effectiveness of this communication. These influencers are conduits through which the USG can reach a TA to achieve the goals of an influence operation.

While an analyst my find it difficult to attain demographic information regarding an influencer's followers, they can identify details through the influencer's profile and posts to indicate general demographic information about their followers. Utilizing their understanding of the TA attained during target audience analysis, users can link influencer details to follower demographics and begin to determine the potential of an influencer to reach the TA of an influence operation. General indicators to consider include language, nationality, age, interests, posting patterns and details, and location.

As with the other categories, this remains highly adjustable based on the situation and mission, but the "Potential Reach" category should consider the following baseline scoring model:

- 5: Influencer shares common nationality with the TA; posts primarily in the TA's language; common locality with the TA; common interests with the TA; posts information and opinions about the TA's location; part of the TA's age/peer group
- 4: Influencer has five of the six characteristics listed above

- 3: Influencer has three or four of the six characteristics listed above
- 2: Influencer has two of the six characteristics listed above
- 1: Influencer has one or none of the characteristics listed above

The primary takeaway when considering the potential reach and applying its score to the matrix is that all relevant information should be considered to understand the full potential of an influencer's ability to reach a TA. If other information affects an influencer's ability to reach the TA, such as religion, tribe, or sports team affiliation, just to name a few, the suggested scoring model can and should be adjusted to incorporate these other factors.

4. Interaction and Engagement Rate

Engagement rates serve as key determinants of an influencer's influence on their followers. The interaction or engagement rate measures the number of reactions and comments per follower per post. This measurement is monodirectional measuring follower-to-influencer interactions. However, other tools exist to provide insight into the rate or frequency with which an influencer engages with their followership, if important to a particular operation. While the engagement rate does not directly demonstrate the influencer's ability to influence followers, it does indicate how the followers feel about the influencer's content and if they view it. Reacting to posts is an indication that the influencer has the attention of their followers.

Engagement rates vary based on the platform, so cross-platform comparison is not recommended. For social media sites such as Facebook and LinkedIn, many consider a 2% engagement rate desirable (above average), for TikTok, successful influencers garner 10% or more, and on Twitter, successful engagement rates are around 0.1%.[109] For this reason, comparing the potential influencers against each other provides a more universal option.

[109] Adina Jippa, "2021 Social Media Industry Benchmarks," Socialinsider (blog), January 19, 2021, https://www.socialinsider.io/blog/social-media-industry-benchmarks/.

In the baseline metric, the influencer with the highest engagement rate scores a 5, and scores for the remaining influencers depend on engagement rate compared to that of the highest evaluated. 90–100% receives a 5 (those with comparable engagement rates to the highest do not get penalized), 70–90% receives a 4, 50–70% scores a 3, 30–50% scores a 2, and 0–30% receives a 1 (low engagement rates highlight the inability of the influencer to elicit a response from their followers). For example, if evaluating five Instagram influencers with engagement rates of 8.1%, 6.4%, 4.2%, 2.1%, and 1.5%, the 8.1% would receive a 5 (8.1% ÷ 8.1% = 100%), the 6.4% would receive a 4 (6.4% ÷ 8.1% = 79%), the 4.2% would receive a 3 (4.2% ÷ 8.1% = 52%), and the 2.1% and 1.5% would receive a 1 (26% and 19%, respectively).

Note that scorecard users should also consider influencer-to-follower engagement. This proves more difficult to assess and will likely require a qualitative approach. This consideration does not override the importance of the engagement rate discussed above, but it does offer the opportunity to enhance the overall understanding of the influencer-follower relationship and the potential for the influencer to influence the TA toward the desired behavior.

5. Shares and Mentions

The number of shares is a metric that may be one of the biggest determinants of influence on social media since the user has to decide to do something—share the content with all their followers. Sharing does not guarantee endorsement, but most people share content with which they agree, and it does show the ability for a message to spread. Content originators control mentions whereas content consumers control sharing. While sharing lets a user disseminate content of another user, mentions allow a user to gain the attention of another user and link the other user to the originator's content. Receiving mentions does measure the popularity of a social media user, which matters for gaining influence among the target audience, especially when social media users from among the TA mention a key communicator with influence on their group.

The quantity of shares and mentions provides a cross-platform perspective that covers content promoting and identifying other users. Sharing allows a user to re-post on their page what someone else originally posted. This can cause an exponential spread or

ripple effect when a post or a video gets shared again and again. Such activity can lead to short term follower gains, but it does not indicate long-term success for an influencer. When using the scorecard, only the mentions received and shared will be visible for each potential influencer, so this is the metric included in the scorecard.

The scorecard user must conduct analysis using the tools available, whether they are sophisticated or basic, to gather share and mention data for individual influencers. Once the data is collected, the user will annotate the data and record the rating on the scorecard in accordance with the baseline. Using the information above, the suggested baseline scoring model calculates shares and mentions separately and as percentages. The baseline and subsequent analysis should consider posts by the influencers of interest from the same timeframe to ensure consistency in their comparison. Users will define the tiers for the baseline measurement based on number of shares and mentions. For this category, the baseline is dependent upon the analysis to determine the highest number of respective shares and mentions. The user will find the influencer with the highest number of shares and assign that influencer with a 100%, which earns a score of 5 on the scorecard. Based on this number, the remaining influencers will fit into their respective tiers according to the baseline. It is possible that multiple influencers earn the same percentage and score.

- 5: 100% - 81% (Influencers with the most Shares/Mentions)
- 4: 80% - 61% (Influencers in the second tier of Shares/Mentions)
- 3: 60% - 41% (Influencers in the third tier of Shares/Mentions)
- 2: 40% - 21% (Influencers in the fourth tier of Shares/Mentions)
- 1: 20% - 0% (Influencers in the second tier of Shares/Mentions)

6. Post Frequency

The importance of an influencer's post volume or frequency cannot be understated. Influencers who frequently produce content with which their followers can interact or consume are more likely to maintain influence with those followers than influencers who post less frequently. While influence operations are not interested in conversion in the

commercial sense of turning a prospective customer into a one-time or repeat customer, this model of post frequency provides an important measurement for influence operations on social media. An influential person for a TA who rarely posts on social media is not the ideal key communicator for that platform. Scorecard users should strongly consider the rate at which influencers post on social media platforms most used by the target audience.

Users should not consider only one platform when analyzing post frequency. An influencer that can reach a target audience and reinforce a message across multiple social media platforms has the potential to increase their reach as well as their influential effect on a TA. Influencers who collaborate with other influencers can increase their potential reach, grow their follower numbers, and broaden their potential to influence a TA.[110] Those influencers who fit into a model of "intra-engagement" can create a snowball effect that sustains conversation on a particular topic, maintains the attention of a TA, and increases the influential effectiveness of partnership with influencers. Different situations call for different levels of partnership, but as post frequency has a positive correlation to the potential to influence, multiple influencers should be considered as more partnerships adds greater volume to post frequency.

A suggested baseline scoring model is:

- 5: Three or more posts per day (PPD) on three or more platforms
- 4: One to two PPD on three or more platforms / three or more PPD on one to two platforms
- 3: Average of one PPD on two or more platforms / multiple PPD on one platform
- 2: Two or more posts per week (PPW) on one to two platforms / one PPW on three or more platforms
- 1: Less than one PPW across relevant platforms

[110] Clint Watts, personal communication, September 10, 2021.

E. CONSIDERATIONS

Much like CARVER is used as a decision-making tool in the targeting process, the Influencer Scorecard provides assistance to influence practitioners who seek to partner with influencers on social media to propagate information in support of influence operations. While the scorecard is a highly flexible tool that is situationally malleable, once its baseline criteria is established, users should avoid making changes to the baseline as it is the basis of analysis and scoring.

Once the scorecard is filled out and the influencers receive their scores, users are advised to analyze the results carefully as a high score does not necessarily signify the best potential partner. An influencer that scores a 1 in the "Aligns with the Desired Behavior" category and rates highly in the other five categories may not be the best partner. Despite their potential to reach and influence the target audience, the probability of the influencer to influence the TA toward the desired behavior is low. This is not a recommendation to discard these influencers. Rather, it is an important data point to consider in further analysis and recruitment efforts.

The scorecard seeks to identify those influencers who might make good partners for collaboration to support influence operations. The more influencers identified, the better chance of establishing good partnerships. If an influence team only identifies one, follow-on analysis and recruitment may prove unsuccessful for that influencer. For this reason, the team should identify multiple influencers who could become quality partners.

Influencers who publish content on multiple relevant platforms increase the chances of reaching the TA.[111] The same goes for influencers that collaborate with other relevant influencers. Influencers in these categories gain access to other follower groups who may choose to follow them, widening the propagation of and interaction with their content, which increases their opportunities to influence potential target audiences. While these are important considerations for scorecard users, they should also seek to diversify their influencer list to ensure the TA receives the intended message in multiple formats.

[111] Clint Watts, personal communication, September 10, 2021.

An influencer, or group of influencers, aligned with one line of messaging or narrative is another consideration for scorecard users.[112]

[112] Clint Watts, personal communication, September 10, 2021.

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