RESEARCH ARTICLE

Exploring online comments from a strategic marketing stance to reduce wildlife crime

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Abstract

Illegal wildlife trade (IWT) is an omnipresent global threat to ecological, social, and economic systems. Marketing expertise can aid in the mitigation and reduction of crime against wildlife using a variety of mechanisms. This paper focuses on how social media usage relates to the framing of conservation appeals. By studying the content of existing blogs, articles, white papers, and other online postings, we extract relevant themes and concepts. Conducting an unguided semantic analysis of our data, we analyzed messaging appeal strategies and the underlying social or informational frameworks they employ. Using literature on advertising appeal types and contrasting *social/emotional* with *knowledge-based/informational* messaging strategies, we identified how wildlife crime prevention content employs these rhetorical framing mechanisms. Through the lens of social learning theory, our study proposes messaging strategies as a framework for understanding online content. Crimes against wildlife are creating increasingly severe ecological, economic, and social damage within international political and social communities; individuals learn from and engage with online content, therefore appropriate framing mechanisms can aid marketers in designing effective prevention appeals.

KEYWORDS
communities, crime, enforcement, illegal, need, social, support

1 | INTRODUCTION

Multiple sources report that the ongoing global COVID-19 pandemic originated in illegal wild animal markets (Mallapaty, 2020). As a result of the nascent coronavirus outbreak, 94% of illegal and unregulated market consumers claim that they would support the closure of these markets (Wu et al., 2020). The current worldwide coronavirus crisis is only one example of the lasting economic, humanitarian, and ecological damage that wildlife crime can create. According to the World Wildlife Foundation (WWF), rhino poaching increased 7700% between 2007 and 2013. In recent seizures of ivory from illegal elephant poachers, 23 metric tons of ivory, representing 2500 elephants, was recovered in 2011 (Warwick, 2020).

Uniquely situated as a multinational and multinetwork crisis, illegal wildlife trade (IWT) affects people of virtually all socioeconomic statuses from poachers and traders, to consumers and markets. This multibillion-dollar industry is predicted to cause the extinction of 8775 species as a result of the *rarity-value feedback model*, wherein higher prices and demand are driven by increased rarity (Scheffers et al., 2019).

Conservation scientists argue that available estimates of global wildlife trade do little to address its barbarity and adverse impact on the Tree of Life. Scientists make this argument knowing that most of the available data are not inclusive of all species and privileges vertebrates over invertebrates and plants (Fukushima et al., 2020). These statistics illustrate the gravity and intensity of IWT and its

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effects on wildlife populations, biodiversity, ecosystems, national economies, and society as a whole. Therefore, an exploration of potential messaging strategies in the context of wildlife crime prevention can provide conservationists with additional insights. Through a deeper understanding of the appeal types at work and those which generate and expose critical and engaging ideas, our research ultimately aims to lessen the intensity of the problem. Our paper studies and interprets media surrounding wildlife preservation by considering the relationship between messaging appeals and social media usage. Our inquiry studies content developed by various organizations in relation to their use of social media. Specifically, we study the appeal frames of online messages pertaining to IWT and show that the central distinction between solution-driven and nonsolution-driven content is primary messaging strategy. Furthermore, we show that the use of social media affects the nature and character of messaging.

To conduct our research, we first gathered comments from a variety of online forums. Second, one of our factors of interest is whether originating voices (firms/organizations/coalitions/communities) utilize social media in their marketing outreach. Research finds that individuals utilize social media platforms for a variety of purposes such as word of mouth and hashtag activism (Appel et al., 2020). Social networking communities span countries of various levels of affluence (c.f., Krishen, Berezan, Agarwal, et al., 2019; Krishen, Leenders, et al., 2019) and multiple generations (Berezan et al., 2018), though motivations to engage may differ. Therefore, social media represents a potentially economical and globally viable media mechanism through which to raise awareness for counter-IWT communities.

We begin our exploration by studying IWT and its relationship to wildlife preservation messaging strategies. IWT is a highly lucrative industry that produces lasting and severe harm in wildlife populations, social contexts, and ecosystems and raises the risk of invasive species and the possible spread of disease. Given our understanding of the harms and risks produced by IWT, it is vital to study messaging and content surrounding wildlife crime prevention to raise awareness, increase counter-IWT efforts, and ultimately reduce wildlife crime.

The primary objective of this study is to understand the conceptual themes relevant in solutions-oriented messaging and potential future implications. We distinguish between *social/emotional* content and *knowledge-based/informational* content in messaging and determine the significance of each within the context of wildlife crime prevention. To find the emergent relationships between the type of content and the usage of social media as a mechanism, we conducted unguided semantic analyses. Next, we summarize our analysis and provide implications and future research. Our conclusion merges background information on IWT and prevention messaging strategies to emphasize the importance of social media as a potential outlet for raising counter-IWT awareness. By understanding and delineating themes in online content, our research aims to aid marketers, environmentalists, and counter-IWT communities with messaging strategies and tools to spread awareness and promote preservation.

2 | LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 | Environmental crimes and IWT

Environmental crimes are defined as violations of laws that affect the safety and health of individuals in their surroundings (Situ & Emmons, 1999). Conservation criminology or green criminology is an interdisciplinary framework designed to study the justice, risk, and management literature and inductively build generalizable knowledge. The *Conservation Criminology Framework* identifies environmental risks at the local, national, and global levels across eight different contexts, namely political, knowledge, cultural, economic, ecological, temporal, social, and policy (Gibbs et al., 2010). This framework connects these contexts to agencies, managers, and the public with integrating theory and tools for mitigation and adaptation interventions. Notably, the *Conservation Criminology Framework* distinguishes between different types of messaging strategies and their relationship to the public. Our paper aims to use solutions-oriented messaging as a proxy for *knowledge-based* contexts and social media as a proxy for *social* contexts.

Research on wildlife crime in the criminology and criminal justice field has dramatically increased and accelerated in recent years. McFann and Pires (2020) indicate that whereas only 43 journal articles were published in the 18-year span between 1990 and 2007, 132 were published in the 9-year span of 2008–2017. This increase in scholarly activity can be attributed to growth in the magnitude of wildlife crime and its pernicious effects on biodiversity and endangered species (Phelps et al., 2010). IWT is defined as the capturing, poaching, collecting, trading, transporting, selling/marketing, and/or processing of protected wildlife animals and their byproducts, such as ivory (South & Wyatt, 2011). IWT produces a variety of significant, negative effects on animals, individuals, and societies, from ethical and moral, to economic and ecological. While we do not study specific incidents of IWT in this paper, we utilize qualitative data to interpret messaging surrounding wildlife preservation and conservation. Our exploration of two primary categories of messaging appeal strategies will provide a foundation to contextualize our qualitative data collection and semantic analysis methodology.

2.2 | Message appeal strategies

Creative branding strategies encompass both what is said (the message content) and where it is said (the method of presentation or execution). Their purpose is to increase various consumer perceptions such as attitude, purchasing intention, motivation, information processing ability, and persuasion (Macinnis et al., 1991). Message appeals are categories of messages that fall into one facet of creative

strategies; early research classified them into two main categories, informational/knowledge-based or transformational (Aaker & Norris, 1982). In addition to the informational versus transformational dichotomy, research also designates these strategies as rational versus emotional.

Informational/rational strategies focus on relevant and factual features and transformational/emotional ones emphasize the experience of usage and associated psychology. Building on this early typology, Laskey et al. (1989) identify sub-appeal types that fit into these two types of advertising. For informational strategies, subtypes are comparative (with competition), unique selling proposition (with an explicit claim), hyperbole (superiority based on a feature), and generic (any type of information focused on the product/service). For transformational strategies, subtypes are user image, brand image, usage occasion, and generic. In terms of the two main categories, rational/informational appeals are functional or text-based and are more effective for utilitarian products. Conversely, transformational/emotional appeals are more image-based and effective for value-expressive products (Johar & Sirgy, 1991). In the services realm, this type of matching is also relevant; rational appeals are more effective for credence services and emotional appeals work better for experiential services (Zhang et al., 2014).

With respect to social media, brands communicate strategic messages through various platforms including consumer-to-consumer messaging. Using thousands of pages of social media content, Ashley and Tuten (2015) coded 13 types of message strategies. The strategies include integrated content, interactivity, functional, emotional, experiential, unique selling proposition, comparative, resonance, user image, social cause, exclusivity, animation, and spokesperson. Social media content categories are also delineated into these broad appeal types. Emotional appeals are characterized as entertaining and relational whereas rational ones are considered informational and remunerative (Dolan et al., 2019). For rational appeals on social media, informational content is described as being helpful, and remunerative content is that which provides incentives. In contrast, emotional appeals on social media can be entertaining as in fun, and/or relational meaning those which provide integration, social benefits, and interaction. Research also indicates that message appeals can increase consumer engagement with brands, especially when they lead to higher arousal. Emotional responses to transformational appeals are classified in terms of valence and arousal (Holbrook & Batra, 1987). Informational appeals consist of textual information or imagery on social media and emotional ones are often associated with affective imagery that generates arousal.

Emotional messaging also leads to higher customer engagement with brands on social media (Rietveld et al., 2020).

Combining the *Conservation Criminology Framework* and messaging appeal works of literature, we constructed Table 1 to explain and describe our proxy variables. Table 1 illustrates our usage of this framework by showing how we relate the *social/emotional* context to firm-based social media messages and the *knowledge-based/informational* context to solutions-oriented messaging. Utilizing social media content strategies (Dolan et al., 2019), IWT-type comments from social media-based coalitions would likely be relational and not entertaining (positive and fun). As such, we draw a connection between social media-based organizations and emotional/social messaging. Likewise, we designate solutions-oriented IWT-type content into the knowledge-based/information/rational messaging appeal category based on previous literature. Therefore, Table 1 connects our two variables of interest, social media utilization and solutions-oriented messaging, to the primary types of messaging appeals, that is, *social/emotional* versus *knowledge-based/informational*, and their definitions.

3 | QUALITATIVE NETNOGRAPHY STUDY

3.1 | Data collection procedure

The diversity of interdisciplinary sets of literature including criminology, psychology, and ecology, demonstrate the difficulty of gathering centralized insights about IWT. As such, social media provides a rich environment to capture cross-silo exchanges of various stakeholders on this difficult and complex topic. The conversations of various political, social, and environmental organizations and individuals are layered in complex conceptual categories and thus require sophisticated analysis. We embarked on a two-phase process to collect data on IWT-related online postings and comments. Netnographic analysis adapts the ethnography methodology of inquiry from the anthropology discipline to the study of computer-mediated communications or online conversations (Kozinets, 2002). By categorizing, organizing, and classifying qualitative descriptions of shared experiences, attitudes, and beliefs, researchers can further understand consumer perceptions of various phenomena (Jayanti, 2010). Netnographic analysis is, therefore, an appropriate technique to obtain user-generated themes and concepts and explore counter-IWT efforts disseminated on social media. Our netnographic data were collected using online comments with and between the public to identify themes of interest regarding IWT and related concepts.

TABLE 1 Messaging matrix

Type of messaging appeal	Variable	Definition
Social/emotional	Social media (1)	Messaging utilizing social media to generate attention
Knowledge-based/ informational	Solutions-oriented (1)	Messaging appealing to general knowledge to offer solutions

During the first phase, a trained graduate student unaware of the purpose of the research gathered social media comments/postings from multiple online sources. The following instructions were provided to the student: (1) search for publicly available comments or postings related to the topic of IWT/crime in a forum, website, or consumer group, (2) gather a set of URLs which contain such conversations, and (3) construct of a data set containing the online conversations for each of the URLs. For the first step, the iterative process of identifying terms to search produced the following list: crimes against wildlife, crimes against wildlife forum, wildlife trafficking, wildlife trafficking conversations, IWT, IWT solutions, wildlife protection conversations, wildlife conservation forum, comments on wildlife protection, stop wildlife crime, reduce wildlife crime, fight wildlife trafficking, end wildlife trade, stop wildlife trafficking, animal poaching, stop poaching, and illegal wildlife products. The final data set consisted of $n = 323$ comments of various lengths and 138 pages of text. The second phase, also performed by an unaware graduate student, consisted of coding comments into multiple categories, namely *social media* and *solutions*. For each of these categories, comments were coded as "0" (*does not pertain to this topic*) or "1" (*does pertain to this topic*), thus creating four categories of interest, *Social Media* with *Solutions (SMSO)*, *Social Media* without *Solutions (SMNO)*, No *Social Media* with *Solutions (NOSO)*, and No *Social Media* without *Solutions (NONO)*.

3.2 | Netnographic analysis

Our qualitative inquiry began with an exploratory analysis of the data set to delineate content utilizing social media from content proposing possible solutions to the problem of IWT. Since the focus of this paper is to explore the rhetorical strategy employed in various forms of messaging, we chose Leximancer as a method of analysis (c.f., Krishen, Berezan, & Raab, 2019). Leximancer is an unguided semantic analysis tool that uses a machine learning technique to identify relevant ideas (Smith, 2007). Using Leximancer, we generated the results presented in Figure 1, which depicts a conceptual map of relevant themes, or higher-order clusters showing semantically connected ideas. Additionally, Table 2 provides sample comments from a selection of the relevant themes and concepts in Figure 1.

Using the four categories of data (*SMSO, SMNO, NOSO,* and *NONO)*, we performed Leximancer comparative analysis, which is provided in Figure 1. A red label and a gray node on the outer part of Figure 1 depicts the concepts located more often in the text contained in these four categories (see Table 3). Large colorful nodes are represented by a particular theme. As shown in Table 2, the themes for each of our four groups of data are "communities" for *SMSO*, "crime" for *SMNO*, "trade" for *NOSO*, and "poaching" for *NONO*. The nodes intersect and the ideas present in these intersections are relevant in multiple categories of comments. Concepts are represented by smaller gray nodes that vary in size depending on their prominence. More prominent concepts (i.e., ones which occur more

frequently in the data set) have larger nodes and less prominent concepts have smaller nodes. Semantically connected concepts overlap. Links are lines between concepts; direct connections indicate that those terms are frequently represented together in the text. In our semantic analysis, the emerging themes and concepts represented by nodes indicate the importance of certain language in crafting and employing messaging both with and without social media.

4 | DISCUSSION

The results of our semantic analysis indicate that there is a particular rhetorical strategy employed for each of the following categories: those offering solutions and those that do not, and those using social media and those that do not. Our findings emphasize the distinction between *social/emotional* appeals and *knowledge-based/informational* appeals in messaging surrounding wildlife preservation. We briefly elaborate upon each theme and its related concepts in the following subsections. Additionally, we utilize each theme to detail how the orientation of messaging appeal relates to the language, objective, and nature of a particular comment or appeal.

Using our characterization of the types of messaging appeals, information contained in Table 1, alongside the data generated from our semantic analysis information contained in Table 2, we constructed Table 3. Table 3 synthesizes our findings by relating the four central themes and relevant concepts to their respective messaging strategies. As such, it effectively applies our theoretical framework to understand messaging strategies.

4.1 | Theme 1: Communities (*SMSO*)

Relevant concepts appearing in Theme 1 include *communities, conservation, need, local,* and *work*. This theme encompasses appeals containing both *social/emotional* and *knowledge-based/informational* messaging strategies. These appeals contain language surrounding community and social networks as well as those that emphasize rationality and functionality. The concepts, *communities* and *local*, highlight the relational dimension of an appeal, referencing community-building, relationships, and integration. The concepts *conservation, need,* and *work* accentuate the rational aspect of the appeal. The *social/emotional* concepts included in this theme map to relational and experiential content, while the *knowledge-based/informational* concepts depict remunerative content that provides incentives.

4.2 | Theme 2: Crime (*SMNO*)

Relevant concepts appearing in Theme 2 include *crime, enforcement, international, major,* and *national*. This theme includes appeals

FIGURE 1 Illegal wildlife trade themes and concepts [Color figure can be viewed at wileyonlinelibrary.com]

that contain only *social/emotional* strategies; such appeals tie to the feeling of arousal and have the purpose of generating an emotional response from readers. These contexts use emotional and experiential approaches to provide integration, interaction, and social benefit. The concepts, *crime* and *enforcement*, exemplify the image-based aspect of emotional appeals and can generate arousal such as anger to trigger social benefit. These concepts tie to the *rarity-value feedback model* and highlight the species that are at the greatest risk of extinction. The concepts *international*, *major*, and *national* exemplify the interactional aspect of emotional appeals generating integration and community.

4.3 | Theme 3: Trade (*NOSO*)

Relevant concepts appearing in Theme 3 include *trade*, *illegal*, *animals*, *species*, and *law*. This theme contains appeals utilizing primarily *knowledge-based/informational* messaging strategies. These concepts directly tie to the act of IWT and the surrounding key ideas such as *species*, *trade*, and *law*. These contexts draw upon relevant and factual information to convey a message. Rational appeals such as those introduced in this theme are helpful and informational and collectively emphasize a utilitarian perspective characterized by facts and rationality.

TABLE 2 Leximancer themes and concepts comments

THEME 1: Communities (communities, conservation, need, local, work, important, stop, efforts, environment, support, hunting, place)	
Communities	(Hits: 157)
First their hooves are made to disturb the soil at a minimal depth exposing just enough nutrients for new grasses. Second the buffalo chip, a big warm fertilizer bomb full of undigested seeds being introduced over a large and sometimes new area	
Conservation	(Hits: 149)
Wildlife, wildlife numbers started coming back, and that's actually becoming a foundation for conservation in Namibia. With independence, the whole approach of community getting involved was embraced by our new government	
Need	(Hits: 112)
John Kasaona, is doing such an incredible job to involve the community in the animal protection, but it also needs the political will to give support in terms of providing alternative basics for the community that will divert their dependency on wild animals for surival. Things like food, economic generating activities, agricultural technology, education	
Local	(Hits: 90)
In Africa and elsewhere, local communities are a key element to any solutions: they have the most to lose and the most to gain of anyone.	
Work	(Hits: 81)
So, you know, the way that this works is that when they enter into these partnerships with the safari hunters is there's a split of the revenues. Sometimes it's 50-50. Sometimes it's 60-40. But the community keeps the majority of the revenue from the sale of the hunt	
THEME 2: Crime (crime, enforcement, international, major, national, information, role)	
Crime	(Hits: 157)
FILE: no sm no solutions	
Wildlife and Countryside Link and Wales Environment Link, reveal today in their third Annual Wildlife Crime Report, that reports of alleged wildlife crime incidents to NGOs rose again in 2018, with an increase of more than 17% since our first report in 2016	
Enforcement	(Hits: 107)
Interpol aims to connect enforcement agencies and partners across international boundaries—and it recently announced the formation of a new dedicated wildlife crime team in East Africa	
International	(Hits: 57)
We ultimately lose the wildlife. Further investment in fighting wildlife crime, and international collaboration, in tandem with the aforementioned long-term actions, gives us hope that we can avoid the same fate befalling other species	
Major	(Hits: 37)
A 2016 report by the Eastern & Southern Africa Anti-Money Laundering Group provides evidence reinforcing the idea that money laundering isn't a primary—or often, even a tangential focus—of wildlife trafficking investigations, pointing out that "the majority of the cases reported indicated that the persons involved were only charged for the offences of trafficking … overlooking the aspect of money laundering," and "this has created challenges in understanding the flow of funds that fuel wildlife crime activities" in both East Africa and the Asia-Pacific region	
National	(Hits: 38)
Tackling organized crimes such as illicit wildlife trafficking is essential to secure sustainable economic growth in Africa. It is then of paramount importance that national governments—and regional institutions such as my own—do everything they can to tackle illicit wildlife trafficking	
THEME 3: Trade (trade, illegal, animals, species, law, trafficking, countries, products, world, endangered, including, time, social)	
Trade	(Hits: 234)
Ivory trade has reduced since then	
Ilegal	(Hits: 220)
Second, it will also be released in Mandarin for a distribution in China which could make a valuable contribution towards a constructive dialogue with consumers. And finally, with those books they hope to raise funds for charities whose mission is to end the illegal wildlife trade in our lifetimes	
Animals	(Hits: 247)
Rewind the clock back to the early 1970s and there was no written regulation on the trade of wild animals and plants. That changed in 1975 with the creation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), an agreement between nations that trade of animals and plants doesn't threaten their survival	

TABLE 2 (Continued)

THEME 3: Trade (trade, illegal, animals, species, law, trafficking, countries, products, world, endangered, including, time, social)	
Species	(Hits: 184)
Very few ecosystems are not affected by wildlife trade. It directly impacts a very large number of species, and has a knock-on effect on many more species still	
Law	(Hits: 157)
You have the power to save wildlife. Help encourage policymakers to improve and enforce laws and regulations in order to reduce or end this trade	
THEME 4: Poaching (poaching, people, elephants, rhino, ivory, use, Africa, live, horn, demand, natural, take, money, example)	
Poaching	(Hits: 232)
I then proceeded to ask him if he thought poaching was wrong. He said	
People	(Hits: 243)
Instead of shooting poachers dead like they were doing elsewhere in Africa, IRDNC has helped men reclaim their abilities to manage their peoples and their rights to own and manage wildlife. And thus, as people started feeling ownership over	
Elephants	(Hits: 117)
The Janjaweed militia in Sudan is involved in elephant poaching in Chad. (See Strategic Report: Environment, Peace and Security a Convergence of Threats, Interpol and UNEP)	
Rhino	(Hits: 99)
Wildlife didn't have an easy go of it in 2018. We lost the last male northern white rhino, the vaquita porpoise continued its slide toward extinction, poachers kept targeting pangolins and other rare creatures	
Ivory	(Hits: 92)
Poaching needs to end. It would also be good if this petition increased the severity of sentences of poachers, especially seeing as I don't know if any of the methods with ivory can be used to minimise the poaching of Pangolins	

4.4 | Theme 4: Poaching (*NONO*)

Relevant concepts appearing in Theme 4 include *poaching*, *people*, *elephants*, *rhino*, and *ivory*. This theme pertains to appeals containing neither *social/emotional* appeals, nor *knowledge-based/informational* messaging appeals. As established in our previous analysis, *social/emotional* appeals emphasize experience and arousal, while *knowledge-based/informational* appeals emphasize utilitarianism and rationality. The ideas present in this theme highlight the actors in IWT (e.g., *people*, *elephants*, *rhino*) and not the actions involved in IWT; thus, the theme does not emphasize either appeal strategy. As exemplified by the primary themes and concepts generated from our semantic analysis, there is an interesting distinction between strategies employing *social/emotional* messaging appeals and those containing *knowledge-based/informational* appeals.

5 | CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

5.1 | Social learning theory and messaging appeals

Social constructivism suggests that instead of simply mirroring instruction, individuals co-create knowledge and co-construct meaning thereby building new knowledge into existing structures (Vygotsky, 1986). According to productive constructivism, learning occurs when individuals combine new knowledge with existing cognitive structures, ultimately leading to new meaning (Zahorik, 1997). Social learning theory claims that learning occurs through multiple cognitive processes including integration and abstraction of information, both from the modeling of others and from the assimilation of social experiences (Bandura, 1977). In combination, these theories emphasize increased cognitive activity as a central tenet of learning (Adrian & Palmer, 1999).

Through social media channels, consumers engage with other consumers, stakeholders, and nonprofit organizations in discussions about the illegal wildlife crisis. These discussions, also known as electronic word of mouth often cross borders and can increase global awareness, a strategy that also occurs in marketing efforts for brands (Barreda et al., 2015; Krishen & Hu, 2018). As indicated by social learning theory, individuals learn and engage with online posts and communities (Schamari & Schaefers, 2015). Online learning assumes multiple forms: herding, diffusion, influence, and contagion, all of which can ultimately lead to behavioral change (Langley et al., 2014). The feedback viral cycle of social media posting means that a high level of engagement can lead to a higher perception of importance and thus retweeting or content sharing (Petrescu et al., 2015; Susarla et al., 2016).

To increase knowledge of illicit wildlife trade, social networks of concerned citizens communicate vast amounts of information, solutions, values, and concerns through various online channels. From our findings, messaging utilizing social media, and thus interpreted within the *social/emotional* context, increases social networking and

and targeted social media marketing efforts to build antitrafficking networks of activist bystanders.

One example of a recent citizen-born campaign is the anti-trafficking messaging placed in 13 different locations throughout Da Nang City (including the airport) in Vietnam. This marketing effort was born from a partnership of TRAFFIC's Chi Initiative and the Da Nang local government (Jose & Ngan, 2020). Our research could provide insights for behavioral change campaigns such as this one to move toward social and knowledge-based solutions. The importance of cross-border, cross-organization, and multinational cooperation in approaching possible solutions is obvious. Social media strategies such as the "I am #IvoryFree" online campaign, funded by the USAID Wildlife Asia project and implemented in multiple languages, can increase attention and generate empathy for illegally poached animals, especially when targeted toward the affluent consumers at the end of the supply chain (USAID, 2014). The Counter wildlife trade (CWT) community consists of stake-holders in a complex network of actors whose mission is to obstruct and mitigate illegal trade (Moshier et al., 2019). A social network analysis of communication within the CWT community reveals in-dividual egos, organizational politics, and information flow as the most crucial elements. IWT, similar to illegal drug, sex, and firearms trafficking, requires a transnational and diverse network of actors whose ability to work effectively hinges upon complex information flows (Kurland & Pires, 2017). This type of communication can only be obstructed by an equally pervasive and effective messaging strategy; in other words, "it takes a network to defeat a network," (Fahlman, 2015, p. 11).

Our paper studies CWT messaging from the perspective of social media utilization as a proxy for *social/emotional* contexts and solutions-oriented messaging as a proxy for *knowledge-based/informational* contexts. Incorporating the literature on messaging ap-peals and strategies with our understating of IWT and wildlife crime prevention, communities and institutions can craft effective mar-keting strategies to mitigate and prevent wildlife crime. Using the existing body of literature on messaging approaches to contrast *social/emotional* appeals highlighting experiential and arousal-producing contexts with *knowledge-based/informational* appeals highlighting utilitarian and rational contexts, society can create more relevant and targeted marketing strategies.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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