

Mediating Space Security: How new and social media are shaping the security discourse

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About the Freeman Air and Space Institute

The Freeman Air and Space Institute is an inter-disciplinary initiative of the School of Security Studies, King's College London. The Freeman Institute is dedicated to generating original knowledge and understanding of air and space issues. The Freeman Institute seeks to inform scholarly, policy and doctrinal debates in a rapidly evolving strategic environment characterised by transformative technological change which is increasing the complexity of the air and space domains.

The Freeman Institute places a priority on identifying, developing and cultivating air and space thinkers in academic and practical contexts, as well as informing, equipping and stimulating relevant air and space education provision at King's and beyond.

The Institute is named after Air Chief Marshal Sir Wilfrid Freeman (1888–1953), who was crucially influential in British air capability development in the late 1930s and during the Second World War, making an important contribution to the Allied victory. He played a central role in the development of successful aircraft including the Spitfire, Lancaster and Mosquito, and in planning the wartime aircraft economy – the largest state-sponsored industrial venture in British history.

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Abstract

As the space security landscape continues to evolve with developments in technology, assessments of new and often ambiguous space activities are taking place on media platforms. With increased accessibility to online resources and a surge in users of new and social media, online platforms facilitate communications, networking, virtual content creation, and conversations for scholars, organizations, and space wonks alike. This paper focuses on how online users and opinion shapers are sculpting the space environment and security discourse through media's facilitation of engaging space activity related content. It argues that users of new and social media help to develop, enforce, and discuss threat perceptions and normative behaviour, shaping the space security environment and discourse as it unravels.

Introduction

Unfortunately, there is no encyclopaedia for understanding and keeping pace with the evolving space security environment. It is a domain that adapts to various developments and activities on a relatively swift scale. Dubbed 'the final frontier', space presents new challenges in that new actors lack a consistent framework to properly assess the relation between space activity and space security. To keep up to speed with these changes, a hitchhiker might find themselves lost in a minefield of news articles and worst-case scenarios predicting a future in space akin to that of modern science fiction. The reality is that the space security discourse is an enigmatic lexicon with new state and commercial actors contributing to the dialogue and shaping this environment of new technologies, new strategies, and new security threats.

Addressing the question of how or if it's possible to stay up to date on this turbulent space security discourse, this paper argues that scholarly tweets and a newfound accessibility to online opinions influence the establishment of space activity norms and thresholds for determining threat levels from emerging space activity. Space norms are not universally agreed upon or defined but can be best understood as 'informal rules that can include best practices to international agreements, or legally binding measures'.¹ This paper argues that media helps develop, enforce, and discuss norms as they emerge, shaping security discourse and behavioural reactions through new platforms and methods. There are merits to how medias navigate information and research, how users use this platform for its accessibility, and how it impacts the discourse that moulds space security perceptions and norms.

The evolution of so called 'grey zone' tactics means that thresholds for understanding threats and risks are not only fluctuating alongside new activities, but also that these thresholds are not always demonstrably identifiable.² Non-military capabilities and technological developments that could be weaponized eventually increase ambiguity in space and polarize threat perceptions. In the space grey zone, black and white responses are rarely prompt, demonstrating that part of this conceptual challenge is failing to prepare for potential provocations or escalations.³ While threats to space security are addressed at large in yearly reviews and comprehensive journals, improving the understanding of space activity in a security context is intelligently addressed on media platforms. Arguably, space and the security discourse are more widely available and accessible than ever before thanks to new media (digital blogs, podcasts, online conferences, webinars, etc) and social media (Twitter, LinkedIn, Clubhouse etc). The struggle to define ambiguous and emerging complex threats in space has fostered active conversation on diverse platforms, platforms which have largely migrated to online media. These different types of media articulate opinion shaping and inform the direction of astropolitics through accessible assessments and analyses of space security by joining together diverse voices in the space sector, open communication with the public, and open source research.

Security discourse on media platforms has impactful potential to either escalate or de-escalate a crisis or event in question, proving media can accelerate international security uncertainties. Media discourse therefore not only has the power to impact our perception of an event, but it also has power to directly impact the event itself. A study conducted by Dr Heather Williams and Dr Alexi Drew, 'Escalation by Tweet: Managing the new nuclear diplomacy' examines the diplomatic newness of Twitter in times of crisis.⁴ Citing speed, informality, and openness as tools of online discourse, Williams and Drew note the risk of open interpretation as an interaction with potential for escalation. This study also pointed out the different state usage of Twitter, noting that while 20% of Americans use Twitter, only 3% use it in Iran, while Twitter is blocked in China; 'Twitter could serve as a useful tool for American adversaries to shape international narratives or influence domestic audiences abroad'.⁵ This research on Twitter escalation demonstrates that discussions on Twitter and dialogue online do not operate in isolation from conflict. That, within the confines of digital media, there are inadvertent consequences to social media messaging in times of uncertainty. Research on nuclear escalation through social media raises a lot of food for thought on the ways that media and security interact in this increasingly digital world.

Space security literature outside of media exists largely as a body of research that applies space activity to a bigger picture discourse, with exceptions of course. This is also a product of crisis digestion where, the longer the time an analyst mulls over an event, the longer time there is to integrate a new piece of information into an existing or consistently evolving space dialogue. For example, The Aerospace Corporation releases papers pertaining to human spaceflight safety⁶, the physics of space war⁷, space based solar power⁸, and space traffic management⁹, to name a few. This format allows for a general theme to apply to various examples of activity, funnelling specific events into bigger narratives; to give an example, a theme on the threat of orbital debris may use the 2007 Chinese ASAT test as a case in point. The flip side of this would be to extrapolate one specific example of space activity to then identify multiple threats from this one particular event; continuing the previous example, this would materialize into an assessment of the 2007 Chinese ASAT test that expands on the implications of this test to include many threats such as ambiguous intent, an orbital policy void, the consequences of a militarized domain, as well as orbital debris. The conversation in this approach flows in a different direction, allowing audiences to interpret space activity by collectively piecing together a single event into multiple themes.

As many senior policymakers, organizations, governments, researchers, and space wonks have found value in fostering this type of communication, it is worth asking the question: is this social media dialogue a gold mine being overlooked? In other words, are there informed and noteworthy opinions on social media complimenting the space security discourse and directing this torque of traditional security dialogue in a new direction?

New Media Spaces

Researchers, governments, and commercial space actors want to talk about the thrills and challenges of the space frontier. There is a vivid enthusiasm to ignite discourse on astropolitics as it joins actors together on all sides from emerging space technologies, asset development in a space economy, and space power politics. One of the very few perks of the COVID-19 pandemic has been a heightened willingness to engage with new online platforms for information sharing and a magnification of user engagement from the comforting safety of home. Through these newly developed online platforms and tools, actors at play are neither exclusive with information nor bereft of platforms to share informed opinions.

The shift to online platforms has made information more widely available and accessible, not only to the general local public but also to global audiences. For example, a researcher living in London no longer has to take an 8.5 hour flight to Washington DC to catch a lecture at the Aerospace Corporation's Center for Space Policy and Strategy. Their recent establishment of the virtual Space Policy Show is a fine example of this platform moving the discussion online for anyone to join at whatever time best suits their agenda. Online briefings, webinars, and discussions offer a potent opportunity for international communication on shared areas of interest which would otherwise be voiced behind closed doors, particularly on occasions when a topic is so contemporaneous that it couldn't be incorporated into a long-planned conference agenda. There are also occasions when an audience member doesn't have ample time to dedicate to a conference discussion or podcast on a topic at length. This is where new media fills a gap; it allows a user to approach a platform and participate on their own time.

Alongside the Freeman Air and Space Institute, some examples of UK institutions and organizations that currently use new media to enhance accessibility to astropolitics are: the Royal Aeronautical Society (RAeS Webinars); Royal United Services Institute (Virtual Conferences and Podcasts); Royal Air Force Museum (RAF Crowdcasts); UKspace (Virtual Conferences); Chatham House (Webinars); Raytheon UK (Shepard Studio's Defining the Future podcast); Farnborough Aerospace Consortium (Webinar Series); and QinetiQ (Podcasts).

Outside of the UK, there are dozens from which to choose; a few examples of global new media usage for space security discourse are: Center for Strategic & International Studies (Online Events); The Aerospace Corporation (Technical Workshops, The Space Policy Show); and The Mitchell Institute for Aerospace Studies (Space Power Forum, Aerospace Advantage Podcast, Aerospace Nation).

Social Media Spaces

Social media as a public domain transcends the exclusivity of content previously sent through private media. Private content sent by email, specialised forums, and bulletin boards has shifted platforms through the internet's facilitation of wider audience engagement. Content that had previously been sent to fewer and more specific recipients can now be shared to a broad and general audience using social media as a soapbox. As an open source resource, providing openly available content and research to general users, social media also moves away from the role of information sharing that would otherwise be either state controlled or corporately incentivized.¹⁰ In times of dwindling trust in media and in the authorities of democratic societies, public fear of manipulation has led to a rise in alternative information sources like social networks, media, blogs, and other perceived-to-be-authentic sources. Communication through social media has transformed the transmission of information and dialogue to more open and multifarious platforms, and it's important to acknowledge that the impacts of this are long standing for the ways in which content is disseminated.

Not only has social media facilitated this engagement, but it has also facilitated new avenues for professional and social networking on a micro and macro scale. When ideas are shared, contacts are shared. LinkedIn provides an excellent demonstration of how didactic functions of social media incorporate additional methods of bridging distances, whether these distances be geographical or vocational. However enveloped the network may be in career objectives, LinkedIn acknowledges the facilitation of more factual information sharing as a more professional social media platform. There is no question that media platforms are profitable educational tools but, because user motivation and reaction times are relevant between different platforms, there are disparities between the impacts of content and the audiences that engage with them.

The unicorn start-up app Clubhouse, launched in April 2020, uses drop-in audio chat in its social network to facilitate a live-streamed conversation.¹¹ Its invite-only function means the only way to access the app is by invite from an existing user.¹² As of 5 February 2021, 6 million users populate Clubhouse and it is currently valued at US \$1 billion.¹³ This app essentially functions as an eavesdrop on conversation, allowing users to join rooms of various sizes and various formalities; while one room may contain a politician or celebrity delivering expert opinion, another room may contain a few people chatting informally.¹⁴ An attraction worth noting by the NYTimes is that Clubhouse 'brought back the spontaneity and real-life interactions, which vanished with the coronavirus'.¹⁵ Clubhouse demonstrates this trend in media where it's less about social cues, fame, follows, aesthetic content and quality of image and more about the relevance of engaging content and networking. As these rooms act like live podcasts, there is a lack of social cues on Clubhouse that helps facilitate the participatory nature of social media.¹⁶ Through these online interactions, valuable information spreads by word of mouth and the app has formal rules to keep these conversations off the record: 'You may not transcribe, record, or otherwise reproduce and/or share information obtained in Clubhouse without prior permission.'¹⁷ Common interests and collaboration drive the communication behaviour and participation in Clubhouse. To give a space example, user participation drives this discourse at SpaceWatch.Global where after a 33 minute Space Cafe WebTalk with a speaker on Zoom, the discussion then moves to Clubhouse where speaker and guests navigate an informal Q&A and network.¹⁸ This social media app demonstrates a new channel for discussions pertaining to space, security, technology, defence, and other connected topics. To name some relevant space security clubs on Clubhouse: The Space Technology & Human longevity Club (STHLC); War Defense and International Security; Space Club; and Small Steps & Giant Leaps.

Sources of immediacy and the ones with quick response times are influential in the interpretation of reality and shaping of events. Without institutional gatekeepers guarding the media domain, participants can diffuse news and opinions at a snowballing rate. Media users can not only share news but also participate as active carriers of information, engaging in the proliferation of information by sharing it with an online network of peers. Twitter has never been removed from politics but, aside from fierce political banter, Twitter has also become a fantastic means for scholars and researchers to launch concise and adroit thought pieces on news and headlines. On 25 January 2021, Twitter introduced the fact checking forum @Birdwatch to identify misinformation in a similar method to Wikipedia and, although this concept is in its early stages, it demonstrates an initial effort to remove information on the platform that is misleading.¹⁹ 3.6 billion social media users in 2020 is predicted to increase to 4.41 billion users by 2025, with Twitter at 353 million active users as of January 2021.²⁰ Twitter, as a microblog network, has triggered an evolution in scholarly communication where users can publish opinions, news, and ideas through a maximum of 280 characters. There is a conversational nature to tweets that transforms traditional scholarly communication and information sharing into an accessible medium. Researchers on Twitter have amassed a large enough audience, particularly through an ability to be both formal and informal, allowing for a more efficient and rapid sharing of information, opinions, and interpretation of news. To narrow in on the particular role this plays in the new space age, space is experiencing new and emerging activity that is cutting edge and experimental with indeterminable consequences; Tweets about space security tend to be reactionary towards news headlines because of the inherent ambiguity of this new frontier. While this is similar to reactions on Twitter about other news or emergency headlines, such as aircraft accidents or capsized cargo ships, space presents an ambiguity where it's not only about understanding the event itself but also the ramifications it holds for the unknown event, actor, intention, environment and future consequences. To further this example of space's unique ambiguity, there is still very little research on the equity of forward contamination in astrobiology and very few actions taken towards orbital debris mitigation; these uncertainties further demonstrate the unknown frontier identity of the space environment alongside the consequences of unregulated activity in it. How the public, early career researchers, and general audience learns to react to new space activity is impacted by a construction of reactions and the formation of normative behaviour over time which is often influenced by quick and reliable commentary from well known researchers and space professionals.

Ramifications of Opinion Shaping

To name a few space security related Twitter accounts, aside from the Freeman Air and Space Institute's account @freeman_air, these are some examples of organizational accounts: @Space_Security; @thelawofspace; @SWFoundation; @OuterSpaceInst; @SpacefaringCiv; @airpowerassn; @SpaceWatchGL; and @AerospaceCorp. Alongside these organization handles, there are esteemed researchers in the field who write and comment on space security, published as representing their own views. As many of these accounts demonstrate, Twitter transcends bureaucratic processes that could otherwise slow down the publishing of formal research commentary. It allows academics and researchers of any and all degrees to post a unique and short analysis of any space news as it is published. Arguably, the ways that experts in the field react to activity, particularly on Twitter, establishes an informed reaction that influences and helps form a basic framework for immediate threat assessments.

To examine the influence of expert opinions on event threat assessments, a case study of the Kosmos-2543 satellite projectile incident on 23 July 2020 is a prime example of this phenomenon; this event demonstrates how widespread and instantaneous reactions across Twitter helped establish a threat level through informed and appropriate assessments. The US and UK assessed this test as a firing of a projectile in space that could potentially be used to target satellites in orbit, raising concern of Russia's anti-satellite (ASAT) intentions.²¹ The Ministry of Defense posted Air Vice-Marshal Harv Smyth's reaction, Head of the UK's Space Directorate, stating concern about the Russian projectile launch, assessing the risks this action posed for the peaceful uses of space, and ultimately urging responsible behaviour in space.²² It was this direct quote from the MoD's Twitter that the BBC news article tagged when referencing Harv Smyth's quote. Continuing with this example of the Kosmos-2543 incident, Brian Weeden, space policy analyst at the Secure World Foundation, responded on Twitter to this BBC article 'UK and US say Russia fired a satellite weapon in space'.²³ Weeden declared this fired projectile as 'far from a conclusive weapons test' to be placed in the 'worrisome category'.²⁴ These immediate reactions positioned opinions away from catastrophic worst case scenarios while still raising concern about the direct risk that they pose. As Allen Antrobus, space industry consultant, tweeted on 24 July 2020, the 'rhetoric of war in space does not bode well'.²⁵ In line with this commentary, a tactic of Russia's national security strategy is to eliminate a decisive narrative for why capabilities are developed.²⁶ Russian strategy and capability are often mismatched and tend towards ambiguity, proving that this immediate commentary on Russia's activity in space was valuable as risk and threat assessments by mitigating disproportionate escalation. As demonstrated by the Kosmos-2543 example, these threat assessments on social media outline a basic framework for norms of behaviour in space, situating news headlines in the appropriate contexts of both international and space security.

Because the promotion of peaceful uses of space is crucial for space security, immediately discouraging aggressive behaviour and encouraging accountability for space activity to broad accessible audiences is a significant and critical part of the discourse.

Opinion shaping online has a unique impact on the space landscape because of the absolute newness and current lack of adequate regulation in the growing space environment. A consistency in user presence and regular interaction on social media establishes a bond between platform users based on reliable commentary on relevant content; this bond between publisher and consumer establishes more prominent voices in the shaping of public opinion, also referred to as opinion shapers. Consciousness of this opinion shaping is illustrated by Rayna Owen's Twitter account under the title 'Space Geek' (@OwensRayna) who currently claims in her biography that she is: 'redefining the norm – opinions my own'.²⁷ Space behavioural norms are constructed, in part, from reactions to illustrious activities and new developments in the space frontier. Quick assessments of news headlines help determine appropriate instinctive reactions. Regardless of its esteem, media platforms excel in providing researchers accessibility to an international dialogue on an emerging and final frontier that would otherwise be shielded by even more ambiguity. Dual-use technologies, such as a manoeuvrable satellite or an orbital debris collector, are neither offensive nor removed from the potential of offense. Establishing a threat level for these developments is therefore useful for unravelling the ambiguities wrapped up in a capability. As a communication platform, social media promotes resource sharing and opinion shaping from various actors involved in and around the space sector.

There are valid critiques of social media worth highlighting as not all opinions posted online are noteworthy, dependable, or ground breaking. Sophisticated algorithms shape the shared content in a network, allowing content to be targeted or customised increase the power of persuasion.²⁸ Tweets are not always objective, as they are often based on a biased opinion that best suits a particular agenda. It's important to be mindful that communication on Twitter promotes an assumption of non-bias or presumptive 'truism' when surface level insight or profundity is tweeted by decorated academics and researchers to an audience of supporters. While media assessments are not always final say or objective fact, opinions expressed online are important to constructing proportionate immediate responses. A noteworthy risk of opinion shaping is a potential for amplified hype because responses to news are not always symmetric to the threat itself. A responsible and sober assessment of these opinion shapers within an adequate and pre-existing knowledge of the landscape is important when approaching security related media content. Without a consumer's rational approach to the inadequacies of media opinions, online assessments risk falling into a void that lacks credibility. Furthermore, policymakers who rely on these online opinion shapers and media hypes, may find themselves developing policies built on foundations of quicksand.²⁹

While the ostensible stars of social media may be those who have amassed a wide following and subscription, this doesn't hold as an exact truth when analysing the esteem of all academic and scholarly circles. Scholars have strong motives to approach social media with caution as it may someday play a role in the promotion process and impact tenure at academic institutions. As software developer Angela Byron (@webchick) assesses when it comes to the risk of political banter on social media: 'Twitter: Where 140 characters is more than enough to get you into trouble, but not nearly enough to get you out of it'.³⁰ Some scholars, who have weighed the cost-benefit of this assessment, interact with media more than others for reasons pertaining to career growth, department funding, and a utilization of 'followers' to propel a more visible position in the field. On the other hand, while a lack of engagement with social media does not discredit a scholar, it may play a part in swaying the impact of their contributions to opinion shaping. While encouraging active participation in a discourse, Twitter can be a discouraging environment in which anonymous users can verse aggressive and targeted content to any account for any reason; there are certainly good reasons why a researcher may abstain from participating in a discourse on social media. After all, those who shout the loudest are not always those who should be passed a microphone. Even with Twitter's deliberate attempts to fact check tweets, the social media microphone does not differentiate the *value* of content alongside the *popularity* of content. A conscious effort must therefore also be made by the media consumer on what content to follow, to credit, to interact with, and to proliferate. Ultimately, media is dependent upon those who engage with it.

With the prominence of new and social media facilitating heightened accessibility to otherwise opaque or remote discussions, the internet has opened an arena for strategic communication on threats and risks sourced from news headlines. Now more than ever, the public can engage and participate in the shaping of reality through the transmission of ideas and opinions on various media platforms.

Media Contributions to Discourse

The space security landscape and dialogue are evolving through a mediated discourse and this activity happening in online in new and social media helps shape the space environment itself. This online discourse publicly shapes and identifies a normative assessment for space behaviour. Through a co-dependent relationship between social media and news media, the internet has viral potentials and en masse user generated content that enables a more accessible conversation. Mediated discourses, particularly those posted by opinion shapers, supplement security dialogues that would otherwise remain in a tighter knit, less diverse, circle.

New and social media are facilitating our perception and determination of acceptable behaviour and norms for space activity. Through increased accessibility to credible opinions, the ways that headlines are consumed and analysed has been unquestionably reshaped. This cannot be ignored when assessing the narrative shaping of frontier activity and the threat perceptions born from media reactions. As an amplification tool for credible and incredible discourse, new and social media provide support for the assessment of space security in all its new, emerging, and various forms.

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