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ANALYSIS OF THE U.S. NAVY OFFICE OF WOMEN'S POLICY FACEBOOK USE

by

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The use of social media within the workplace as a tool for communication among employees is increasing at an astounding rate. The implications for such use, however, are widely unknown. This case study aims to increase the understanding of enterprise social media (ESM) and computer-mediated social support (CMSS) use within the Department of Defense (DOD) by examining three Facebook (FB) groups developed by the Navy's Office of Women's Policy (OWP).

The research utilizes interviews and data collected from the FB groups to identify the purpose, content trends, and availability of social support. The analyses of the interviews and FB data are subsequently used to assess the groups' effectiveness as platforms for ESM and CMSS.

Results show that the FB groups are an effective resource for CMSS with complementary managerial benefits. The study implies that FB groups could be used to provide social support for other military members, especially those who are considered minority groups. Additionally, a richer understanding of the groups' strengths and weaknesses will allow the OWP to develop a more succinct purpose and strategy for administering these FB groups.

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**ANALYSIS OF THE U.S. NAVY OFFICE OF WOMEN'S POLICY
FACEBOOK USE**

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Submitted in partial fulfillment of the
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LIST OF ACRONYMS AND ABBREVIATIONS

CHINFO   U.S. Navy Chief of Information
CIP   career intermission program
CMC   computer-mediated communication
CMSS   computer-mediated social support
CNP   Chief of Naval Personnel
DOD   Department of Defense
DON   Department of the Navy
ESM   enterprise social media
FB   Facebook
FtF   face-to-face
IRB   Institutional Review Board
LGBT   lesbian, gay, bisexual, transgendered
OCS   officer candidate school
OPSEC   operational security
OWP   Office of Women's Policy
PII   personally identifiable information
PTSD   post-traumatic stress disorder
RQ   research question

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I.   INTRODUCTION

Social media use within the workplace is expanding at a rapid rate. A survey completed by global consulting firm McKinsey reported that 65% of companies were using some form of social media within their organizations.[1] Forrester Research predicted corporate spending on social media would reach more than $4.6 billion annually by 2013.[2] The Pew Research Center reported that in 2014 71% of online American adults used Facebook (FB).[3] FB reported that they had an average of 936 million daily active users in March of 2015.[4] The accessibility of these networks allows an exchange of information and an opportunity to establish relationships in ways that were not previously possible.

Although organizations worldwide are adopting internal social media practices, research is limited in identifying the implications of such practices. Scholars suggest that social media integration in organizations is outpacing our understanding of the technology and theories of how they change organizational processes.[5] The adoption of internal social networks has been met with both success and failure. Successes come in the form of information sharing, increased communication, and collaboration, but with risks of security and employee work inefficiencies.[6] Altimeter Group, an independent research and consulting firm, encourages businesses to approach social networks as new relationships instead of technologies in order to better understand their value.[7]

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[1] Jeffrey W. Treem, and Paul M. Leonardi, "Social Media Use in Organizations: Exploring the Affordances of Visibility, Editability, Persistence, and Association," *Communication Yearbook* 36 (2012): 143.

[2] Ibid., 143–144.

[3] Maeve Duggan, Nicole B. Ellison, Cliff Lampe, Amanda Lenhart, and Mary Madden, "Demographics of Key Social Networking Platforms," Pew Research Center, January 9, 2015, http://www.pewinternet.org/2015/01/09/demographics-of-key-social-networking-platforms-2/.

[4] Facebook, "Company Info," accessed May 18, 2015, http://newsroom.fb.com/company-info/.

[5] Treem, "Social Media Use in Organizations," 144.

[6] Efraim Turban, Narasimha Bolloju, and Ting-Peng Liang, "Enterprise Social Networking: Opportunities, Adoption, and Risk Mitigation," *Journal of Organizational Computing and Electronic Commerce* 21, no. 3 (2011): 203.

[7] Charlene Li, Alan Webber, and Jon Cifuentes, "Making the Business Case for Enterprise Social Networks," *Altimeter Group* (2012), 3.

While the advantages of social media are numerous, the Department of Defense (DOD) has yet to capitalize on its benefits. The DOD currently offers a social media website that provides education and training, terms of service agreements, a site registry for all official DOD pages, and current policies.[8] The DOD's primary focus has been on education, training, and awareness of cyber-security and operational security (OPSEC) in order to manage the risks that social media poses.[9] While these issues and concerns are important to the DOD, the focus on risks creates a lag in understanding how social media use can advance the DOD's mission. Currently, most individual units create and manage their own FB pages and groups. The DOD social media hub offers a link to a general FB help center as a guide to FB administrators, but media offers nothing specific to the DOD.[10] In addition, limited metrics have been established to measure social media trends or to track effectiveness. This, again, points to the issue of technology growing more quickly than we can understand its impacts.

This study takes a modest first step at understanding the potential benefits of enterprise social media for the DOD. Using three Facebook groups established by the Office of Women's Policy (OWP), this research examines the social support afforded to the participants via interactions with their peers.

A.   BACKGROUND

Enterprise social media (ESM), further defined in Chapter II, is a fully integrated web-based communication platform that is used by an organization as a tool to share information, ideas, and communicate internally.[11] Numerous cases of successful application of social networks can be found in public and private firms. For example, Northrop Grumman has an internal social network that links over 120,000 employees

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[8] DOD Social Media Hub, accessed May 18, 2015, http://www.defense.gov/socialmedia/.

[9] U.S. Department of Defense, Social Media Education and Training, accessed May 18, 2015, http://www.defense.gov/socialmedia/education-and-training.aspx/.

[10] Ibid.

[11] Paul M. Leonardi, Marleen Huysman, and Charles Steinfield, "Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations," *Journal of Computer-Mediated Communication* 19, no. 1 (2013): 2.

worldwide;[12] They have created "communities of practice," which are groups focused on a specific topic or technology, thereby linking employees in a common effort who otherwise may not benefit from one another's expertise.[13] Wells Fargo launched an enterprise employee portal with various social networking capabilities for over 200,000 of its employees, and it has reported significant productivity improvements.[14]

One byproduct of social networking that has recently gained traction is the idea of computer-mediated social support (CMSS). Traditionally, social support applied to face-to-face (FtF) interactions and defined as "an interpersonal transaction in which one can rely on others for information, help, and advice."[15] As social media has expanded, individuals are increasingly seeking information, advice, encouragement, companionship, and tangible help through social media—even from people they have never met.[16] Social media has the advantage of accessibility while removing time and geographic limitations of conventional FtF social support. Recent studies suggest that developing relationships and social support through FB can improve goal efficacy and job satisfaction.[17] This phenomenon could prove useful in large organizations as a way to better connect employees and give them a workplace network that provides social support.

The Navy's OWP is responsible to the Chief of Naval Personnel (CNP) and the Director for Military Personnel Plans and Policy for all topics affecting female officers and enlisted personnel.[18] The interviews conducted for this study determined that the office established three FB groups in 2012: female naval aviators, female naval officers, and female enlisted sailors. The groups were developed during a time of budget cuts as a

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[12] Turban, "Enterprise Social Networking," 203.

[13] Ibid.

[14] Ibid.

[15] Deborah A. Olson, Jeanny Liu, and Kenneth S. Shultz, "The Influence of Facebook Usage on Perceptions of Social Support, Personal Efficacy, and Life Satisfaction," *Journal of Organizational Psychology* 12, no. 3/4 (2012): 134.

[16] Wenli Chen, and Alfred Siu Kay Choi, "Internet and Social Support among Chinese Migrants in Singapore," *New Media & Society* 13, no. 7 (2011): 2.

[17] Olson, "The influence of Facebook," 133.

[18] Navy Personnel Command, "Office of Women's Policy (OPNAV N134W)," last modified May 4, 2015, http://www.public.navy.mil/bupers-npc/organization/bupers/womenspolicy/Pages/default.aspx.

free tool to disseminate women's policy information to the fleet, intended primarily as a one-way communication strategy. The group descriptions, however, emphasize providing an open forum for women to educate, train, and mentor one another—creating a space for multi-directional communication. Although the groups have existed for three years, their roles within the OWP are poorly defined, and their success is largely unknown.

B.   PURPOSE AND BENEFITS OF STUDY

The goal of this research is to utilize the OWP's FB groups as a case study to better understand internal social media use within DOD, both as a managerial tool and as a platform for social support. I analyze and discuss the advantages, disadvantages, and limitations of these FB groups as a tool for ESM and CMSS. The study addresses implications of the findings, and it provides recommendations to both the OWP and other DOD organizations to improve social media use.

The implications of social media use within DOD are largely unknown. The OWP established these FB groups with little guidance and direction. This study attempts to better define the FB groups' objectives, assess how members and management use these groups, and determine what FB groups can provide to members and management as both an ESM platform and tool for CMSS. The study highlights trends of content within each FB group and identifies similarities and differences between the groups. The information and knowledge gained in this research can help the OWP benefit from these FB groups' affordances and provide DOD leaders with insight into potential social media use within the organization.

C.   APPROACH AND LIMITATIONS

I conducted a literature review to establish a sound knowledge base of ESM and CMSS. From this review, I narrowed my study to focus on the advantages ESM provides when compared to other methods of internal organizational communication. I also considered the three metaphors sometimes used to describe social media: leaky pipe, echo chamber, and social lubricant.[19] These metaphors provide a lens through which to

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[19] Leonardi, "Enterprise Social Media," 6.

consider social media's advantages and disadvantages. The literature review also included a study of CMSS. From this review, I found five categories of social support: informational, emotional, esteem, tangible, and social networking.[20] These categories served as a framework for analyzing the FB posts.

This study includes analysis of interviews and FB posts. I interviewed seven employees within the OWP who have been FB group administrators. The goal of these interviews was to better understand the requirements and role of FB groups within the OWP, such as day-to-day tasks required of FB administrators, issues experienced, and management practices. I also collected and analyzed posts to the FB groups. This data enabled an in-depth analysis of topic trends, type of social support both solicited and provided, and user statistics.

This study was limited by the availability of data from the FB groups. Many extraction methods were attempted with mixed results. I was unable to acquire the complete four-year database of posts for the three groups and, due to technical difficulties, was unable to extract associated "likes" or comments. This limited the analysis of both activity level within the groups and discussion thread content.

D.   ORGANIZATION OF THE STUDY

The rest of this thesis includes the following chapters: literature review, research questions and method, analysis and findings, and, finally, the implications, recommendations, and conclusion. The literature review examines relevant studies and builds the necessary foundation of knowledge required to conduct the study. The research question and methods' chapter outlines the questions that the research answers and the methods used to achieve those answers. The analysis and findings chapter discusses the results of the study and key findings. The final chapter addresses implications of the study, provides recommendations, suggestions for future research, and a conclusion.

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[20] Joseph B. Walther, and Shawn Boyd, "Attraction to Computer-Mediated Social Support," In *Communication Technology and Society: Audience Adoption and Uses,* eds. Carolyn A. Lin and David J. Atkins (Cresskill, NJ: Hampton Press, 2002), 153–188.

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II.   LITERATURE REVIEW

The Office of Women's Policy's (OWP) Facebook (FB) groups are unique because, as established by the interviews, they were initially formed as a one-way communication tool in order to disseminate information. They later, however, became both a management tool and a social support network, capitalizing on the multi-directional communication opportunities. In order to understand their full potential, it is necessary to develop a broader understanding of enterprise social media (ESM) and social support. The following literature review guided this study of the affordances and limitations of these FB groups and their current influence within the Department of the Navy (DON).

A.   ENTERPRISE SOCIAL MEDIA

Organizations utilize social media both internally and externally. External use targets an outside audience such as customers, vendors, or the public. For the DOD, an example of this might be a FB page for recruiting, a unit page that emphasizes public relations, or a Twitter feed from the U.S. Navy Chief of Information (CHINFO) that publishes the latest news from the fleet. This external use of social media is most commonly used and studied.[21] The OWP's FB groups, however, are closed, or private. Consequently, only members are able to read, comment, "like," or post to the group. Therefore, they are exclusively internal tools to aid communication and interaction within the organization.

Generally, a social media tool provides multiple means to communicate within a platform. In the case of FB, these options are posts, private messages, "likes" photo uploads, among others. ESM does not distinguish between each type of communication but instead treats it as one fully integrated platform. Leonardi defines ESM as:

> Web-based platforms that allow workers to (1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular

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[21] Leonardi, "Enterprise Social Media," 2.

coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing.[22]

The FB groups studied here fit within Leonardi's definition if it is assumed that the "organization" is the specific FB group—aviators, officers, or enlisted. This is an important distinction because it requires our analysis to consider each FB group as a separate ESM with the understanding that these closed groups do not overlap with each other or with the larger DON and DOD Facebook groups.

1.   What Makes ESM Unique

Managers could benefit from understanding the communications' platforms available to them and the advantages and disadvantages that each poses. When deciding, for example, whether to send an email, pick up the phone, or arrange a FtF meeting, one must balance the trade-offs of time, convenience, clarity, and other factors that each of those communication platforms provides. ESM now adds another layer of complexity. Research has determined that there are two primary affordances that separate ESM from other internal communication technologies: visibility and persistence.[23]

a.   *Visibility*

ESM allows users the ability to make their behaviors, knowledge, preferences, and communication network connections apparent to others within the organization.[24] Visibility is tied to the amount of effort people must expend to locate information.[25] Employees cannot maintain awareness of all the communication that is happening within an organization. To mass communicate via email, a person must copy all intended recipients. If a person desires to respond to everyone on the email, then the respondent chooses "reply all." Communication through mass email is a cumbersome way to keep coworkers informed, and it can be simplified with an open-forum discussion through

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[22] Leonardi, "Enterprise Social Media," 2.

[23] Ibid., 3.

[24] Treem, "Social Media Use in Organizations," 150.

[25] Ibid.

ESM. While this example is a simple way to streamline communications, the implications of visibility go beyond efficiency. The visibility that ESM provides creates metaknowledge and organizational activity streams.[26]

Metaknowledge is the understanding of who is in the organization and what they know.[27] Through an individual's posts and content, other users can effortlessly identify experts in specific areas and seek them out for future needs or private consultations. A survey conducted in 2009 found that employees were more likely to contact users of social media for information because of a perception that they were both more knowledgeable in particular domains and likely to respond.[28] The visibility that ESM provides shows who in the organization is knowledgeable and encourages approaching them to share knowledge.

Organizational activity streams are the trends of topics and ongoing events within the organization. Respondents of interviews within large organizations, when asked how ESM might influence organizational communication, saw ESM as an opportunity to "keep a pulse on what is going on in others' minds" and "a way to orient themselves in the organization."[29] This awareness helps employees feel connected to their organization and aware of what is happening around them. This benefit can be a great way for organizational leaders to monitor for contentious issues and gain a sense of organizational direction.

b.   *Persistence*

Communication is persistent if it remains accessible as originally displayed once the communicator has finished his or her presentation.[30] When someone posts to a FB group, that communication is available to other users, and it does not expire—offering persistence. Studies indicate that the affordance of persistence affects organizational

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[26] Treem, "Social Media Use in Organizations," 150.

[27] Ibid., 153.

[28] Ibid.

[29] Ibid., 154.

[30] Ibid., 155.

action in three ways: sustaining knowledge over time, creating robust forms of communication, and growing content.[31] Although these advantages apply to any form of ESM, there are distinct advantages that some applications have over others.

The key to utilizing the affordance of persistence is the ability to sort, organize, and recall this data. Research indicates that wikis, more than other social media tools, afford individuals the opportunity to work over long stretches of time in an asynchronous, collaborative, distributed manner.[32] FB groups are limited in how content is stored and accessed and therefore may not be as successful as wikis in creating that knowledge base. If there were a particular article or discussion that a FB group user was interested in recalling, there is a basic search function utilizing key words. What it is lacking, however, is a list of past content. Once a post has fallen off a person's feed, it is much less likely that the person will come across that content. Consequently, FB group communication is persistent, but persistence is not as impactful as visibility.

2. Metaphors for ESM

Researchers utilize three basic metaphors to guide the study of social media use within organizations: leaky pipe, echo chamber, and social lubricant.[33] Each metaphor has distinct characteristics and can be used as a vantage point when looking at the advantages or disadvantages of a specific process. The following sections discuss each metaphor specifically and develop each as a lens through which to focus aspects of this study. Each metaphor represents a way that communication flows, and it can also be viewed as phenomena with unique advantages and disadvantages to both users and organizations within ESM.

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[31] Treem, "Social Media Use in Organizations," 155.

[32] Ibid., 157.

[33] Leonardi, "Enterprise Social Media," 6.

a.   Leaky Pipe

The leaky pipe metaphor for ESM suggests that the directionality and content of communication is visible to people who are not involved in it.[34] This feature allows unintended audiences to learn who the communication partners within an organization are and also what they communicate about. Leaky pipe as a phenomenon allows ESM to be a channel through which to enlarge the arena that individuals within the organization pay attention.[35] The exposure it provides expands people's awareness of knowledge, but it also may increase the attention they pay to it.[36]

An advantage highlighted by the leaky pipe metaphor is the opportunity it creates for analyzing social relations and producing insights based on social analytics.[37] Communications can be processed with algorithms to help employees make connections and help managers understand the organization's information structure.[38] This ability can increase collaboration, but it also comes with potential negative side effects. Today's culture is becoming increasingly wary of electronic surveillance. Having their communications surveyed and analyzed may discourage employees' interactions through ESM, thus negating any benefits it may have provided.[39]

The leaky pipe phenomenon emphasizes the danger of communication overload. If the amount of knowledge and connections becomes overwhelming for the user, he or she is more likely to ignore it than utilize it. The availability may also become a distraction from job productivity. Additional research is being conducted to develop specific attention-allocation strategies that filter information gleaned from ESM, but these could thereby restrict the potential utility gained by the user.[40] Individuals and

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[34] Leonardi, "Enterprise Social Media," 7.

[35] Ibid., 11.

[36] Ibid.

[37] Ibid.

[38] Ibid.

[39] Ibid.

[40] Ibid., 12.

organizations must constantly seek out the right balance of social media to utilize the benefits without being overwhelmed by the amount of information that is available.

b.   *Echo Chamber*

A common concern of the Internet is its tendency to link like-minded individuals through content that reflects their preferences, and thus it operates as a giant echo chamber.[41] Researchers most commonly use the echo chamber metaphor to study social media external to the organization, but the metaphor also highlights influences within ESM. The phenomenon demonstrates the tensions between the benefits of personalization (finding people and content with similar interests) and the dangers of balkanization, which may reduce exposure to new ideas and exacerbate differences that can result in conflict or reduced cooperation.[42] Within an organization, the effects of the echo chamber phenomenon could nurture connections based on common interests. It is easy to see, however, how it could also inhibit new ideas and potentially stifle those who see themselves as outsiders.

The echo chamber phenomenon could serve managers by gaining a better understanding of the communities within an organization and their common interests are. One must understand, however, that this perspective could be distorted. The echo chamber amplifies the inputs of the most active members of a community. The content may be largely based on the input of very few. Offline these individuals may not be the most active community members or the most expert.[43]

c.   *Social Lubricant*

The final metaphor used to describe the use of ESM is that of a social lubricant. Organizations are becoming increasingly social. To support and sustain the social fabric of organizations, social networking must run smoothly with limited managerial

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[41] Leonardi, "Enterprise Social Media," 12.

[42] Ibid.

[43] Ibid., 14.

intervention.[44] The social lubricant metaphor suggests that the ease and accessibility of communication that ESM provides creates the capacity for social lubrication by easing connection within an organization to enable work efficiencies.[45] ESM has the ability to create a safe environment in which individuals who may not normally choose to interact can connect with others and obtain a greater sense of belonging.

ESM as a social lubricant can also have negative impacts. It may develop disingenuous relationships and encourage users to establish many weak ties, instead of fostering strong, rewarding relationships.[46] It may also present an opportunity for gossip and cliques within the organization. Generation Y, specifically, is known for using social media as a way to chat with friends. By introducing this form of communication in the corporate structure, there could be a distinct threat of work interruptions and subsequent loss of productivity.[47]

A growing concern for organizations, including DOD, is the new blurred lines between work and social lives. "Context collapse," a phenomenon in which multiple audiences are reached simultaneously, can create problematic encounters within the work place.[48] Blending private and public ties and social ties of varying strengths requires audience management strategies.[49] These audience management strategies necessitate a user to be very conscious and aware of self-presentation and must limit what is shared. A failure to properly managing professionalism with these tools could lead to negative at-work consequences. Organizations must set clear guidelines and policy to foster this integration, and capitalize on the positive aspects of the social lubricant metaphor.

This study utilizes the discussed metaphors in the analysis as a lens to evaluate the effectiveness of the OWP's FB groups as an ESM tool. Additionally, the phenomena

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[44] Leonardi, "Enterprise Social Media," 14.

[45] Ibid.

[46] Ibid.

[47] Ibid., 15.

[48] Ibid.

[49] Ibid.

associated with the leaky pipe, echo chamber, and social lubricant metaphors are explored to identify how they may enhance or detract from the utility of the FB groups.

B.   SOCIAL SUPPORT

Social support is defined as "an informal social network that provides individuals with expressions of emotional concern or empathy, practical assistance, informational support or appraisal."[50] Traditionally that definition has applied strictly to FtF interactions; however, with the rapid diffusion of the Internet and the increase in social media, more and more people go online to solicit or offer social support.[51] CMSS is different from traditional social support, but it is researched relatively little. It is particularly suitable and valuable for those who lack FtF social support resources.[52] This literature review aims to identify the benefits of social support, define the categories of social support, and investigate the advantages of CMSS.

1.   Benefits of Social Support

Studies indicate that social support positively affects several aspects of individuals' well-being (physical or health, psychological, social, and community well-being); thereby increasing a person's perceived quality of life.[53] Research suggests that social support can provide physical and mental benefits because it provides the individual with an increased sense of control, power, and personal competence during stressful events.[54] It may also provide a person regular positive experiences and a set of stable, socially rewarded roles within a community.[55]

DOD's biggest and most expensive asset is its employees. DOD's work environment is characterized by high stress, frequent moves, and lack of stability. The

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[50] Paula Brough, and Judi Pears, "Evaluating the Influence of the Type of Social Support on Job Satisfaction and Work-Related Psychological Well-Being," *International Journal of Organisational Behaviour* 8, no. 2 (2004): 472.

[51] Chen, "Internet and Social Support," 2.

[52] Ibid.

[53] Ibid., 4.

[54] Ibid.

[55] Ibid.

benefits of social support, as stated previously, could assist with critical work-life balance to military members.

2. Categories of Social Support

Various literatures on social support utilize differing terminology to describe social support categories. For the purposes of this study, I use the functions defined by Walther and Boyd, which are specific to CMSS. They include: informational support, emotional support, esteem support, tangible aid, and social network support.[56] In the following paragraphs, I define each category to provide a classification scheme that allows further content analysis of the types of support provided in various FB posts. To further demonstrate defining characteristics of each category, a specific example of each type of support from the FB groups is provided in Chapter III.

Informational Support: Informational support comes in the form of advice, factual input, and feedback that may help individuals to make decisions and judge actions.[57] This is the most common form of CMSS exchanged. It could be as simple as an informative post regarding an upcoming event or a link to an insightful article. While common and simple, informational support is largely sought after, and social media can provide a quick and easy way to get an answer to a question.

Emotional Support: Emotional support is given through any expression of caring, concern, empathy, or sympathy.[58] These messages are aimed more at psychological well-being than decision-making. Examples include statements of affection, emotional understanding, and any posts geared toward relieving pain or providing compassion.

Esteem Support: Esteem support comes through the expression of admiration or understanding of another's worth. It can occur through compliments of a person's skills and abilities or, as a more direct approach, by telling someone that he or she is a good

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[56] Walther, "Attraction to Computer-Mediated Social Support."

[57] Ibid.

[58] Ibid.

person.[59] Esteem support and emotional support are similar, but the distinction is in the aim of the post. Esteem support is directed specifically at an individual, while emotional support may address a problem that an individual is facing.

Tangible Aid: Tangible aid comes in the form of actual physical assistance and provides needed goods and/or services.[60] This type of CMSS is less frequent since tangible aid usually requires FtF interaction, which is unusual among computer-mediated groups. Examples of tangible aid would be bringing dinner to a sick friend or pet sitting while that person is out of town. One form of tangible aid that is becoming more common in online communities is financial donations. With easy payment applications like PayPal or Venmo, donating funds for a cause is becoming more accessible and a great way to provide tangible aid support without physically interacting.

Social Network Support: Finally, social network support involves referring someone to a separate person or group of people who share a common set of experiences or expertise.[61] FB has made this type of CMSS easy with the "tagging" method. Linking someone's name to a post implies a good connection or perhaps subject expertise. Tagging is a very clear way of providing social network support. Social network support may also be achieved by directing other users toward other pages or groups that might better address an issue.

3.   Advantages of CMSS

With the development of the Internet, some characteristics of online social groups make such groups a welcome alternative to traditional FtF support networks.[62] More and more people are turning to CMSS to compensate for what may be lacking in their physical world. The following sections describe the unique advantages that CMSS offer when compared to traditional social support.

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[59] Walther, "Attraction to Computer-Mediated Social Support."

[60] Ibid.

[61] Ibid.

[62] Chen, "Internet and Social Support," 5.

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Accessibility: The largest and most apparent advantage of CMSS is accessibility. Computer-mediated communication (CMC) eliminates time and distance barriers that can prevent traditional social support.[63] With FB available on smart phones, the opportunity to interact with these groups is virtually unlimited by geography or time. FtF support groups are limited by the ability to fit within a person's work/life schedule and the ability to travel to the group. FB (and other forms of CMC) brings the support group to the user. This advantage alone has revolutionized CMSS.

Lurking: The concept of lurking closely ties in with the advantage of visibility and the leaky pipe metaphor. Lurking (and lurkers who do it) refers to reading messages posted by others, without posting one's own messages or signaling observation in any way.[64] This phenomenon allows online lurkers to "obtain comparison information or vicarious support without having to disclose anything about themselves … [and] obtain validation for their feelings of stigma without having to communicate those feelings to others."[65] The FtF equivalent to lurking would be eavesdropping. This of course is generally not socially acceptable in FtF settings nor is it a plausible way to gain social support. The ability to observe the posts of other users with similar struggles or interests is, however, an enormous advantage of CMSS.

Anonymity: The anonymity of the Internet allows users to feel safer to engage in sensitive or potentially risky issues that might seem too personal or private for FtF interactions.[66] Participants often disclose extremely personal details on-line in seeking social support, and other users sometimes respond with equally intimate details as they tell about their own similar experiences or traumas.[67] Anonymity, however, is becoming increasingly difficult to achieve on the Internet. FB encourages the use of real names and a user photo, which diminishes the anonymity of that application. Society is also becoming weary of offering personal information over the Internet for security reasons.

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[63] Chen, "Internet and Social Support," 5.

[64] Walther, "Attraction to Computer-Mediated Social Support."

[65] Ibid.

[66] Chen, "Internet and social support," 5.

[67] Walther, "Attraction to Computer-Mediated Social Support."

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These are valid concerns, and they may diminish the advantage of anonymity that CMC provides.

Number of Participants: The final distinct advantage that CMSS provides is the number of participants. This is primarily an effect of the accessibility already mentioned, but it warrants a discussion of its own. With traditional social support, there was no guarantee that someone could meet a person in his or her situation who could truly empathize. CMC connects users worldwide, and it generates a larger pool of participants. This large number of members may help to promote a sense of universality that decreases feelings of isolation and alienation.[68] Additionally, more expertise may be available within the group. The sheer volume of people online increases the possibility of users to match with their specific type of need.[69]

Utilizing the knowledge gained from the literature review, I developed research questions and methods. The following chapter identifies those questions and provides an in-depth discussion of the methods used.

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[68] Chen, "Internet and Social Support," 5.

[69] Ibid.

III.   RESEARCH QUESTIONS AND METHOD

The purpose of this chapter is to identify the specific research questions (RQ) that drove this study and describe the methods used to frame and answer those RQs. Finally, I discuss the limitations and assumptions that underlie this study.

A.   RESEARCH APPROACH

This study utilizes a qualitative research design. Qualitative research can be characterized as "any research that uses data that do not indicate ordinal values."[70] Qualitative methods allow and require the researcher's interpretation.[71] As described in the introduction, social media in the workplace is still relatively new and lacks research. Because of that, I chose an inductive approach to this study, meaning that the research was exploratory or content-driven in lieu of being hypothesis-driven.[72] In exploratory studies, the researcher reads and rereads the data, looking for key words, trends, themes, or ideas in the data that will help outline the analysis and develop RQs.[73] I started the research interested in using these FB groups as a case study to provide a better understanding of social media use within DOD. The data collected from these case studies further refined the RQs and scope of the study.

Five RQs were developed to examine the use of these Facebook (FB) groups as a tool for enterprise social media (ESM) and computer-mediated social support (CMSS). The first two questions are broad and aim to utilize the knowledge gained from the literature review to examine the utility of the FB groups from an ESM and CMSS perspective. The remaining RQs seek specific information from the FB groups to provide a greater understanding of their current use. The following is the list of research questions posed:

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[70] Greg Guest, Kathleen M. MacQueen, and Emily E. Namey, *Applied Thematic Analysis* (Los Angeles: SAGE, 2012), 5.

[71] Ibid., 5.

[72] Ibid., 7.

[73] Ibid.

- What are the advantages, disadvantages, and limitations of the FB groups from an ESM perspective?

- What are the advantages, disadvantages, and limitations of the FB groups as a platform for CMSS?

- What categories of CMSS are being provided and solicited on the FB groups?

- What are the most common topics in the FB posts?

- What are the similarities and differences between the three FB groups?

B. DATA SOURCES

The research design consisted of two primary data sources: interviews and posts to FB groups. An Institutional Review Board (IRB) granted approval for the interviews. Participation was strictly voluntary, and no names or identifying information was requested or given during the interviews. Appendix A shows the interview consent form signed by each participant.

The FB group post content was obtained partially by a third party utilizing extraction software, and the rest was obtained by manually copying and pasting from FB. A separate third party removed all personally identifiable information (PII) from the FB data and coded each posting member as a separate member identification number. All FB group users and interviewees remain anonymous in this study.

1. Interviews

I determined that interviews would be beneficial to the study because they provide a source of background information, such as the history of the FB groups, but also opinions, perceptions, and attitudes regarding the FB groups.[74] The Office of Women's Policy (OWP) recommended interviewing eight individuals who currently or formerly worked within the office and had some part in administering the FB groups. Those individuals were contacted by email and invited to conduct 20–40 minute phone

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[74] Margaret C. Harrell, and Melissa A. Bradley, *Data Collection Methods: Semi-Structured Interviews and Focus Groups* (Santa Monica, CA: RAND, 2009), http://www.rand.org/content/dam/rand/pubs/technical_reports/2009/RAND_TR718.pdf.

interviews. Of the eight contacted, seven individuals volunteered to participate and one did not respond to the request. The interview questions were developed to gain greater insight into the history of the FB groups, objectives of the groups, and the OWP's role as administrators.

The interviews were conducted in a semi-structured format. Semi-structured interviews utilize a guide to cover specific questions and topics, but the interviewer has discretion over the order of the questions and may probe further to ensure the topic is thoroughly covered.[75] The interviews were conducted in a conversational tone, allowing me to delve deeply into a topic and understand the provided answers more thoroughly. The questions were designed to be descriptive in nature to encourage a narrative from the interviewee.[76] The initial question was designed to be very broad; then follow-on questions became increasingly specific, and I (as the interviewer) was able to follow up in order to clarify or extract more information on a specific topic. The seven interviews were recorded and transcribed for a total of 70 single-spaced pages of questions and answers. A copy of the questions guiding the interviews is included in Appendix B.

2. FB Data Content

The FB group post content was downloaded and remained separated by group: female aviators, female officers, and female enlisted. The information contained for each post was a unique member ID, date of the post, and post text. The following is a summary of data obtained from each FB group:

- Female Naval Aviators: 138 posts; 32 posting members; 279 total members; from November 15, 2012–February 22, 2015

- Female Navy Officers: 826 posts; 145 posting members; 1,789 total members; from December 28, 2012–February 23, 2015

- Female Enlisted Sailors: 608 posts; 401 posting members; 6,951 total members; from December 29, 2014–January 31, 2015

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[75] Harrell and Bradley, *Data Collection Methods*.

[76] Ibid.

The data from the Female Naval Aviator and Officer groups includes a date range for the history of the groups, except for a gap in the officer data (May 2014–January 2015), likely resulting from an error during the data pull. The Female Enlisted Sailor data, however, was too extensive for the software to obtain a complete history. I therefore selected a one-month cross-section that enabled a comparative analysis with the other groups for that timeframe.

Additionally, many of the posts compiled by the software showed up as "null." After researching this phenomenon, it is seemingly caused by members posting a picture or video without any associated text. These "null" data points account for 30 (21.7%) of the aviator posts and 282 (28.1%) of the officer posts. These are not included in the analysis. Because I downloaded the female enlisted data manually, the "null" data points did not impact the female enlisted data.

C. DATA ANALYSIS METHODS

An inductive thematic analysis was conducted on both the interviews and FB data. Additionally, I categorized each FB post as a type of CMSS. I also labeled each post as either "offer" or "seek" based on whether the posting user was offering or seeking CMSS. Finally, I used the knowledge gained from the literature review and the analyses of the data to determine the effectiveness of these FB groups as a tool for ESM and CMSS. I explain the analysis approach next.

1. Thematic Analysis

A thematic analysis of the interviews and FB posts was conducted to identify reoccurring topics. Thematic analysis is the process of identifying both implicit and explicit ideas within the data—referred to as themes.[77] Codes are developed to represent the identified themes and applied or linked to raw data as a summary for future analysis.[78] Thematic analysis requires a large amount of involvement and interpretation

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[77] Guest, *Applied Thematic Analysis*, 10.

[78] Ibid.

from the researcher because it goes beyond counting word occurrences within the text.[79] Reliability is a concern with thematic analysis as compared to word-based analysis because more interpretation goes into defining the themes.[80] Although thematic analysis requires interpretation, which can skew results, it is still the preferred method for analyzing free-flowing text—like that of the interviews and FB data of this study.[81]

To conduct a thematic analysis of the interviews, I started by reading the transcripts to truly familiarize myself with the content. I circled words within the text that seemed significant or common. While rereading the transcripts, I underlined phrases that also seemed relevant or related to the circled words. I summarized or paraphrased these underlined sections into specific words or ideas. Finally, I made a list of all words and ideas, grouped them, which resulted in a distinct group of themes and sub-categories.

To analyze the FB group content, I engaged in an iterative coding process. As I read posts, I would either create a category based on the content of the post or label the post as a previously made category. I continuously added themes or categories as they were discovered. If a post lacked a prominent or reoccurring theme, I categorized it as "other." I kept the content categories consistent among the three FB groups to allow comparison analysis.

2.   CMSS Classification

As discussed in Chapter II, this study utilized five categories of social support to analyze the FB posts: informational, emotional, esteem, tangible, and social networking. I manually assigned a social support category to each post utilizing the definitions provided in the literature review. Although there were some posts that could qualify for more than one type of social support, I limited each post to one social support category by selecting the best fit. This presented a challenge at times, and it required my interpretation of the posts.

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[79] Guest, *Applied Thematic Analysis*, 10.

[80] Ibid., 11.

[81] Ibid.

The following are example posts of each social support category, along with an explanation as to why I categorized them as a type of social support and whether it was offered or sought accordingly:

Informational: "Does anyone know if Tricare has implemented the breast pump in our insurance yet? I can't remember all the exact verbiage or the link to it. My baby is due in 5 weeks." This post was categorized as seeking informational social support because she was asking for factual input from other group members who may be knowledgeable on the subject.

Emotional: This post from the officers' group demonstrates the length and depth of some posts. Selected details within the post have been omitted to preserve the anonymity of the user.

> I'm 6 months out from my PRD and recently the detailer has been pushing me to put in for a 24 month tour as [omit]. I explained to her my concern of wanting to finally have children of my own. I've been in the Navy almost 18 years and this is the first shore tour it would work for my husband and me. I requested a tour at [omit] and I was told she 'competed' me for the billet but I didn't get it, but there's always the [omit]. I went to my boss and he talked to the senior detailer to get the scoop on what I needed to do in order to set me up for success at the Command Screening Board [omit]. The senior detailer said I needed to do a 'heavy lifting SWO tour in order to set myself up for success. He said I should do one of the following billets: [omit]. I asked what would happen if I didn't do those, and he said I would risk not screening and not making O-5. And a note, there's no promise obviously that I would screen for command or in two years (when I would be 38) that I would be able to bear a child… Needless to say I was a little emotional. I mean, after all these years, I never thought I would have to choose between having a family and continue the pursuit of command. I thought I would be able to have both. I've held multiple challenging billets [omit] and am currently ranked #1 out of the URL O-4s on [omit] but it still isn't enough. I'm extremely frustrated. Any words of advice?

The post is an example of a user seeking social support, but it blurs the line between informational and emotional. In the post, she presents an emotional and difficult situation, but she also seeks advice. Walther's definition of informational support

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specifically mentions being a "form of advice;"[82] however, his definition of emotional support emphasizes messages aimed more at "psychological well-being than decision-making."[83] My decision to classify it as seeking emotional support was determined from the content of the full post. Although the last sentence seeks advice or informational support, the user has been given adequate career guidance from her detailer and chain of command. The context leads me to think she is looking for psychological well-being and support from women who have faced similar circumstances.

Esteem: "CONGRATS to [name]!! She was selected for Early Command in the [date] Board! So proud of her!" This post is an example of the user offering esteem support to the individual selected for early command. By recognizing the achievement, this user expressed "admiration" of an individual, directly in line with Walther's definition of esteem support.[84]

Tangible: "Hi ladies! Anyone in San Diego have maternity summer whites? I don't want to buy them for one occasion but I will! I'm 5'4ish and my maternity khakis are small top and x-small bottom. Thanks!" This user is seeking tangible social support in this post. The maternity uniform is a good that is being sought from other users.

Social Networking: "Good evening ladies! There's a strong possibility that I'll be receiving orders to USS MONTEREY (CG-61). I've never been on a cruiser nor the Norfolk area. Anyone on this page on USS MONTEREY?" This post is a great example of social networking through CMSS. This user is likely moving to a new ship and city, and is seeking social networking support from someone on that ship.

These examples demonstrate how the difference between these social support categories can be subtle, and posts may offer or seek more than one category. This brings a level of subjectivity to the analysis. By categorizing all the data independently, however, I was able to provide consistency.

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[82] Walther, "Attraction to Computer-Mediated Social Support."

[83] Ibid.

[84] Ibid.

3.   Offering and Seeking Analysis

Each FB post is distinctly different by either offering or seeking a form of social support. I was interested in determining whether there was any correlation between types of social support versus offered or sought, or between FB group and whether the social support was offered or sought. Therefore, I categorized each post as either providing or soliciting social support, and labeled it as either "offer" or "seek" accordingly. Next are two example posts of informational support—one offering and one seeking social support—and a justification of my classification:

Offer: "Some of you attended her 100th birthday celebration earlier this year. The oldest WWII Nurse has passed away. Funeral information attached." This post very clearly provides information regarding the funeral of the oldest WWII nurse. The user is sending the information for all group members to see, thereby offering informational support.

Seek: "Does anyone know when the new uniforms are going to be available?" This post is in the form of a question, and it seeks information support regarding new uniforms. The user is seeking the knowledge of other users in order to get an answer to a question.

4.   Evaluating Effectiveness

The final section brings together the FB and interview analyses. It utilizes the metaphors and principles introduced in Chapter II as a lens to determine the advantages and disadvantages (or effectiveness) of each of the FB groups as a tool for ESM and CMSS. This framework utilizes analyses from the interviews and the FB group data as support for whether these FB groups are effective in each category. This method, again, is qualitative, and it relies heavily on interpretation of the data. Lastly, I rate each FB group as excellent, good, fair, or poor for the purposes identified by the interviews. I define each of the ratings as the following:

Excellent: Activity frequently observed within the FB posts; analyses support that FB groups are an appropriate forum for such activity.

Good: Activity observed within the FB posts; analyses demonstrate room for improvement.

Fair: Activity seldom observed within the FB posts; analyses demonstrate significant room for improvement.

Poor: Activity not observed within the FB posts; analyses demonstrate limited room for improvement.

As described, these RQs and methods guided this study's analysis. In Chapter IV, I present my analysis and the findings of the study.

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IV. ANALYSIS AND FINDINGS

This chapter presents the analysis and the findings of the study. I first present the analysis and findings of the interviews and then the analysis and findings of the FB group posts. Lastly, the analyses are integrated and considered in the context of the metaphors and principles introduced in Chapter II to assess how these FB groups are being used and the advantages and disadvantages of FB as a tool for enterprise social media (ESM) and computer mediated social support (CMSS).

A. INTERVIEWS

The inductive thematic analysis of the interviews resulted in the following broad themes: purpose, advantages, problems, and content. These themes each contain sub-themes that tell a story of the FB groups and their role within the Office of Women's Policy (OWP). I will identify and discuss common threads discovered in each of the general themes.

1. Purpose

The interviews were conducted as a means to identify the objectives of the FB groups within the OWP. The coded responses presented a clear purpose; the term most widely used was "forum." In the context of a forum, I identified the following common words or phrases that describe desired activities: to mentor, network, ask questions, support, and share knowledge and experience. As an example, the following quote was one interviewee's description of the purpose of the FB groups:

> The purpose of the group is to provide a forum for enlisted female sailors to network, to speak out, and to provide mentorship to each other, to collaborate on ideas, provide resources, and … give … Navy women a place to go to ask the questions that maybe they're not always comfortable asking in their work settings. Or maybe they don't have…a mentor they're comfortable with that they have access to, so this provides them with that.

While these activities are individually unique, they are also interconnected. These combined actions paint a picture of the OWP's vision for the FB groups. I will discuss each of these activities as presented by the interviewees.

The first activity repeatedly mentioned was to mentor. The interviewees identified the FB groups as an opportunity for women to both provide and seek mentorship from one another. The following quote is an interviewee's description of mentoring within the groups:

> Being in a workplace where there's … only a handful of [women] or none at all…a lot of junior sailors have reached out and said, "You know, this is the situation…How do I handle it?" And so there's a lot of mentoring that went on in the group just to … let them know that, "Hey, I've been there, done that. You're not alone …. This would be a good way to handle the situation."

This form of mentorship, as described by the interviewee, closely mirrors informational and emotional support. This interviewee describes a hypothetical post in which a user seeks information/advice or emotional/psychological support from other users who may have similar experiences with the situation. Although each interviewee mentioned mentorship multiple times, none specified the capacity or level of desired mentorship. More specifically, interviewees did not stipulate whether the OWP desires one-on-one mentor to mentee relationships to develop from these forums, or whether the transmission of knowledge from expert to novice is sufficient. Analysis of the interviews reveals that mentoring is clearly an objective of the FB groups, but the desired level is indeterminate.

The next encouraged activity for the groups was networking. The interviewees all described the FB groups as a venue to expand both a personal and professional network with other women in the Navy. They identified the Navy as a large organization, and they described these FB groups as a means to connect women. One interviewee had the following response when asked how these FB groups are unique compared to other resources provided by the DON:

> And there might be a little more … mentoring, networking, and peer-to-peer interaction going on, because you can reach out to somebody who's not right there with you who has maybe gone through something that … you need some advice on. And it's not geographically constrained or constrained to your ship.

This quote mentions networking, but it also brings up mentorship, advice (or informational support), and the advantage of accessibility. It is a good demonstration of how all these purposes and advantages blend together and support one another.

Asking questions and sharing knowledge and experience could be viewed as one activity with two perspectives—a sender and receiver. The interviewees repeatedly identified the FB groups as a potential forum for sharing knowledge. Analysis revealed that interviewees placed equal importance on a user seeking information as a user sharing information. As administrators, the OWP identified themselves as a knowledge source but not the sole source. The interviewees expressed the importance of the FB groups containing senders and receivers of information and experience.

The last activity identified was support. Like mentorship, the interviewees did not specify the type or level of desired support, but the descriptions, or examples provided parallel emotional support. For example, one interviewee noted:

> Recently a picture from a submarine page was posted and it was derogatory towards women … integration to submarines and … a female submarine officer … posted it and said she was upset by it, so it was a way for … the community to support her and for her not to feel alone in that.

As mentioned, all of these activities have the potential to bleed into one another to build a unique space, or forum, to interact. Networking enables mentorship by connecting women who could benefit and thrive from a mentor/mentee relationship. Mentorship provides support and enables knowledge sharing. Knowledge sharing is a form of support. Each of the activities can be linked, thereby enhancing one another. This analysis exposed the complexities of defining the purpose of these FB groups, and it developed a sincerer understanding of the intent of these groups.

2. Advantages

The interviewees identified numerous perceived advantages of the FB groups. The advantages, as determined from the interviews, are: accessibility, geography, a safe environment, observation, and feedback. These advantages align remarkably well with the advantages of ESM and CMSS identified in the literature review. Each advantage and

how the interviewees perceived these advantages are discussed within the context of the interviews.

The first advantage identified was accessibility. Interviewees expressed understanding of the importance of users having access to these groups—whether at work or home. They expressed that having these groups on FB, the world's most popular social media site,[85] creates a large opportunity for success that would not be present with a DOD-specific social media application. Interviewees conveyed that accessibility was the distinguishing difference between these FB groups and other DOD-run programs such as E-mentorship.

Interviewees also expressed the advantage of breaking geographic barriers. The DOD is a worldwide organization. Employees are constantly moving, creating fluid units with high turnover rates. A single forum that can reach all members, no matter where they are stationed, is fundamental to achieving the desired objectives of these forums. As previously mentioned in one of the interviewee's quotes, the FB groups not only break geographic barriers but also artificial barriers created by different units, jobs, and communities within the Navy. Two women, both stationed in San Diego on neighboring ships, may never have the opportunity to interact without the help of these FB groups.

The next advantage identified in the interviews was a safe or comfortable environment. The interviewees reasoned that the FB groups are closed to the public to enhance this feeling of safety to the users. Having closed FB groups becomes both an advantage and a problem, which will be discussed further. A closed FB group enhances a feeling of safety and comfort, and in turn it fosters sharing. Safety is important to the success of these groups, but further analysis is required to examine the trade-offs of a closed group. One interviewee ties a lot of these ideas together in the following quote:

> The Facebook page is unique because it provides a … safe environment for people to post their questions without being harassed. I think a lot of the official pages are all open to anyone and this is … restricted to a specific cohort … [which] allows for a more open flow of dialogue and more candid responses from members of the group. You don't really get

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[85] Duggan, "Demographics of Key Social Networking Platforms."

that anywhere else … This is … another way to reach a wide variety of background and experiences and … have access to more resources [and a] more diversified wealth of knowledge.

The next advantage discussed by the interviewees was observation. Each interviewee expressed the managerial benefits of having this insider perspective on women's issues. Observation mirrors the affordance of "visibility," or "lurking," as described in Chapter II. The OWP utilizes these observations daily to discuss potential policy changes, or brief leadership on women's issues, as identified by the following interviewee:

We monitor for what people are talking about, what they are interested in, and if there's anything of major concern. Sometimes some pregnancy and parenthood questions are brought up and that's something that we take into consideration for the new version of the instructions that we're working on … We want to make sure that we're addressing everything that we possible can because it doesn't get updated every year.

Finally, the interviewees identified feedback as an advantage of these FB groups. Feedback, again, is utilized by the OWP as a management tool to solicit opinions on any topic. Administrators have used this advantage to conduct quick, informal polls of users to gauge popularity of a potential policy change. These advantages were identified in the interviews as either contributing to the success of the FB groups in achieving their objectives or acting as a management tool for the OWP.

3.   Problems

The next theme identified in the interviews was problems or issues that the OWP faces as administrators of the FB groups. The sub-categories included: time requirements, vetting users, enforcement, and advertising. Each of these issues acts as a burden to the administrators or as a limit to the group's effectiveness.

The interviewees discussed that their responsibilities as administrators are a collateral duty, meaning an extra task in addition to their regular jobs within the OWP. Each of them expressed that the administrative tasks of the FB groups require daily attention. The interviewees all admitted that they fulfill their responsibilities as administrators primarily outside of normal working hours while at home because of

connectivity issues on government computers and higher priorities of tasks while at the office. Each administrator would like to devote more time to the groups but confessed that the FB groups generally get pushed aside. One of the interviewees expressed desiring a worker within the OWP whose job is exclusively maintaining and managing the FB groups, but the OWP does not have the resources to accommodate that type of position. The time required to properly administer these groups was identified as the leading problem during the interviews.

The next major issue addressed during the interviews was vetting group members. As previously mentioned, the FB groups are closed to the public. The OWP has made membership rules, requiring members of the group to be either active duty or retired Navy and to fit the description of the applicable groups: aviator, officer, or enlisted. The interviewees conveyed that accurately vetting members takes a large portion of their time in administering the groups. Each interviewee described different methods in vetting. Sometimes it is as easy as seeing a picture of the requesting member in uniform but at other times it requires more digging, and it may ultimately require the requesting FB member to send separate correspondence from a DOD email address. The interviewees said they get a surprising amount of requests from men and international individuals, which emphasizes the importance of screening properly. The interviewees noted that vetting is a complex and time-consuming process. The following interviewee quote demonstrates both time and vetting issues:

> One of the big challenges is … that vetting process for member requests, because we get so many. I remember … one of the members went through and added like all of her female Navy … friends … so in one day, she had added like 100 people, maybe 150. And … we thought that they were all legitimate … but we still had to go through that vetting process and … it's hard to … chip away at that, especially because the Internet Explorer version we have at work is not very compatible with the new Facebook page … It's just easier to do it from home, but then you don't want to be doing all that work at home.

Another problem identified by the interviewees was enforcement. Each FB group posts specific rules regarding conduct on the group. For example, from the Female Enlisted Sailor Group:

This group shall remain professional and productive at all times. Posts and/or comments that are insulting, inappropriate with or without photos, contain profanity, or solicit goods or services will be removed without notice. You are also asked to keep in mind that this group is open to enlisted servicewomen of ALL ranks, so please keep comments respectful at all times.

Enforcing these standards, and other general violations such as operational security (OPSEC), is a responsibility of the group administrator. Interviewees identified the most common violation is users soliciting private business on the groups. They also conveyed that there is a lot of self-policing within the group; however, anything inappropriate gets reported to administrators, and they must delete the post and decide how to deal with the offending user. Enforcing these policies, again, requires time, which is already limited.

The final problem identified during the interviews was advertising for the groups. The administrators would like to see membership numbers that reflect the represented communities. The interviewees, however, expressed having insufficient resources, primarily time, to adequately advertise for these groups. Currently, new members either discover the groups through word of mouth or through an annual women's symposium. The OWP would ideally develop more ways to advertise and increase membership.

4.   Content

The remaining theme discussed during the interviews was post content on the groups. Each interviewee identified similar categories that they thought were prevalent or reoccurring on the groups. Those sub-categories included: pregnancy, parenthood, breast-feeding, uniform/hair regulations, deployment, women combat exclusions, physical fitness, sexual harassment/assault, news article, and stories.

As previously discussed, the OWP monitors topic trends to identify policies that may be unfair, inadequate, or unclear as a way to effect change. The interviewees, however, mentioned this process as a source of frustration. For example, they read numerous posts complaining about uniform issues, but uniforms do not fall under their realm of responsibility. The OWP brought up specific issues to the Navy Uniform

Matters Office, but they do not have direct authority to make the appropriate changes. Even though they are able to identify problems based on post content, they are not always able to effect change.

The analysis demonstrated consistency between the interviewees and therefore within the OWP. Interview responses enable a better evaluation of the group's effectiveness and recommendations for improvements.

B.   FB DATA

The FB data was categorized, sorted, and analyzed to determine how the members are using the FB groups. I organized the material into user statistics, CMSS analysis, and content analysis.

1.   User Statistics

To summarize the use of the FB groups, I counted the number of total posts, total members, posting members, and days of data for each group. I then calculated the average number of posts per day in each group. The enlisted group averages over 20 posts per day, as compared to 0–2 posts per day for the aviator and officer groups. This comparison, however, does not account for the size differences of the groups. I, therefore, calculated the number of posts per day, per member. Lastly, I calculated the percentage of members who post compared to total members. I made these calculations for each group as well as for the total data collected in the study. The results are summarized in Table 1.

Table 1.   Summary of FB Use

Group	# of Posts	Total Members	Posting Members	Date Range	Days of Data	Posts/ Day	Posts/Day /Member	% of Posting Members
Aviators	138	279	32	Nov 12–Feb 15	829	0.17	0.00060	11.47%
Officers	824	1789	121	Nov 12–Feb 15	786	1.05	0.00059	6.76%
Enlisted	608	6951	397	Jan 15	30	20.27	0.00292	5.71%
Total	1570	9019	550	-	1645	0.95	0.00011	6.10%

I was interested in observing the number of posts over time and how the numbers compared with each group. I plotted the number of posts each month as a function of the total group members in order to normalize the data between the three groups (Figure 1). The graph depicts the gap in officer data (May 2014–January 2015) and the limitation of one-month's enlisted data. The increase in the aviator group activity in October of 2014 was a result of a single user advertising and offering support for a remembrance run. The enlisted use appears to be irregular, but the sudden increase is due to lack of data in surrounding months.
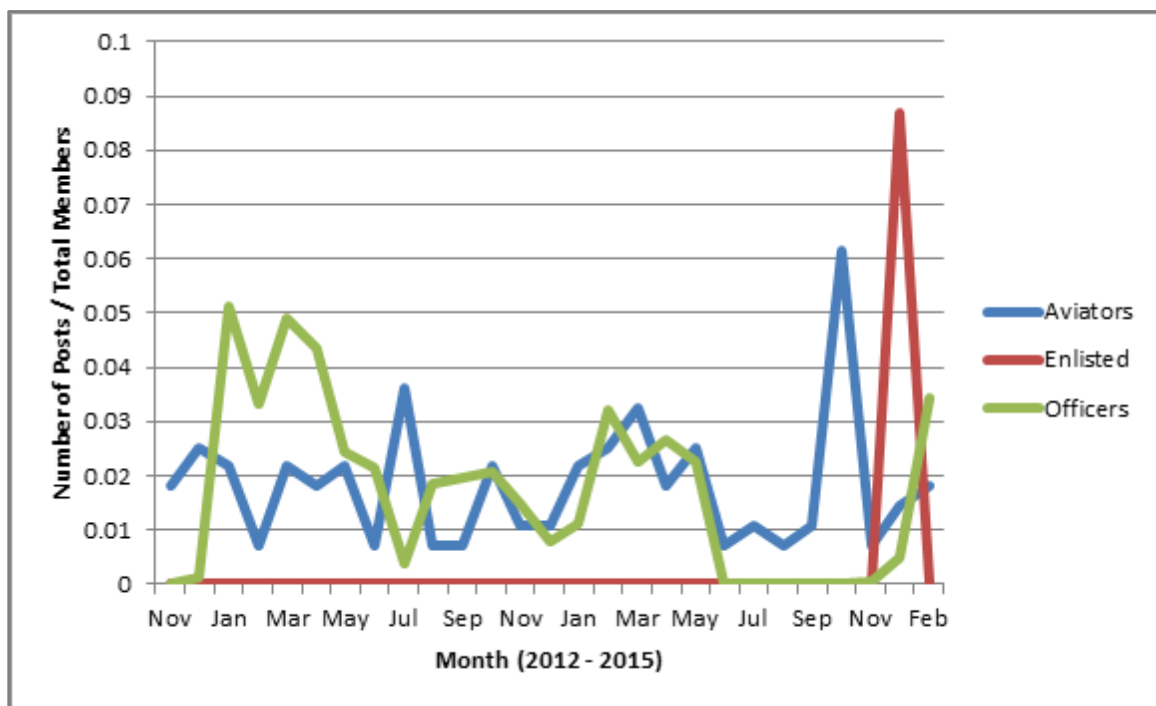
Figure 1.   Posts per Month / Total Membership

Both Table 1 and Figure 1 show that the officer and aviator groups have a similar post rate per member (0.00060 and 0.00084, respectively), but the enlisted group is over three times more active per member (0.00292).

The final part of the user analysis looks at how the group activity is distributed over group membership. Figure 2 shows a histogram of user posts, and it demonstrates

that the majority of users in all groups post 1–3 times (accounting for 42.87% of total posts).
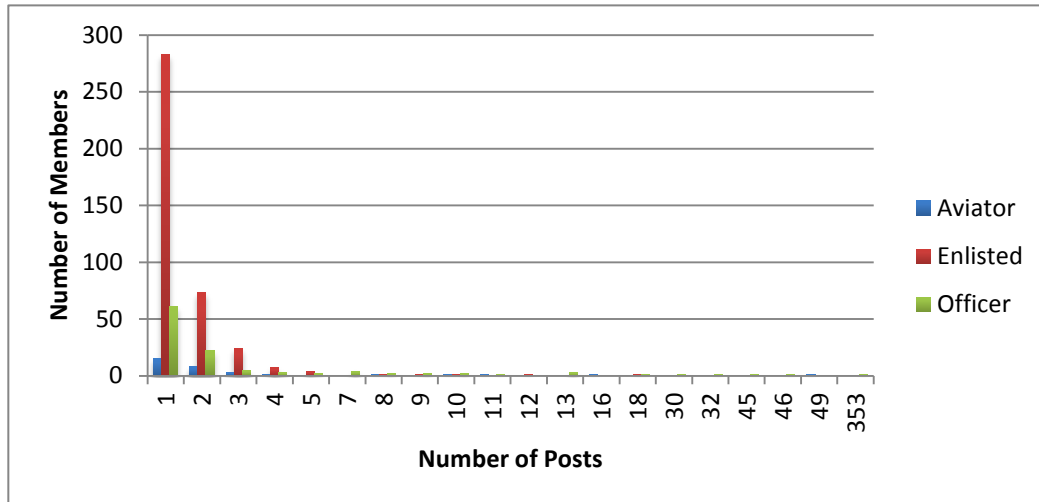
Figure 2.   Histogram of User Posts

In order to look more closely at the distribution of members who post more frequently, I adjusted the scale of the y-axis to a maximum of 10. Figure 3 shows the same chart with the scale adjusted. This version better depicts the more active members of the groups. The officer group has a member who posted 353 times, an average of 0.64 posts per day, which accounts for 44% of the group's total posts. The aviator group's most active member posted 49 times, an average of 0.059 posts per day, accounting for 35% of the group's total posts. Finally, the most active enlisted group member posted 18 times, for an average of 0.60 posts per day, accounting for only 3% of the group's total posts. Both the officer and enlisted most active group members post similar rates (0.64 and 0.60 posts per day), but the officer member has a much larger impact within the group based on the percentage of posts. This is partially due to the size difference of the group but also because of the activity level of other members. Figure 3 also shows that the officer group has more members who contribute more frequently (30, 32, 45, and 46 posts), accounting for an additional 19% of the group's activity.
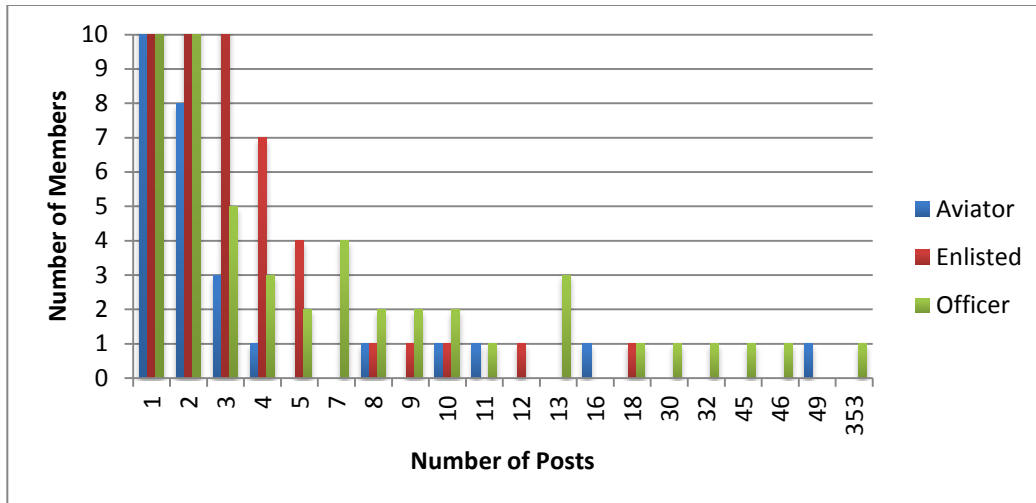
Figure 3.   Histogram of User Posts with Adjusted Scale

In summary, the analysis shows that the enlisted group has a higher activity level than both the officer and aviator groups. Fewer members who post frequently dominate the officer group activity level. The enlisted activity level, conversely, is spread between more users. That information will contribute to evaluating the effectiveness of the three groups.

2.   CMSS Analysis

The next portion of my analysis categorized FB posts as a type of identified social support; the analysis also shows whether that support was offered or sought. The types of social support from most to least common are: informational (71.7%), emotional (16.7%), networking (6.4%), esteem (3.1%), and tangible (2.1%). Each group has similar percentages of types of social support; however, the aviator and officer groups primarily offered informational support, while the enlisted group primarily sought informational support. The enlisted posts that are categorized as informational support primarily come in the form of a question, thereby seeking informational support. The aviator and officer groups, on the other hand, generally post in the format of an announcement, often sharing a link or information about a special event. That trend may be linked to average age or experience level of the groups, but it requires further research to determine. Figures 4, 5,

and 6 depict the percentage of each type of social support and whether it was sought or offered for the aviator, officer, and enlisted groups, respectively.
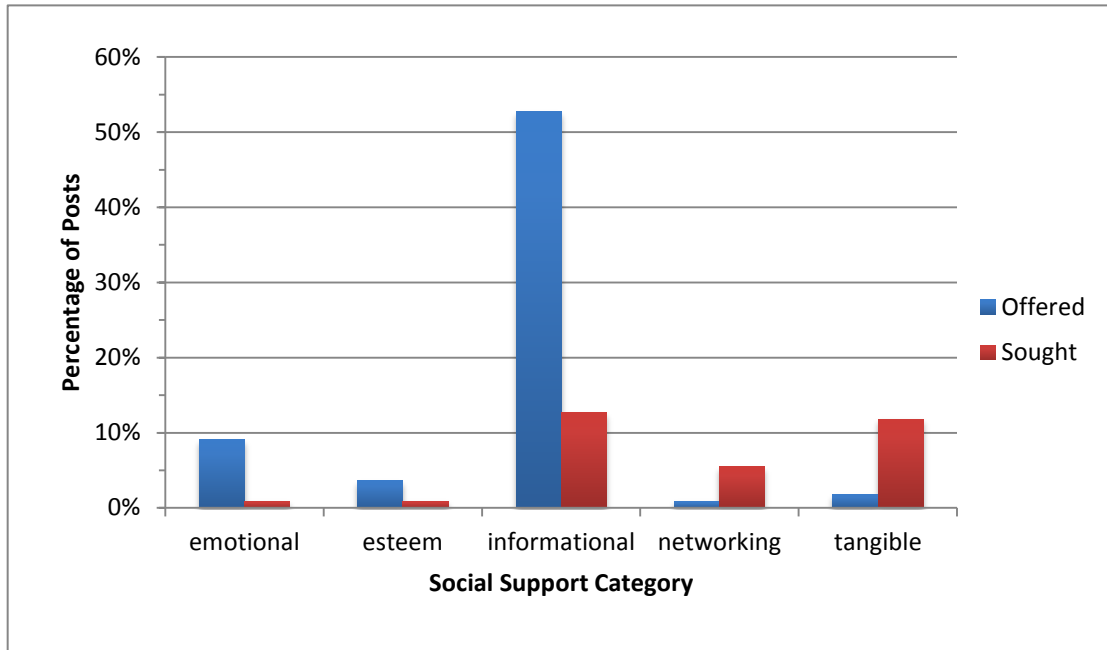
Figure 4.   Aviator Computer-Mediated Social Support
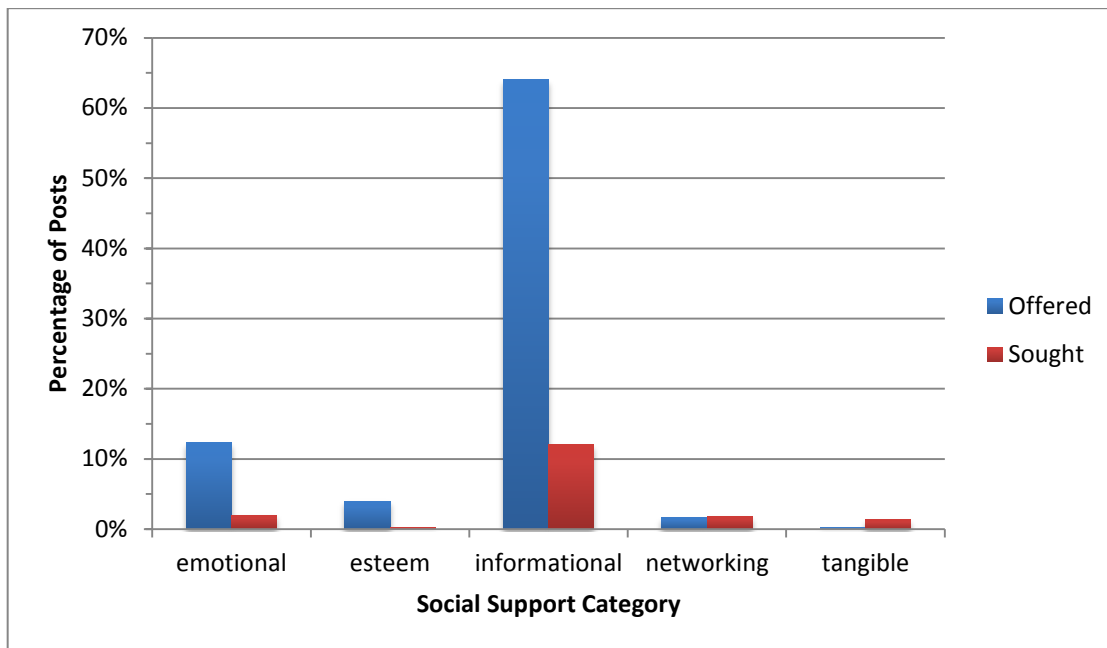
Figure 5.   Officer Computer-Mediated Social Support
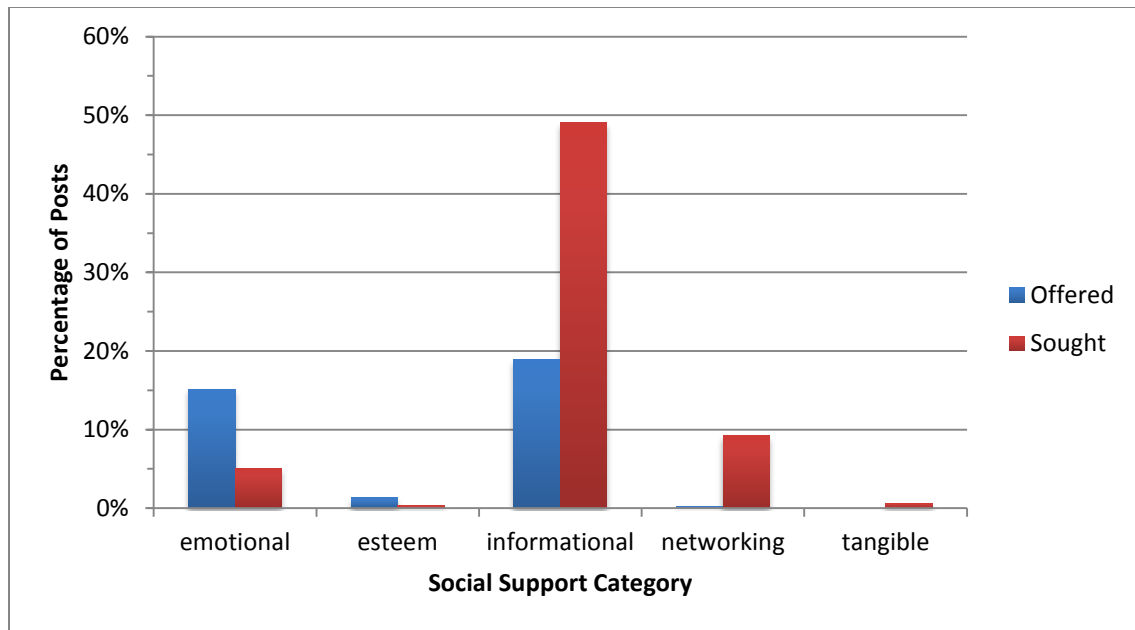
Figure 6.   Enlisted Computer-Mediated Social Support

With the exception of informational support, each category has a strong tendency to either be sought or offered by all groups. Figure 7 graphs each type of social support broken down by either sought or offered. Emotional and esteem support are primarily offered while networking and tangible social support are primarily sought. Informational support was divided—59% offered and 41% sought. As previously mentioned, the aviator and officer groups largely offer informational support while the enlisted group tends to seek informational support.
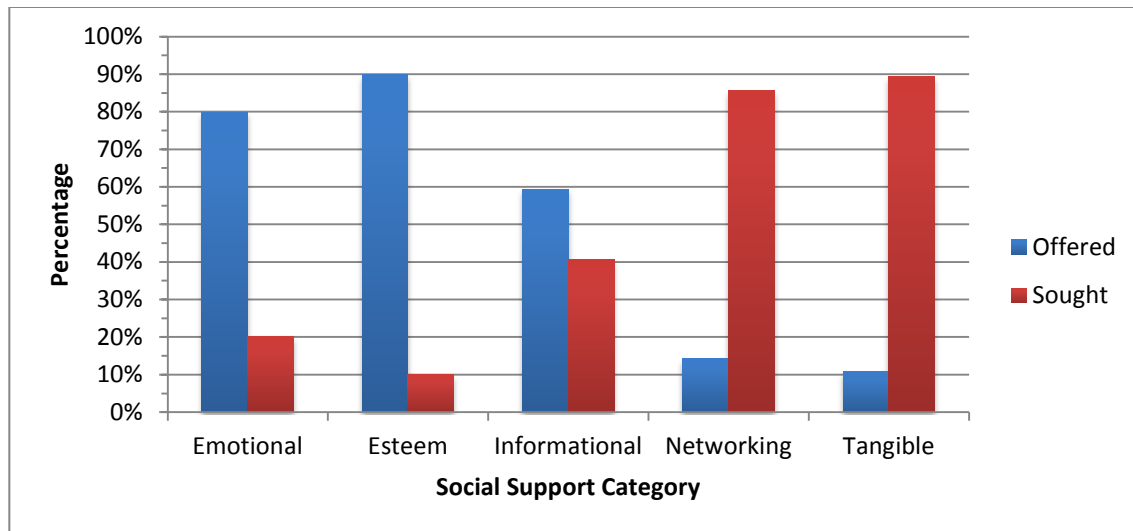
Figure 7.   Social Support Category—Offered versus Sought

The CMSS analysis demonstrated the most frequent types of social support and how they are used within the groups. That information aids further analysis of the group's effectiveness.

3.   Content Analysis

The final portion of the data analysis categorizes FB posts by content. I organize this section by first discussing the combined data for the three FB groups and then compare and contrast some differences. Then I will analyze content trends for each group individually and provide examples of common posts.

a.   *Combined Data*

Table 2 shows the categories in alphabetical order and summarizes the results by FB group, total posts, and the percentage of total posts for each category. Table 3 shows the same data, but it sorts the data by percentage from high to low. The top five categories of all posts are: special event, inspirational story/photo/video, other, uniforms, and article/book suggestions. The category "other" was used for any post that either did not have enough information to categorize or did not fit well into any other category.

Table 2.   Summary of FB Post Content—Alphabetical Order

	Aviators	Enlisted	Officers	Total	Percentage
Article/Book Suggestions	6	10	73	89	6.66%
Awards	3	11	11	25	1.87%
Breast-Feeding		7	2	9	0.67%
Career Intermission Program	5		6	11	0.82%
Clubs/Organizations	7	9	6	22	1.65%
Deployment			3	3	0.22%
Domestic Violence			4	4	0.30%
Equal Opportunity		2	1	3	0.22%
Family / Parenting	5	37	26	68	5.09%
FB Group Admin	13	8	4	25	1.87%
Fund Raiser	7		2	9	0.67%
Gender Barrier	2	9	18	29	2.17%
GI Bill	2	13	6	21	1.57%
Inspirational Story/Photo/Video	7	49	55	111	8.31%
Job Opportunity	12	34	23	69	5.16%
Medical	1	21	7	29	2.17%
Mentorship		40	6	46	3.44%
Military Relocation		56	3	59	4.42%
Other	8	60	33	101	7.56%
Pay/Bonuses	1	35	3	39	2.92%
Physical Fitness Assessment		14	5	19	1.42%
Pregnancy		19	17	36	2.69%
Promotion	7	40	16	63	4.72%
Retirement/Separation	1	23	6	30	2.25%
Sexual Assault Prevention	2	4	64	70	5.24%
Special Event	30	15	72	117	8.76%
Suicide Awareness			3	3	0.22%
Survey	3	3	8	14	1.05%
Technology		26	9	35	2.62%
Uniforms	7	46	37	90	6.74%
Women Combat Exclusion	2	2	36	40	2.99%
Women on Submarines		7	9	16	1.20%
Women's History	2	3	26	31	2.32%

Table 3.   Summary of FB Post Content—By Percentage (High to Low)

	Aviators	Enlisted	Officers	Total	Percentage
Special Event	30	15	72	117	8.76%
Inspirational Story/Photo/Video	7	49	55	111	8.31%
Other	8	60	33	101	7.56%
Uniforms	7	46	37	90	6.74%
Article/Book Suggestions	6	10	73	89	6.66%
Sexual Assault Prevention	2	4	64	70	5.24%
Job Opportunity	12	34	23	69	5.16%
Family/Parenting	5	37	26	68	5.09%
Promotion	7	40	16	63	4.72%
Military Relocation		56	3	59	4.42%
Mentorship		40	6	46	3.44%
Women Combat Exclusion	2	2	36	40	2.99%
Pay/Bonuses	1	35	3	39	2.92%
Pregnancy		19	17	36	2.69%
Technology		26	9	35	2.62%
Women's History	2	3	26	31	2.32%
Retirement/Separation	1	23	6	30	2.25%
Gender Barrier	2	9	18	29	2.17%
Medical	1	21	7	29	2.17%
Awards	3	11	11	25	1.87%
FB Group Admin	13	8	4	25	1.87%
Clubs/Organizations	7	9	6	22	1.65%
GI Bill	2	13	6	21	1.57%
Physical Fitness Assessment		14	5	19	1.42%
Women on Submarines		7	9	16	1.20%
Survey	3	3	8	14	1.05%
Career Intermission Program	5		6	11	0.82%
Breast-Feeding		7	2	9	0.67%
Fund Raiser	7		2	9	0.67%
Domestic Violence			4	4	0.30%
Deployment			3	3	0.22%
Equal Opportunity		2	1	3	0.22%
Suicide Awareness			3	3	0.22%

The most recurrent categories are scattered depending on the group. I determined the five most frequent categories, as a percentage of total group posts, and charted those relative to the other groups. The aviator group's five most frequent categories were: special event, FB group administration, job opportunity, other, and inspirational

story/photo/video. The officer group's five dominant categories were: article/book suggestions, special event, sexual assault prevention, inspirational story/photo/video, and uniforms. Finally, the enlisted group's five most frequent categories were: other, military relocation, inspirational story/photo/video, uniforms, and promotion. The results are shown graphically in Figure 8.
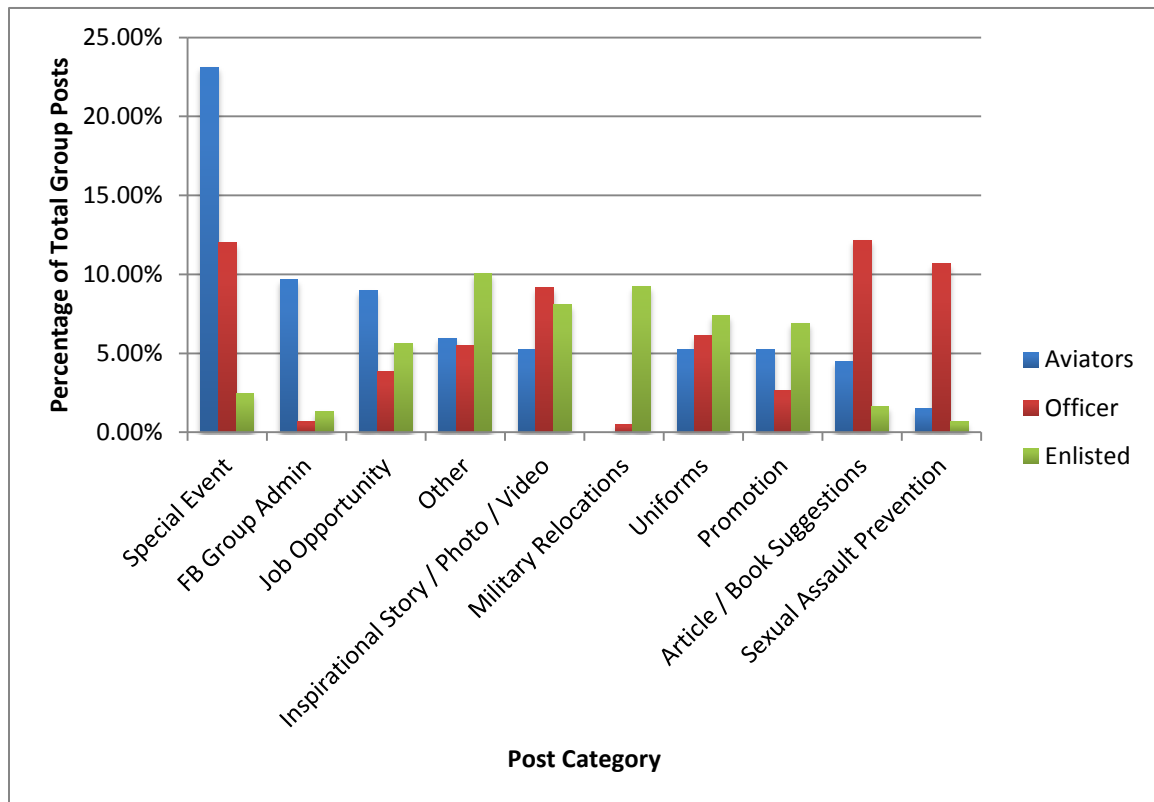
Figure 8.   Content Data (Most Frequent)

The most consistent categories between all groups were uniforms, inspirational story/photo/video, other, and promotions. There were large disparities between some categories when compared to other groups. For example, the aviator group has a large amount of content relating to special events. A closer look at the data identifies an annual "Women in Aviation" symposium that accounts for the majority of the special event posts. Another disparity was the large number of posts on the officer group relating to sexual assault prevention. These posts were predominantly from the same user (who posted 353 times to the officer group) and occurred while sexual assault was a

highlighted issue within the DOD. One final difference that caught my attention was the amount that the enlisted group posted about military relocations compared to the other groups. The data does not present a clear explanation for that disparity; therefore, the data suggests the enlisted group is more concerned with relocations than the other groups. The average age or experience level of the group might explain that trend, but specific user information was not available in this study.

b. *Individual Group Trends*

Aviators: The aviator group posts were largely dominated by information on special events. As previously mentioned, there is an annual "Women in Aviation" conference, and the FB group actively uses the forum to advertise and give information on that conference. The second most common category of post for the aviator group was what I labeled "FB Group Admin." The following post is an example of that category:

> Ladies with wings! This group is for every female Navy and Marine Corps pilot and NFO, past or present. This will be a place your Office of Women's Policy Aviation Representative will use to keep you updated on the 'women's issues' we are currently facing. This is also a place to have discussions, share stories, meet new friends and reconnect with old friends, network and anything else. Please pass this group along to all of your other female friends with wings of gold!

The aviator group is the smallest and least active. The OWP administrators utilize administrative posts to encourage members to advertise and participate within the group.

The next most frequent post content for aviators was job opportunities. These posts vary. For example, it may be a user putting out information on applications to the Blue Angels or test pilot school or a user providing information on a specific billet that is opening. For example:

> Ladies, my billet at GWU NROTC will be up for grabs shortly. XO talked to Millington today and they are looking for my relief to report this [omit]. If you are interested tell your detailer (requires a package with your academic transcripts) and send me an email with your bio/resume to give the XO so he can make a by-name request [omit]. He would like to replace me with another female aviator to keep diversity on the staff. Besides the intrinsic satisfaction of molding midshipmen into future Naval Officers, ROTC is an excellent opportunity to develop professionally and

personally with education benefits (every member of the staff is currently enrolled in a grad program) and work/life balance.

This post demonstrates the ability for the aviator group to post very specific information because of the smaller, more homogenous group. Those attributes lend themselves to posts regarding job opportunities in the aviation community.

Beyond those top three categories, the numbers become very similar; the remainder of the categories involved eight or less posts. Figure 9 shows a summary of the aviator content analysis by number of posts in each category, from most to least frequent.
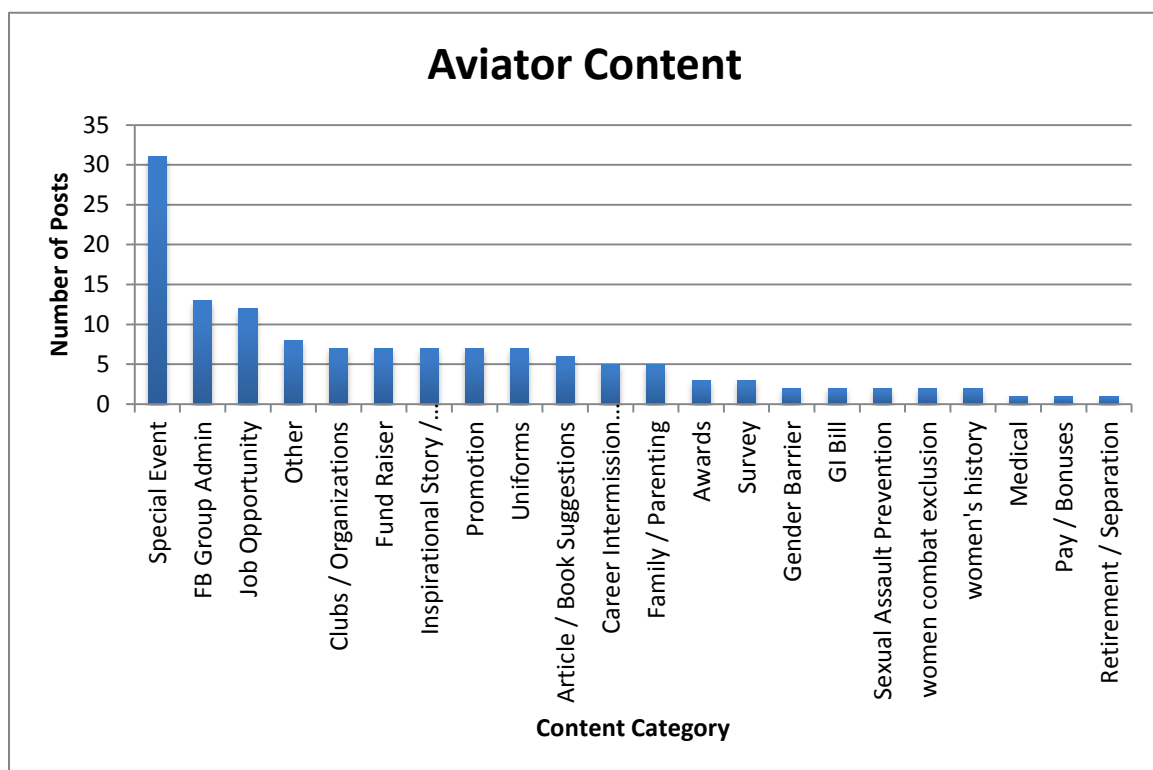
Figure 9. Aviator Content Summary

Officers: The most common post category within the officer group was article/book suggestions. These posts were most commonly in the form of a link to a current event article pertaining to the military and sometimes specific to women within the military. Many of the hyperlinks were broken or inactive; therefore, the topic of the suggested article or book was not always evident. Because of that, I decided to maintain

consistency by categorizing all similar posts as article/book suggestions. For example, the following is a post with a working link that I categorized as article/book suggestion:

> Thoughts? http://www.nytimes.com/2014/02/22/opinion/sunday/baird-the-courage-of-trans-soldiers.html?_r=0&module=ArrowsNav&content Collection=Opinion&action=keypress&region=FixedLeft&pgtype=article

The hyperlink directs you to an opinion piece about transgendered individuals serving in the military. The post asks for thoughts on the article. I, however, interpreted the post to be offering informational support since it was directing other users to this article. Most of the posts in this category have a similar format. Many say "Interesting…" followed by a link, or "Please read." Additional research could be done to further analyze topic trends within the suggested articles and the threads of discussion that stem from such posts.

The next most common post category for the officers was special events. Unlike the aviator group, this category encompasses many events throughout the year. Some are specific to women officers; others are just neat opportunities within a specific area. For example, "A film in Arlington, VA on 7 April, called Girl Rising. Reserve your ticket now to ensure the film makes its quota to be shown." Many of the events are opportunities for users within the group to network, such as:

> San Diego ladies, The Warrior Expo is in town this week on Wed & Thur. Take some time away from work for some 'professional development' and check out all the cool gear. http://www.adsinc.com/company/events/warrior-expo/.

The third most prevalent category of posts was sexual assault prevention. Forty-nine out of 64 (76.6%) of these posts were from a single user. The majority of the posts referenced a news article or opinion piece, but unlike the article/book suggestion category, the posts generally gave amplifying remarks, or at least made it clear what the suggested article was about. For example, "We'll solve it together: Fleet Master Chief John Minyard asks sailors to step in and act, when witnessing possible sexual abuse on liberty. http://www.navy.mil/viewVideo.asp?t=7." Additionally, these posts all occurred within a nine-month timeframe (June 2013–February 2014) while sexual assault was a prevalent and largely debated topic within the DOD. Additional research could be done to

study content trends over time compared to current events; this may be particularly relevant on the officers group since many of the posts include news articles.

The final content category with significantly more posts was inspirational story/photo/video. These posts required some assumptions. I was unable to see the attached photo or video, but I could often tell by the description that it fit into this category. All three FB groups had this category as one of the more frequent. I perceive these posts as generally a form of emotional support being offered to other users. Some came in the form of an actual story. For example:

> I attended a change of command of HSC-21 at NAS North Island … I was so pleased to see so many women pilots in that command … made me so proud … 50 years ago I was an Ensign line officer … you have come sooooo far…

Others were vaguer. For example: "Love this pic!!" or "What a great way to celebrate Women's Equality Day!" (Both posts had a picture attached that I was unable to see). The remainder of the post categories within the officers' group had significantly less posts. Figure 10 shows a summary of the entire officer group content.
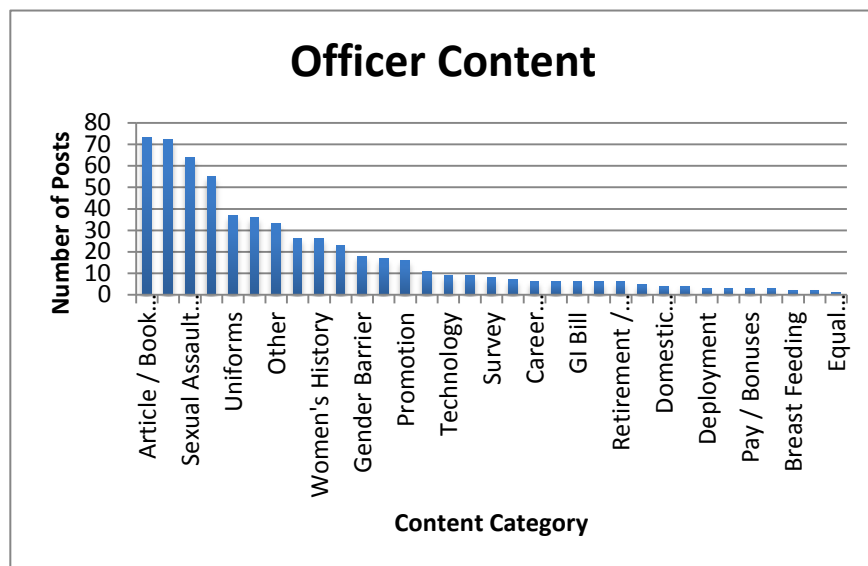

Figure 10.   Officer Content Summary

Enlisted: The enlisted content had a higher distribution throughout categories. The most frequent category was "other." As previously mentioned, the other category was how I classified posts that did not fit under any specific category or were unclear based on just the post text. The following are a few examples of posts labeled as other:

Tough love is still love

Fyi…

Ladies... what's a good airline to invest in internationally and domestic?

Which rank are you suppose to command 'Attention On Deck?'

The first two are examples of not enough information to categorize appropriately. The second two examples did not fit into any other category, but they did not warrant creating a new category.

The next most common category observed on the enlisted group was military relocation. These posts often asked either about a region or unit that the user was moving to, or seeking a network or service within that new area. These posts are often very direct and easy to categorize. For example:

> Can anyone tell me what squadron life is like for CS's [sic] either in California or Florida? I'm looking at a lot of different orders and my head is spinning but I've been considering a squadron.

The third most common category was inspirational story/photo/video. These posts, like the officer posts, shared a post with other users with the intent to inspire or motivate other members and to generally offer emotional support.

The next common category was uniforms. These posts commonly came in the form of a question, and they sought informational support from other members on proper wear or other information regarding uniforms. These are examples of posts categorized as "uniforms":

> Ladies, I'm trying to find the instruction for wearing colored contacts in uniform. Help, please! I know it can't be anything funky like purple but can I wear other "natural" colors like hazel?

Good morning! I was wondering how far up we are supposed to zip up the black fleece when wearing it with NWUs? I don't have computer access at this command yet or I'd look it up and I've just seen lots of differences on others who are wearing them. Thanks in advance!

Figure 11 shows a summary of the enlisted group content, and it demonstrates the more even distribution among content categories.
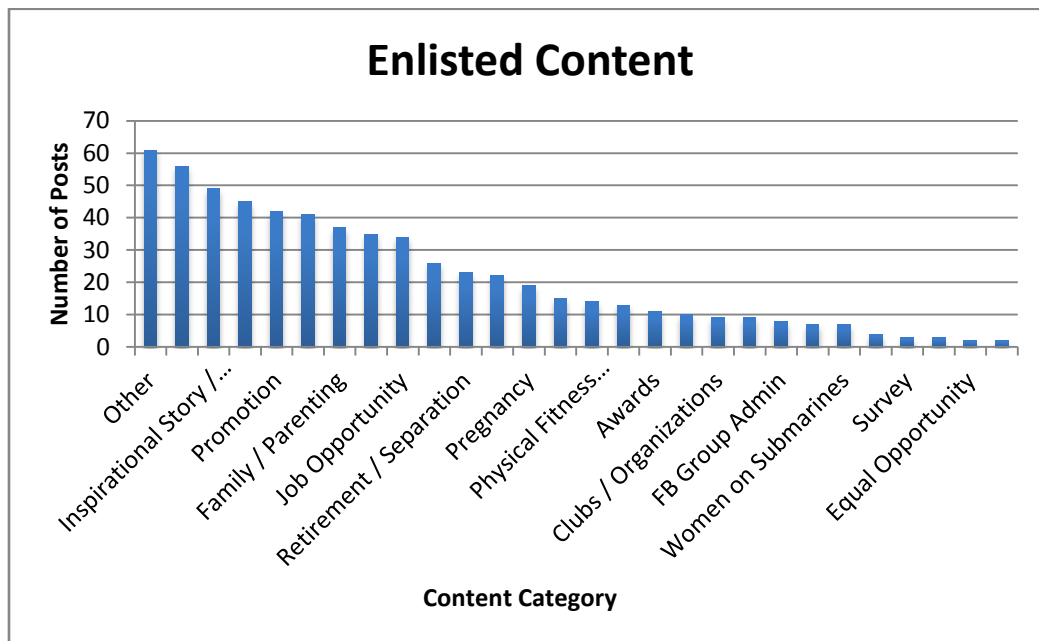
Figure 11.   Enlisted Content Summary

The aviator and officer groups both had a few categories that were much more frequent than the rest. The enlisted group, however, has relatively small changes between each category. I assume, but did not test, that there is a connection between distribution of member activity and distribution of content. While the aviator and officer groups appeared to have one or two members who were very active and able to sway common categories, the enlisted group has a larger percentage of active members who mostly posted once or twice, which brought a larger diversity to the content.

C.   EFFECTIVENESS ANALYSIS

This final segment attempts to link together the information gleaned from the interviews, FB data, and literature review to examine the effectiveness of the FB groups. I organized the section by ESM and CMSS in an effort to answer research questions one and two. Finally, I use the ESM and CMSS effectiveness analyses to rate each FB group according to the purposes established by the OWP interviews.

1.   ESM Effectiveness

To analyze the effectiveness of these FB groups as a tool for ESM, I consider the two affordances provided by ESM: visibility and persistence. I identify advantages, disadvantages, and limitations of those affordances within the scope of these FB groups, as supported by the interviews and data. Next, I utilize the three previously discussed metaphors—leaky pipe, echo chamber, and social lubricant—to identify additional advantages and disadvantages.

Visibility: Both the analysis of the interviews and FB posts demonstrate that visibility is an important affordance of these FB groups. Visibility allows complex communications between individuals who may not otherwise communicate, and creates conversations that could even benefit lurkers. Without access to the entire threads created from a post, it is difficult to determine the level that this is occurring; however, the following are some examples of users attempting to establish new communications that could provide a benefit to all users:

> Does anyone know how long after you submit a 1306 to terminate shore duty, does it take to get orders?

> Hey ladies! As we all know, it is tax season. I've been using turbo tax and am having a little bit of difficulties since my husband and I have to file for three different states. Do any of you have a recommendation for companies that can give free or low cost consultations in the Virginia Beach/Hampton Roads area?

Additionally, the interviews identified that visibility allows the OWP to informally track content trends and women's issues. Interviewees discussed visibility as one of the major roles the FB groups play within the office: "It's a way for us to be aware

of what's going on in the fleet." Simply through lurking the OWP can use the groups to gain an awareness that might not otherwise be available.

Visibility potentially creates metaknowledge by users gaining awareness of other members' areas of expertise. The analyses of interviews and FB data do not explicitly demonstrate establishment of metaknowledge. It may occur if a specific user consistently posts on a specific topic or regularly answers questions on a subject. Metaknowledge could be more available if members could specify areas of expertise on their profile. Although FB allows members to give a job description on their profile, it is generally not specific, and other members do not have the ability to search that feature. This study does not have a method to properly assess the level to which metaknowledge is formed within these groups, but I surmise that it is not readily available through FB.

The advantage of collaboration that visibility affords was not witnessed in either interviews or FB data. Although users get knowledge and advice from the groups to solve work-related problems, I did not see evidence of collaboration on shared goals. Collaboration likely does not occur because most group members do not work together day-to-day. Instead, these groups facilitate connections outside of their commands with individuals who may have already solved a similar problem. For example:

> I'm looking for a multi-cultural/diversity committee instruction. I am in the process of creating a committee for my command and would like to use an existing instruction as a reference.

This user seeks information on an instruction from a different command that she could modify for her own purposes. If someone is able to provide that information, it is still not considered collaboration because both members do not make progress on a shared goal.

Persistence: FB posts and threads are by definition persistent, meaning a post remains accessible as it was originally displayed to other users, provided it is neither deleted nor edited. Both the interviews and FB data, however, identified that the posts are not easily searchable, thereby limiting the ease of access to older posts. Therefore, I assess the persistence of posts to be limited based on their restricted accessibility. The

groups are a poor tool for organizing and searching content history. The following post from the aviator group demonstrates the limited persistence:

> Ladies, there was a great uniform heel discussion that happened either on this page or the female navy officers page. Does anyone remember the date, the links or even the page it happened on? It was so helpful and I can't find it anymore.

The interviews identified this as being an issue particularly on the enlisted group. The enlisted group is the largest of the three studied; it has over 20 posts per day on average. Because individuals seem to repost rather than reference past discussions on the same topic, the OWP observes many reoccurring posts. I observed this while analyzing the FB posts. In one month, there were nine posts on the enlisted group asking very similar questions to this:

> Hey ladies, I am due to separate in Feb and I was wondering if anyone knows how I am supposed to get my W2 for my taxes if I don't have access to Mypay?

Leaky Pipe: As previously mentioned, the affordance of visibility allows all users to be privy to conversations and discussions that they otherwise would not be a part. The leaky pipe metaphor is tied closely to that affordance, and it presents the idea that the directionality and content of a post is visible to users who were not involved directly with the communication. The knowledge and experience gained from others' conversations is the true advantage of the leaky pipe phenomena, and it is witnessed daily on these FB groups.

The disadvantage to these groups when viewed as a leaky pipe, however, could be information overload. The analysis of FB posts suggests that the enlisted group may suffer from information overload. I base that assessment on the same evidence that demonstrates limited persistence, i.e., many posts of the same topic occurred within a relatively short amount of time. The enlisted group has an average of more than 20 posts per day, which is a lot to sort through—especially if a user is not regularly checking FB. The high post activity causes threads to quickly fall off the news feed. The limitations of searching historical content results in that content becoming effectively lost. A vicious cycle could occur as users continuously post similar content without searching for

previous discussions. Chapter II identified that as a result users may become disinterested and disengaged from the group, thereby losing the original advantage that the leaky pipe phenomena offered.

Echo Chamber: The next metaphor used to explore these FB groups in the context of ESM is echo chamber. An advantage, as identified in Chapter II, of the echo chamber phenomenon within social media is the creation of common ground that makes interaction and sense of belonging easier.[86] The interviewees identified that these forums should be a "chance to see other people like them" or a "specific cohort" to allow for "open flow of dialogue" and "more candid responses." Each of the FB groups has posts that exhibit a level of candidness and comfort within the forum. For example:

> This is the future ... I cannot tell you how frustrating it is for me, as a guest speaker at many STEM [science, technology, engineering, and mathematics] events, to try to counteract the toy culture geared toward old-fashioned ways ... that girls only like to play dress up and house.

> More garbage. We're not pulling our weight in war because we aren't getting killed as much ... I offer the following counter argument/ rebuttal. Death is not a statistic we should strive toward. We shouldn't encourage misleading metrics. The 90% statistic cites casualties that as we know are often operator error/self inflicted/blue on blue/stupidity.

As women in the military, these posts display a level of frustration. Users may be reluctant to share with male counterparts or in the workplace, demonstrating the advantage of an echo chamber. The FB groups act as forums for like-minded individuals to share information, knowledge, and experience.

The disadvantage of an echo chamber, however, is that it can distort what is actually happening within an organization if few users dominate the activity level. This disadvantage may be present within the officer group. One member was responsible for 44% of the group's total posts, and this member's posts on sexual assault awareness almost single-handedly resulted in sexual assault awareness being one of the group's most frequent topics. Because the aviator and officer groups are smaller, individual members potentially have a much larger influence on the group dynamic. The

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[86] Leonardi, "Enterprise Social Media," 8.

overwhelming influence of a few members could stifle the participation of others and limit the way the group is being used.

Social Lubricant: The final metaphor used to describe ESM is a social lubricant. Any use within these FB groups demonstrates a certain level of social lubrication; however, the extent is difficult to gauge. The data and interviews do not show whether meaningful relationships are being established. The disadvantage that these groups may pose (as brought up in the interviews) is the tendency to replace face-to-face interaction and mentorship with these groups. It may also encourage women to seek help or guidance online for issues that would be more appropriately addressed by their chain of command.

In summary, the FB groups as a tool for ESM have both advantages and disadvantages. The interviews and data both indicate that the visibility provided in these groups links women who otherwise would not be connected and creates a forum to share knowledge and experience. Issues observed are a lack of collaboration, the threat of information overload, a potential for a restrictive echo chamber, and the likelihood of harboring of shallow connections and relationships.

2.   CMSS Effectiveness

The final section of the analysis uses the information gained from the interviews and FB data to discuss the advantages and disadvantages of the FB groups as a tool for CMSS. The section is organized by type of CMSS.

Informational: The FB data shows that informational support is the most common type of social support provided by these FB groups, comprising 65% of all posts. Informational support is both sought and offered by members, and it is an accessible and visible way to share knowledge, experience, and advice with others. All three FB groups appear to be a good forum for informational support, whether users share something perceived as valuable or seek wisdom from another user. The disadvantage to informational support, however, is the potential for misinformation. The interviewees identified that users are encouraged to cite sources for their information; however, this does not always happen. The large flow of information provides an opportunity for bad information to be passed. A second disadvantage is an over-reliance on social media for

answers. The interviewees also discussed a concern of a younger generation who relies on social media for answers instead of taking the time to read publications and instructions. The OWP encourages members to utilize other resources, but it offers these groups as a forum for clarification, advice, or experience-based knowledge. The gathered data is inconclusive as to whether good or bad information is being distributed on these groups.

Emotional: The data shows that 17% of all total posts are emotional support. This number demonstrates a certain willingness to provide emotional support within the groups, but the aviator and officer groups are lower (10% and 12%, respectively) than the enlisted group. I attribute this to the smaller size of the groups and less anonymity. Chapter II discussed how anonymity enables users to disclose personal information that they otherwise would not in FtF relations. Facebook, however, often uses real names, decreasing the amount of anonymity provided. The officer and aviation communities are smaller both within the FB groups and within the Navy. This may make those members more reluctant to share emotional posts. Although the FB groups are closed to the public (increases the safety), the groups may still not be sufficient to allow extensive emotional social support.

Networking: Social network support occurs in 6.4% of total posts within the study. This number reflects posts that are exclusively a request or offer for networking; however, I would argue that other posts, such as emotional and informational and their associated responses, offer a form of social network support that is not accounted for in this study. The officer group utilizes networking the least compared to the other groups (only 3.5% of officer posts were categorized as networking). The interviews and data do not provide a clear explanation as to why. The FB groups have the advantage of connecting women without concern for geographic separation or time differences. Considering these advantages, it seems this form of social support is underutilized within the groups, but especially with the officer group.

Esteem: Esteem support is a challenging type of social support to cultivate through computer media. This form of social support generally is a byproduct of established and meaningful relationships. The small amount observed (3%) primarily was

congratulating individuals on promotion. There may have been other esteem support occurrences as a result of these FB groups through channels that were not included in the research—specifically private messages. Based on the literature review and the research data, I do not think esteem support is a likely output from CMSS.

Tangible: Finally, tangible social support was the least frequent type of social support observed in this study (2%). Because tangible support relies on the transfer of goods and services, it generally nullifies the geographic advantage that CMSS provides. There are some exceptions to this. Some examples are: monetary donations via online transfers or the ability to mail a specific good. A reoccurring form of tangible support observed in this study was the request to either give or receive maternity uniforms to or from other users. Maternity uniform exchange is a clever form of tangible support on these forums. Although tangible support is present, the geographic requirements greatly limit the availability of this type of support on these FB groups.

The type of support provided by CMSS closely reflects the established goals of these FB groups, as determined from the interviews. As previously discussed, the analysis of interviews identified networking, sharing knowledge and experience, support, and mentorship as FB group objectives. Networking is a type of social support. Sharing knowledge and experience could be labeled as informational support. Support was very non-specific in the interviews, but I surmise the interviewees meant emotional and esteem support. Finally, mentorship is a relationship that combines all forms of social support.

The primary limitation of these FB groups is their ability to provide social support is weak relationships caused by lack of FtF interaction. By enhancing the feeling of safety and security on these groups, and cultivating stronger relationships, the groups could expand in their ability to provide social support to their members. Overall, the study demonstrates that the FB groups are a good platform for CMSS with some additional managerial benefits.

3. FB Group Rating

The final section of my analysis rates each FB group separately based on the desired activities established by the interview analysis: mentorship, networking, support, and sharing knowledge and experience. I utilize four ratings: Excellent, Good, Fair, and Poor. The criteria for each rating were defined in Chapter III.

a. *Aviator Group*

The aviator group is the smallest and most homogenous of the three groups. Although it has the lowest average number of posts per day, it has the highest percentage of members who have posted to the group. I would characterize the aviator group as the least anonymous due to its size, and therefore members may be more aware of self-presentation within the group. Those characteristics, along with post content and forms of social support, helped me to determine the ratings for each of the desired group activities.

Mentorship: I evaluate the mentorship availability on the aviator group as fair. The FB posts are primarily informational (65%), and 80% of the informational posts are offered, rather than sought. The content analysis shows that the information posted primarily concerns special events, FB group administration, and job opportunities. Posts generally have an impersonal tone, and they do not attempt to connect on a personal level. For example:

> Hey Ladies, there is a growing movement to ensure all MOSs are available to both men and women, no exceptions, in 2016. It wasn't that long ago that we weren't allowed to fly in combat aircraft. If you would like to be in a military where the most qualified individual can fill an MOS regardless of gender, then head on over to the NoExceptions2016 page and click 'Like'!

> At the DC Navy Memorial they celebrate 2013 as the Year of the Military Woman. Tribute to Aviation as well.

Posts that reach out to establish a more personal connection between users are seldom. An example of one such post is: "Anyone else going to WAI this year? I'll be there - hope to see some of you!" Based on these types of posts in the aviator group, as

well as in the other groups, I believe there is a greater potential for mentorship within the group.

Network: I rate the aviator group as an excellent platform for networking. The aviators' networking posts accounted for only 6% of total posts, which is not as high as the enlisted group's networking percentage, but I do not think this number tells the entire story. I found that many of the aviator informational posts blended into networking by posting about special events that are used for networking. For example:

> Ladies ... this is going to be a GREAT event ... I am definitely going to attend this!! https://www.facebook.com/pages/Typewriters-to-Strike-fighters/437920829623249

Additionally, many of the posts that are seeking networking are very specific, which suggests that this group may be a great way to find these connections compared to other tools offered by the DOD and DON. For example, this post is seeking a contact for someone who has done the career intermission program (CIP):

> Hey ladies, anyone have a good POC for the Navy's sabbatical/off-ramp program? Either someone who's done it and knows the ins and outs of applying for the program or where to find the instruction/some guidance.

Again, it is difficult to assess the level of networking that results from the posts without seeing the entire thread, private messages, or knowing if members are connecting at events. Nonetheless, networking posts occur regularly, and the size and make-up of this group make it an appropriate forum for such interaction.

Support: I rate support as fair within the aviator group. Their posts demonstrated the least amount of emotional and esteem support (14.5%) when compared to the other groups (18.5% and 21.9%). As previously mentioned, the tone of posts is largely impersonal. The following post is an example of a user attempting to start a conversation regarding challenges of being a female pilot when talking on the radio: "I found this to be an issue, especially in the aircraft and talking on the radio. Thoughts? https://www.facebook.com/NPR/posts/10152912889121756." Based on these numbers, I think there is room for improvement on the amount of support within this group.

Sharing knowledge and experience: I evaluate the aviator group as good at sharing knowledge and experience. I based my assessment on the content of the posts. The aviators do a good job of advertising special events that are coming to geographical regions, but I think the group would benefit from a broader range of conversations. FB group administration posts are the second highest content category (9.7% of all posts). Although these managerial posts benefit the growth and structure of the group, the volume seems imbalanced. The group may benefit from a larger variety of subjects discussed. More topic variety could provide more opportunities to share knowledge and experience, thereby increasing the knowledge base of the collective group. Table 4 summarizes how I have rated the effectiveness of the aviator FB group.

Table 4.   Aviator FB Group Evaluation

	Poor	Fair	Good	Excellent
Mentor		X		
Network				X
Support		X		
Share knowledge and experience			X	

b.   *Officer Group*

The officer group demonstrates characteristics of both the aviator and enlisted group. The members of both the aviator and officer group are naval officers—implying college graduates (a requirement to be an officer)—which likely increases the average age of the group members. The officer group, however, is more similar to the enlisted group in its size and job diversity. These characteristics give the groups a higher level of anonymity, and they may make users less conscious of their self-presentation within the group. These assumptions and analysis of type and content of posts helped me rate the group.

Mentorship: I evaluate the officer group as good in the category of mentorship. I base that assessment from the combination of informational, emotional, and esteem

support available (94.5%) combined with the content of the posts. The following is an example post that I think captures the potential for mentorship:

> As we kicked off Women's History Month today, I was struck with just how far we have come since I started at the Naval Academy way back in 1988. Then, women could not serve in combatants and could not serve in submarines. Yes, there were women in Command, and a few female Flag Officers, but the coveted URL positions still eluded them. The Combat Exclusionary Law was repealed in 1993, the year after I was commissioned, and since then, I have watched Navy women go to Command of CRUDES ships and Amphibs, Aviation Squadrons, DESRON's, PHIBRON's, and Carrier Strike Groups. With the repeal of the barrier to women serving in direct combat roles, I look forward to witnessing Navy women tackle even bigger challenges. To all of my fellow female Naval Officers, be proud of your accomplishments and take time this month to reflect on those who paved the way for you.

This post combines historical information with personal experience, but it also emotional support in the form of appreciation for women's accomplishments. Although it may not result in one-on-one mentorship, I think posts like this harbor transmission of knowledge and experience from an older to younger generation while providing the emotional support needed to continue progress.

While 64% of total posts offer informational support, the content analysis demonstrates that many of these posts are giving article and book suggestions. My impression of these posts is that they generally intend to start conversations on controversial subjects dealing with women's issues. It is unlikely that these posts result in one-on-one mentorship; however, they are another way to share personal experiences, opinions, and connections with other women in both a personal and professional manner.

I rated the category as good instead of excellent, because I think there is room for improvement by finding ways to connect women with individual mentors and mentees. I discuss this further in the recommendations section of Chapter V.

Network: I rate the officer group as a good forum for networking. Of the three groups, they had the lowest percentage of networking posts (3.5%). Like the aviator group, however, many of the informational posts include information regarding special

events that provide an opportunity for networking. The following are some examples of networking posts from the officers' group:

> Good morning Ladies, can anyone please point me to an enlisted or officer female diver? I spent the morning talking with a young woman who is thinking about joining the Navy and wants to be a diver. I would love for her to talk to someone in that community.

> I'm PCS'ing to Oak Harbor, WA is anyone from this group in that area?

While these are great examples of ways to network within the group, and demonstrate that networking is occurring, the numbers show room for growth.

Support: I evaluate the officer group as a fair tool for providing support. The group had 18.5% of total posts that were emotional or esteem support. This number is higher than the aviator group but lower than the enlisted group. The depth of the posts within those categories varies greatly. Most are as simple as, "Amazing. Stay strong!" with an inspirational photo attached. Others demonstrate a higher level of vulnerability from the user, like:

> Ladies, this is going to be a pretty long, personal, and uncomfortable post - I need your help with getting some ideas/feedback/recommendations together. I'm not writing this with the intent to complain, but to advocate for a change. It's taken me a while to get to the point where I can write this: a couple months ago, I had a miscarriage … [omit] The only Navy instruction I could find anywhere that addresses miscarriages at all is the pregnancy instruction, which has one sentence: OPNAVINST 6000.1C 110. Termination of Pregnancy a. Spontaneous Abortions. Following a spontaneous abortion (i.e., miscarriage), the servicewoman's PCM may recommend a period of convalescent leave when clinically indicated. The PCM may also waive participation from the PRT (PFA and BCA) as clinically indicated. To wrap up a long post, I think we need an instruction or an addition to the pregnancy instruction that has some guidelines for things like going on emergency or convalescent leave, follow-up treatment, notification of chain of command and the PCM, etc. and am looking for your help in how best to make it happen. The sad stats are about one in five women has a miscarriage, and those numbers only get worse as we get older. If I had trouble navigating this, imagine what it could be like for a seaman.

Much of that post was omitted for brevity, but it is an excellent example of a challenging situation that lacks clear guidance within instructions. This officer identifies an issue, becomes vulnerable to the group, and seeks support from others who may have dealt with a similar issue. Unfortunately, these types of posts are extremely infrequent. While the framework to provide support within the groups is there, this is an area that has unrealized potential.

Sharing knowledge and experience: Finally, I rated the officer group as an excellent platform to share knowledge and experience. I primarily based this upon the amount of informational support and content. As discussed in the mentor section, many of officer group posts are suggestions for relevant articles to the group that encourage discussion of challenging topics. For example:

> A well-written article by a fellow navy officer. I think a lot of us can relate. http://taskandpurpose.com/11-countries-3-deployments-4-years-heres-kept/?utm_source=facebook&utm_medium=facebook&utm_campaign=11-countries-3-deployments-4-years-heres-kept

I perceive posts like these as a great way to share knowledge and experience within the group. The ability to read the full threads would give a better idea of the level at which ideas are flowing within the group. It seems clear from the posts, however, that discussion is occurring and nurtured within the officer group. Table 5 summarizes my evaluation of the officer group.

Table 5.　　Officer FB Group Evaluation

	Poor	Fair	Good	Excellent
Mentor			**X**	
Network			**X**	
Support		**X**		
Share knowledge and experience				**X**

c. Enlisted Group

The enlisted group is the largest and likely most diverse group of the three. Again, I do not have access to specific demographics, but enlisted ranks consist of a larger group of people without a requirement for college. Further, there is a greater diversity in jobs available. The group averages over 20 posts per day for an average activity level per member more than triple the other groups. I surmise, based on the high number of members and posts, that this group has the largest advantage of anonymity, meaning individual members probably pay less attention to self-presentation. This data, however, is limited to one month (compare this to the aviator and officer data which represented almost the entire history of the groups). This limitation may have skewed my analysis of the group's effectiveness.

Mentor: I evaluate the enlisted group as a forum for mentorship as good. My assessment is based on a combination of social support type, offered vs. sought, and post content. The FB data characterizes the most common post on the enlisted group as seeking informational support within the category of "other," meaning a topic that does not fit within its own category. That trend is much different from the officer and aviator groups, where they mostly offer information support in the form of special event announcements or posting interesting articles. I perceive this difference to mean that the enlisted sailors are seeking out information, advice, and therefore a form of mentorship in their posts. Again, the level of mentorship that occurs is indeterminate due to lack of complete post threads or private messages, but I assume that most of the posts are answered, thus providing the sought mentorship. As an example:

> Hi ladies I'm in a sticky situation and could use some help. My doctor had written me a recommendation to cross rate. I am in my window for orders and I've been getting mixed answers some saying I should go ahead and pick orders and others saying no I shouldn't because if I do it will be up to my gaining command whether or not I will be able to cross rate … I want to get this right so in case it falls through I don't get slammed with orders, I have 2 kids and dual mil - hubby is deploying very soon.

This post is a great example of someone who needs mentorship. Her command may not have the necessary tools to provide the guidance that she needs. This group becomes a good and appropriate forum to seek such support.

Similar to the officer group evaluation, I rate the enlisted group as good instead of excellent, because I think the group could benefit from some coordination to encourage more one-on-one mentorship.

Network: I rate the enlisted group as an excellent platform for networking. A total 9.4% of the posts fit within the networking category—the most of any group. The group has reoccurring posts that range from users looking for other users who may know something about an area, a job, or even childcare. The following are some examples:

Do we have any Female bowlers here in the Norfolk VA area? Please PM me.

Is anyone on here stationed on the USS Iwo-Jima (LHD-7)?

Hi ladies! Any BMs in here that work at ATG in Norfolk??

Again, it is challenging to assess what type of networking happens as a result of these posts without the resultant threads or private messages. I evaluate the group as excellent, however, because the women on the forum seem very comfortable and willing to use the group to find new connections. Even if they are shallow connections that just allow more detailed information to be passed about a job or unit, I still consider them important connections that could make a big difference in a military person's quality of life.

Support: I assess that the level of support within the enlisted group is fair, meaning some support has been observed, but I believe there is significant room for improvement. The amount of emotional and esteem support observed within the group was 20.3% and 1.6%, respectively (21.9% total—the highest of the three groups). The data, however, was collected during a month that the Chiefs' exam was administered. This is an annual exam that makes first class petty officers eligible to select for Chief, and it is perceived as a big hurdle within the enlisted community. Many of the emotional support posts were words of encouragement to those taking the exam. For example:

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Good luck to all the ladies taking the Chiefs test tomorrow.

Good luck to everyone taking the CPO exam!!!

The timing of this exam may have inflated the emotional support given within the group, but it is indeterminate due to limited data available. Other than the encouraging posts for the exam, there were similar emotional support posts as the other groups—inspirational stories, photos, and motivational videos. I did not observe many posts that truly made a user vulnerable to the group, and that environment allowed others to give needed support. Therefore, I believe in that aspect this group has room to grow.

Sharing knowledge and experience: Finally, I rate the enlisted group as excellent with sharing knowledge and experience. As previously discussed, the majority of the posts on the enlisted group seek information, knowledge, and advice from other users. The content analysis shows a nice distribution of topics within the enlisted group and also a good balance of offered versus sought informational support. With the assumption that users are responding to the posts, the transmission of knowledge seems to be the primary use of the group. Table 6 summarizes the ratings for the enlisted group.

Table 6.   Enlisted FB Group Evaluation

	Poor	Fair	Good	Excellent
Mentor			X	
Network				X
Support		X		
Share knowledge and experience				X

Overall, the enlisted group was collectively rated higher than the other two groups. I attribute the success of the group to the number of members and higher posting activity, which provides for more diverse interactions among group members. The assessment is limited by lack of demographics for the groups and a shorter time range for the enlisted group.

These findings and analyses answer the research questions (RQ) posed in Chapter III. Chapter V discusses the implications of these analyses, and it provides recommendations to the DOD and OWP based on implications.

V.   CONCLUSION AND RECOMMENDATIONS

This chapter provides a summary and implications of the study. It also provides, based on the implications, recommendations to the Office of Women's Policy (OWP) and Department of Defense (DOD). Additionally, I examine limitations of this research and give recommendations for future research. Finally, a conclusion presents my final thoughts on the study.

A.   SUMMARY

The Pew Research Center published a *Social Media Update 2014*, showing that 71% of all internet users are on FB and 70% of those users engage with FB daily.[87] FB is a free and widely used tool for computer-mediated human interaction. The implications of such interactions within organizations are widely unknown. The OWP established three FB groups in 2012: female naval aviators, female navy officers, and female enlisted sailors. These FB groups target minority groups within the DOD, and they became a forum for women to connect and share knowledge and experience with one another. This study utilizes these FB groups as a case study in an attempt to better understand the use of internal social media within the DOD. The scope of the study is to determine the effectiveness of these groups both as a tool for ESM and CMSS.

This research uses interviews with administrators of the FB groups to gain background knowledge, opinions, perceptions, and attitudes regarding the FB groups from the perspective of the OWP. The study also utilizes FB group posts to analyze activity level, content, and types of social support demonstrated. The research is limited by the amount of FB post data available, absence of FB group member demographics, and lack of analysis on the perceptions of the FB group users. A qualitative analysis of the data was conducted to determine interview themes, post content, and type of social support observed.

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[87] Maeve Duggan, Nicole B. Ellison, Cliff Lampe, Amanda Lenhart, and Mary Madden, "Social Media Update 2014," Pew Research Center, January 9, 2015, http://www.pewinternet.org/2015/01/09/social-media-update-2014/.

The analysis concludes that these FB groups are used primarily as a means for social support with specific managerial benefits. The managerial benefits include the ability to observe trends, disseminate information, and conduct informal surveys or solicit feedback from members. It also demonstrates that all types of social support are present on these FB groups, but that the informational support is most commonly offered and sought by group members. The results also demonstrate that the post content varies between groups; it also shows how individual members and current events may greatly influence the post content within a group (as shown in the officer group). Finally, the analysis rates the effectiveness of each group based on the objectives identified by the OWP's interviews. These ratings show success within the groups in the form of networking and sharing knowledge and experience. The ratings also determine that there is room for growth for mentorship and support within the groups.

The DOD social media website offers a variety of information: social media user safety, standards of conduct, social networking risks, operational security (OPSEC) training, and general guides for various social media.[88] It, however, does not consider social media as a form of social support. This study sheds light on a new approach for social media use within the DOD. The OWP's FB groups provide the framework for DOD to find future uses of CMSS that reach more military members. Additional research could be done to investigate the impacts of these groups on users to determine whether the groups increase quality of life and retention for military members.

The secondary implications of this study are managerial insights that may stimulate more impactful use of these groups within the OWP. The discussion of advantages, disadvantages, and limitations of the groups as a tool for CMSS may guide the OWP in developing succinct management strategies for each FB group. My recommendations include training all administrators on these advantages and disadvantages in order to empower the administrators to post with a purpose. Additionally, I recommend creating regional group representatives in major military

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[88] DOD Social Media Hub, accessed May 18, 2015, http://www.defense.gov/socialmedia/.

areas to act as supplementary administrators and coordinate meet-ups as an opportunity for group members to interact in person.

B.   IMPLICATIONS

The goal of this study was to use the OWP's Facebook (FB) groups as a case study to gain an understanding of how social media is used within DOD. The analysis evaluated the effectiveness of the FB groups as a tool for enterprise social media (ESM) and computer-mediated social support (CMSS). This section addresses the impacts or implications of the analysis.

The first implication of the study is that these FB groups act as forums for social support with managerial benefits. The interviews demonstrated that the OWP is able to describe, using activities, the purpose of these groups. The OWP, however, does not have a clear, unified objective for the groups. This study identified and described the emergent role of the FB groups. Users receive the benefits of social support. Management, or the OWP, gains three simple, yet powerful abilities from the groups: a means to disseminate information, request feedback or informal surveys, and, lastly, the ability to observe trends. Having a clear objective of these FB groups and an understanding of CMSS could guide the OWP's strategy for administrative and management roles within the groups.

Another implication of this study is recognizing other avenues in which DOD could benefit from this form of social media use. The OWP's FB groups provide social support to women, a minority group, within the Navy. As previously mentioned, the DOD is a dynamic work environment. Using non-traditional methods to provide social support could increase work satisfaction and quality of life for employees, thereby potentially improving retention rates.

Lastly, the analysis demonstrates the influence that one user can have on the direction of the group (based on the most active user within the officer group). The power of a single user has managerial implications and could act as either advantage or disadvantage for administrators. Group administrators should be aware that they may be able to shift the dynamic of the group with their posts, but they also know that if they are

the most frequent user, the group could be perceived as strictly a single direction communication tool of the OWP instead of a forum for social support.

C.   RECOMMENDATIONS

Recommendations based on this study consider the analysis, including the issues identified by the interviews and implications of the study. This section is organized to first give large-scale recommendations to the DOD, and then it provides management-level recommendations to the OWP.

DOD: I recommend that DOD look for ways to incorporate this type of CMSS for other minority groups. The analysis demonstrates these FB groups as a tool for social support for women within the military. This could be expanded for additional minority groups within the DOD. The OWP's FB groups could lay the groundwork for other similar FB groups such as Lesbian/Gay/Bisexual/Transgendered (LGBT), wounded warrior, and post-traumatic stress disorder (PTSD). As demonstrated, these groups could act as a forum for social support while management identifies issues, provides information, and receives feedback. The key is identifying groups of people within the DOD that may not have the support within their command to answer difficult questions or provide the emotional support necessary to still be successful within the DOD.

OWP: First, I recommend that the OWP conduct training for all FB group administrators on CMSS, emphasizing the unique advantages that CMSS provides as compared to traditional, face-to-face (FtF) social support. Additionally, I recommend incorporating the results of this study into the training to display the advantages and disadvantages observed on these FB groups. Lastly, I recommend that the OWP develop a unified strategy for the FB groups, emphasizing administrator activity level and content. For example, if the goal is to encourage more emotional support within the aviator group, have the administrator occasionally post emotional support. Non-informational posts demonstrate to other users that it is a safe place for such interactions to occur. I think it is also critical to emphasize the potential impact of the administrator posting too frequently and thereby creating an unintended echo chamber.

My next recommendation is for the OWP to advertise these groups. They could create business cards that include the name and objective of the group. In an effort to reach more women, I recommend that they offer these cards at symposiums, and that they also distribute them to major schools such as boot camp, officer candidate school (OCS), and flight school. Larger groups imply more women have access to the social support provided; they also expand the knowledge and experience base of the groups.

My final recommendation is based on two goals: minimizing the administrative burden to the OWP and encouraging an opportunity for FtF interaction between group members. I recommend that the OWP reach out to group members and ask for volunteers to act as geographical representatives. These volunteers would act as additional administrators and community representatives for major military areas. For example, the officer group could establish San Diego, Norfolk, and Jacksonville representatives. Their responsibilities would include vetting members, enforcing group standards, and coordinating monthly/quarterly (as demanded) regional meet-ups. The meet-ups would act as an opportunity for women to establish mentor/mentee relationships, network, and provide additional FtF social support to one another. The OWP would need to remain involved to properly train and supervise the regional representatives, but their day-to-day responsibilities may reduce over time.

D.   LIMITATIONS AND FUTURE RESEARCH

The limitations of this research can be divided into three major sections: missing FB group threads and "likes," lacking user demographics, and missing data on user perceptions. I will discuss each in more detail. I will also provide recommendations for future research based on what that information could provide.

The FB data is limited to strictly original posts. The data does not include either comments to posts or "likes." This limits the analysis in many ways. First, it does not show the true activity level of group members. There may be users who "like" or comment on a post without making original posts themselves. This study ignores their activity in the analysis. Additionally, posts often turn into threads of conversation. From a social support perspective, the comments could demonstrate whether a solicited type of

support was given; these threads of conversation could also mold from informational support (as an example) into a deeper level of emotional or esteem support. I recommend subsequent research to collect that missing data and also to conduct a more in-depth analysis of the group activity and social support.

The next major limitation to this study is the lack of demographic information of users. For example, this study did not include any information on the age of members. It would be interesting to see if there is a correlation between average age of a group and average activity level or to determine a relationship between race/ethnicity and type of social support offered or sought. Basic demographic information for either the group or each individual member could allow a deeper analysis of the activities of these groups.

The final limitation of this study is the lack of users' perceptions. The research attempted to evaluate the effectiveness of these groups based on interviews of administrators and post content, but it did not consider the opinions or perception of the users. Follow-on research could interview or survey FB group members to determine their perceived advantages and disadvantages of the groups, how they personally use the group, and what the group provides to them on both a personal and professional level. Without knowing the impact of the groups on the users, it is challenging to truly assess the groups' effectiveness.

E.   CONCLUSION

The goal of this research was to utilize the OWP's FB groups as case studies to explore the use of social media within the DOD. Through a literature review, interviews of OWP's FB administrators, and analysis of FB post data, I conclude that these FB groups primarily act as a platform for CMSS with managerial benefits for the OWP. CMSS within the DOD seems to be an unexplored and underutilized use of social media.

Although data limited the analysis, this study is an important first step towards understanding CMSS within the DOD. I encourage future research to expand on user statistics and impacts of CMSS on military members. As social media continues to grow within the workplace, so must the DOD's understanding of its impacts and abilities.

APPENDIX A. INTERVIEW CONSENT FORM

Naval Postgraduate School
Consent to Participate in Research (Interviews)

Introduction. You are invited to participate in a research study entitled Descriptive Analysis of the Women's Policy's Use of Facebook. The purpose of the research is to identify specific objectives of the use of Facebook, analyze how members utilize Facebook pages, and provide recommendations for future social media use within the Department of Defense.

Procedures. Requirements for the study include:
a. Participants will be asked to participate in a 20–40 minute interview
b. Participants will be asked to discuss organizational objectives and expectations of the use of Facebook.
c. Interviews will be audio taped and transcribed if you consent
d. Responses will be aggregated into common themes; no individuals will be identified

Location. Interviews will be conducted over the telephone from Naval Postgraduate School campus.

Cost. There is no cost to participate in this research study.

Voluntary Nature of the Study. Your participation in this study is strictly voluntary. If you choose to participate you can change your mind at any time and withdraw from the study. You will not be penalized in any way or lose any benefits to which you would otherwise be entitled if you choose not to participate in this study or to withdraw. The alternative to participating in the research is to not participate in the research.

Potential Risks and Discomforts. The study involves minimal risk of breach of confidentiality if data or reports are improperly handled and an individual's name is associated with the project. To minimize the risk, data will be stored on a secure NPS server, all identifying information will be removed from transcripts and notes. Recordings will be destroyed at the conclusion of the research. Contact information will be held separately from any project data and will be destroyed when the research is complete. Data from an individual interview and contact information for that interview will not be held in the same location.

Anticipated Benefits. You will not directly benefit from your participation in this research. Anticipated benefits from this study are a better understanding of integration. The project will provide a basis for future studies, a detailed record of the experiences of those involved and recommendations for research and actions to support integration.

Compensation for Participation. No tangible compensation will be given.
Confidentiality & Privacy Act. Any information that is obtained during this study will be kept confidential to the full extent permitted by law. All efforts, within reason, will be made to keep your personal information in your research record confidential but total confidentiality cannot be guaranteed. Data will be stored on a secure NPS server. Participants will not be asked to give their names or other identifying information during interviews. Transcripts will be reviewed for identifying information that may have been relayed during the interview (and it will be removed).

The recordings will be destroyed at the conclusion of the research. Pseudonyms will be used for all projects in written reports.

Points of Contact. If you have any questions or comments about the research or if you experience an injury or discomfort, please contact the Principal Investigator, Dr. Gail Fann Thomas, 831–656-2756, gthomas@nps.edu. Questions about your rights as a research subject or any other concerns may be addressed to the Navy Postgraduate School IRB Chair, Dr. Larry Shattuck, 831–656-2473, lgshattu@nps.edu.

Statement of Consent. I have read the information provided above. I have been given the opportunity to ask questions and all the questions have been answered to my satisfaction. I have been provided a copy of this form for my records and I agree to participate in this study. I understand that by agreeing to participate in this research and signing this form, I do not waive any of my legal rights.

_____   _____
Participant's Signature   Date

_____   _____
Researcher's Signature   Date

APPENDIX B. INTERVIEW QUESTIONS

Facebook Page Interview Questions

Based on our initial explorations, we believe that the Department of Defense could benefit from internal social media use. We are thus interested in understanding the objectives of the Women's Policy Department in creating the Female Naval Aviator, Officer, and Sailor Facebook groups.

Question 1: Can you please tell us about the Facebook group you are a part of, as if you were telling a story, from the beginning to the end, emphasizing your role in implementation, goals of the group, and general observations from the group?

Question 2: What would you say the role of these Facebook groups is within the office of Women's Policy?

Question 3: How is the Facebook group unique compared to other resources made available by the Department of the Navy?

Question 4: Have their been any challenges in administering the Facebook group, or issues that you have noticed?

Question 5: How involved is the Women's Policy department in the Facebook group? How frequently is it monitored? How frequently does someone within the office post to the page?

Question 6: Are there any reoccurring themes that you have noticed being posted to the page?

Question 7: Has the Women's Policy office's role in administering the Facebook group changed over time?

Question 8: Is this a public or private Facebook group? That you're aware of, what level of leadership monitors the activity of this Facebook group?

Question 9: How does the Office of Women's Policy integrate the information from the Facebook group into day to day activities?

Question 10: To what extent and how are social media learnings and/or best practices from the Office of Women's Policy shared across DOD entities?

Question 11: Are there any ways that you think the FB groups could be better utilized or improved upon?

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LIST OF REFERENCES

Brough, Paula, and Judi Pears. "Evaluating the Influence of the Type of Social Support on Job Satisfaction and Work-Related Psychological Well-Being." *International Journal of Organisational Behaviour* 8, no. 2 (2004): 472–485.

Chen, Wenli, and Alfred Siu Kay Choi. "Internet and Social Support among Chinese Migrants in Singapore." *New Media & Society* 13, no. 7 (November, 2011): 1–18.

DOD Social Media Hub. Accessed May 18, 2015, http://www.defense.gov/socialmedia/.

Duggan, Maeve, Nicole B. Ellison, Cliff Lampe, Amanda Lenhart, and Mary Madden. "Demographics of Key Social Networking Platforms." Pew Research Center, January 9, 2015, http://www.pewinternet.org/2015/01/09/demographics-of-key-social-networking-platforms-2/.

———. "Social Media Update 2014." Pew Research Center, January 9, 2015, http://www.pewinternet.org/2015/01/09/social-media-update-2014/.

Facebook. "Company Info." Accessed May 18, 2015, http://newsroom.fb.com/company-info/.

Guest, Greg, Kathleen M. MacQueen, and Emily E. Namey. *Applied Thematic Analysis.* Los Angeles: SAGE, 2012.

Harrell, Margaret C., and Melissa A. Bradley. *Data Collection Methods: Semi-Structured Interviews and Focus Groups* (Santa Monica, CA: RAND, 2009), http://www.rand.org/content/dam/rand/pubs/technical_reports/2009/RAND_TR718.pdf.

Leonardi, Paul M., Marleen Huysman, and Charles W. Steinfield. "Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations." *Journal of Computer-Mediated Communication* 19, no. 1 (2013): 1–19.

Li, Charlene, Alan Webber, and Jon Cifuentes. 2012. *Making the Business Case for Enterprise Social Networks*. Altimeter Group: 1–23.

Navy Personnel Command. "Office of Women's Policy (OPNAV N134W)." Last modified May 4, 2015, http://www.public.navy.mil/bupers-npc/organization/bupers/womenspolicy/Pages/default.aspx.

Olson, Deborah A., Jeanny Liu, and Kenneth S. Shultz. 2012. "The Influence of Facebook Usage on Perceptions of Social Support, Personal Efficacy, and Life Satisfaction." *Journal of Organizational Psychology* 12, no. 3/4 (2012): 133–144.

Treem, Jeffrey W., and Paul M. Leonardi. "Social Media Use in Organizations: Exploring the Affordances of Visibility, Editability, Persistence, and Association." *Communication Yearbook* 36 (2012): 143–189.

Turban, Efraim, Narasimha Bolloju, and Ting-Peng Liang. "Enterprise Social Networking: Opportunities, Adoption, and Risk Mitigation." *Journal of Organizational Computing and Electronic Commerce* 21, no. 3 (2011): 202–220.

U. S. Department of Defense. "Social Media Education and Training." Accessed May 18. 2015, http://www.defense.gov/socialmedia/education-and-training.aspx/.

Walther, Joseph B., and Boyd, Shawn. "Attraction to Computer-Mediated Social Support." In *Communication Technology and Society: Audience Adoption and Uses,* edited by Carolyn A. Lin and David J. Atkins, 153–188, Cresskill, NJ: Hampton Press, 2002.

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