

The Use of YouTube by Persons with Asperger's Syndrome
for Online Social Networking

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ABSTRACT

Persons with Asperger's Syndrome¹ (AS) are typically described as having broad range symptoms, but most frequently, they fail to establish and maintain appropriate social interactions (APA, 2010). The syndrome's characteristics promote a *sense of self* that becomes increasingly apparent in adolescence and young adulthood, and serves to isolate the individual in relationships (Attwood, 2007; Heflin & Aliamo, 2007). Because one of the most pervasive characteristics of AS is the inability to initiate and sustain social relationships, it appears a paradox that YouTube posters with Asperger's have uploaded more than 5,000 online narrative self-disclosures in video form and are willing to connect in very personal ways with strangers through this very public medium. Yet, research substantiates that online venues are virtual spaces wherein persons with AS are able to form social connections and community in an unthreatening, more comfortable way (Davidson, 2008; 2009). The purpose of this study was to investigate the content of YouTube video self-presentations by young adults with Asperger's Syndrome to discern how the posters make use of the disclosive narrative videos as a means of establishing and maintaining social interactions with viewers. A preliminary study identified eight emergent self-presentational features that were used in subsequent regression analysis (Hand, 2009). The data suggested that a combination of those features, specifically describing one's own Asperger's and sharing personal information, appeared to be predictive of a greater number of viewer responses, yet none of the elemental features were predictive of a maintained dialogue between the poster and the viewer.

¹ In accordance with the demands of APA style formatting (6th edition), it was required that person first or bias-free language be used throughout the document. However, this researcher would like to genuinely and supportively acknowledge the desire by many on the Autism Spectrum to be recognized as autistic rather than as a person with or having autism (Davidson, 2009).

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To my siblings and in-laws, especially to my dearest mother-in-law, Maria, who has suffered my absence at her Italian table, I pledge to start coming to see you all more.

To my husband, Carl Michael Hand, thank you would never be enough.

DEDICATION

I dedicate this “empty nest project” to Carl, for the love he has invested in me.

Chapter I

INTRODUCTION

Asperger's Syndrome (AS) is a neurobiological disorder that falls within the umbrella category of Autism Spectrum Disorders (APA, 2010; Attwood, 2007; Heflin & Aliamo, 2007). Persons with AS are typically described as having a complex combination of broad range symptoms, but most significantly, the disorder includes the failure to establish and maintain appropriate social interactions (APA, 2010; Attwood, 2007; Heflin & Aliamo, 2007). As noted by Kanner (1956) in his seminal work, the primary pathology is directly associated with the "inability to relate in the ordinary fashion to other human beings" (p. 58). He stated that "Even the relatively 'successful' children exhibited a lack of social perceptiveness, perhaps best characterized as a lack of *savoir-faire*" (Kanner, 1956, p. 58). The combination of the syndrome's social characteristics becomes increasingly apparent in adolescence and young adulthood, and serves to further isolate the person with AS in relationships across the contexts of school, work, and community (Aston, 2003; Attwood, 2007; Heflin & Aliamo, 2007; Henault, 2006; Patrick, 2008). This isolation is often attributed to the general inability to interpret social cues from others, such as body language and emotional reactions (Attwood, 2007; Heflin & Aliamo, 2007).

Isolation from the socially skilled world is processed by the individual with AS in several ways. As explained by Patrick (2008), some are "not concerned with having

friends” and others “may prefer to strengthen family relationships or be satisfied with the acquaintances in their lives” (p. 76). However, there is evidence that many do wish to make connections with others and are motivated to make that desire a reality (Blume, 1997a; Blume, 1997b; Grandin & Scariano, 1986; Jones, Zahl, & Huws, 2001; Robinson, 2007). Despite characteristic difficulties in establishing and maintaining appropriate social interactions in face-to-face encounters (APA, 2010; Attwood, 2007; Heflin & Aliamo, 2007), persons with Asperger’s Syndrome are utilizing YouTube to post virtual encounters using online narrative self-disclosures via home-made videos.

YouTube.com is an online, video-based, social phenomenon now citing over two billion *hits* or views and more than 86, 500 new videos added per day (YouTube, 2010b). There are currently almost 9, 000 postings which have locator tags for the terms *Asperger’s Syndrome*, *Asperger’s*, *Aspergers* (sic), *High Functioning Autism*, and *Aspie* (YouTube, 2010d). As evidenced in a preliminary study, there was a certain consistency amongst the video postings, most specifically in the presentation of self through the elemental components of the video content (Hand, 2009). For example, most of the videos analyzed contained at least some level of self-revelation or personal disclosure with an explanation of the posters’ manifestations of AS as characteristic traits and a description of how those characteristics impact them in their daily social interactions. The video postings generated responses from viewers, giving the poster an opportunity to respond in kind to whatever degree he or she chose, thus creating the potential for an interactive, communicative exchange online between poster and viewer.

Preliminary Study Results

Raw data and qualitative analysis from a preliminary study served as the inspiration for the current study. The preliminary study was conducted to identify emergent themes from transcribed YouTube videos (Hand, 2009). Working from a grounded theory perspective, that analysis was initiated in 2009 simply to determine which thematic elements would emerge that might explain the significance of the hundreds of YouTube video postings by persons with Asperger's Syndrome. The videos were from a purposive sample, selected as being representative critical cases after the viewing of over one hundred postings. Descriptive data were collected on a total of twenty-six videos and full transcriptions were conducted on eight of those with mining for emergent themes. Nine basic categories emerged from the data².

- *Why the Video was Made.* The category *Why the Video was Made* included any statement or phrase that attempted to explain why the poster created and aired the video. For example, "I am explaining what Asperger's Syndrome is and trying to make the world understand."
- *Definition of Asperger's.* Any statement or phrase that attempted to give a definition of Asperger's Syndrome, such as, "Asperger's is a form of High Functioning Autism" was determined to be in the category of *Definition of Asperger's.*
- *Characteristic Attributes.* This category consisted of any statement or phrase that was indicative of a standard characteristic of Asperger's Syndrome that is typically used to medically classify it as a disability. Some examples included,

² Quotations to follow are paraphrases of actual content in order to protect the anonymity of the posters.

“lots of trouble with eye contact,” “trouble feeling empathy,” or “can't pick up social cues.”

- *Sharing of Personal Information.* *Sharing of Personal Information* consisted of any information specifically personal to the person posting, even if it sometimes doubled as a characteristic attribute. Examples would be, “My name is Bob and I have Asperger’s. I am 26 years old and live in Cleveland.” or “I am crazy about TV remote controls and have a thousand of them that I have categorized by make, model, and color.”
- *Seeking to Understand one’s own Asperger’s.* Any statement or phrase that appeared to be an attempt by the persons with AS to seek information or affirmation about their disability from the viewers was considered to be in the category of *Seeking to Understand one’s own Asperger’s*. It included statements such as “I need to know that I am like other people with the same problems.”
- *Seeking to be Understood.* *Seeking to be Understood* included any phrase or statement that appeared to be instructive in nature, as if to educate any viewer that did not have AS, for example, “I have a high IQ. Don't think that I'm stupid.”
- *Seeking to Help Others to Understand.* This category emerged out of the *Seeking to be Understood* data because it appeared that there was a difference between trying to get others to understand the poster and his/her own Asperger’s and when they were trying to provide information specifically to help others to understand their Asperger’s or the AS of their family members, friends, or coworkers. An example in this category would include a statement similar to, “I watched your video asking people if they think your son has Asperger’s and I think he does. He

acts just like I did at that age.” Another example might be, “If you have Asperger’s, trust me. Don’t get a job at *Store X* because you won’t understand how they make you do things there. The boss tells you to do something and just expects you to do it. We need someone to show us.”

- *Invitation for Response.* Any phrase or statement that was an invitation for social contact was coded as such. Included in this category were invites to watch the video, to follow-up with a visit to the poster’s website, or to simply have the email address provided as an open invitation to make social contact. For example, “All input will be appreciated!”
- *Outcomes of the Video Postings.* Outcomes included any reference to the good or bad consequences that posting the video elicited. One poster explained, “My video has received many comments, most all of them positive from people who also have Asperger's.”

The results of the earlier preliminary study provided the impetus for further exploring the function of the video postings for the posters with Asperger’s in the current study. Thus the focus of the current study evolved from these basic thematic elements emergent as described.

Purpose of the Study

The purpose of this study was to more deeply investigate and analyze the content of online YouTube video submissions by young adults with Asperger’s Syndrome to discern how the posters made use of these narrative videos as a means of self-presentation in establishing and maintaining social interactions with viewers. An examination of the video content included an extended analysis of which elements shared

by the poster in their presentation of self were predictive of eliciting social responses from viewers and whether the poster used those responses as an opportunity to maintain an ongoing dialogue with the viewer. The elemental features used in the study were rooted in the emergent themes derived in the preliminary study and served as independent variables (Hand, 2009).

Because one of the most pervasive characteristics of AS is the inability to establish and maintain social relationships (APA, 2010; Aston, 2003; Attwood, 2007; Heflin & Aliamo, 2007; Henault, 2006; Patrick, 2008), it appears a paradox that the YouTube posters with Asperger's are willing to connect in very personal ways with strangers through this very public medium. It is arguably a significant possibility that YouTube provides a venue similar to other social networking sites such as Facebook and Myspace, in which the poster with AS is able to form social connections and community in a way less threatening and more comfortable than in face-to-face interactions (Blume, 1997a; Blume, 1997b; Davidson, 2008).

Contrary to face-to-face interactions wherein persons with Asperger's typically fail to initiate and/or maintain social interactions (APA, 2010), this study operated on the assumption that these YouTube videos were purposeful attempts by the posters to engage in initiating social interactions with others and the subsequent dialoguing in responsive chat was evidence of an attempt to maintain that interaction. The actual content of the videos are operationalized presentations of self by the posters in the form of disclosive, personal opportunities offered to the viewer so that they can come to *know* who the poster is as an individual and as an individual with Asperger's.

Significance of the Study

A small but significant body of research exists on using computer-based technologies for teaching social skills to persons with autism and Asperger's, including instruction through video modeling (Sansosti & Powell-Smith, 2008), using virtual environments (Mitchell, Parsons, & Leonard, 2007), and with computer-mediated tasks and scenarios (Faja, Aylward, Bernier, & Dawson, 2008; Klin, 2000; Rajendran, Mitchell, & Rickards, 2005). However, no research has been conducted for this population on the use of online social networking mediums such as Facebook and MySpace. There is a growing focus on the Neuro-typical population of adolescents and young adults within these social networking sites, particularly in regards to self-presentation through profiles, but the studies are primarily descriptive in nature (Williams & Merten, 2008; Thelwall, 2008). As of February 11, 2011, according to a search including Academic Search Complete, ERIC, PsychINFO, and PsychARTICLES, only two articles have been published on the use of YouTube specifically as a means of social communication and network building for Neuro-typicals, and none have been published regarding the use of YouTube by persons with any type of disabilities or more specifically, by persons with Asperger's Syndrome.

There is a substantiated gap in the general literature and also a gap within the discipline of Curriculum and Instruction which may be filled by this study. This supposition was evidenced by the dearth of published research to demonstrate the development of curricula using online social networking sites as instructional resources. As of February 11, 2011, according to a search including Academic Search Complete, ERIC, PsychINFO, and PsychARTICLES, of the 69 articles in peer-reviewed journals

with YouTube in the title, only eight (11.6%) held content related to teaching. The other content was spread across broad disciplines, specifically: Film/Media/PopCulture (23.2%), Medicine (15.9%), Politics (14.5%), Law (10.1%), Social Issues/Feminist Studies (8.7%), Science (7.2%), and Business/Advertising (2.9%). The small percentage of articles which addressed using YouTube specifically as an instructional resource for young people were primarily focused on delivery by Media Specialists or Librarians (Mullen & Wedwick, 2008; Nicholson, 2010; Trier, 2007). Several others addressed the efficacy of YouTube use as a visual teaching tool for adults, but most commonly, these were related to issues in the medical field (Dinscore & Andres, 2010; Keelan, Pavri-Garcia, Tomlinson, & Wilson, 2007; Kim, Paek, & Lynn, 2010; Linkletter, Gordon, & Dooley, 2010; Lowman, Judge, & Wiss, 2010; Walther, DeAndrea, Kim, & Anthony, 2010; Wood, Struthers, & Herrington, 2009).

As the existing body of literature on computer-based social skills instruction has suggested, perhaps Facebook, MySpace, and YouTube can be practical spaces or virtual classrooms wherein social skills can be practiced, perfected, and used proficiently by persons with Asperger's (Faja, et al., 2008; Klin, 2000; Rajendran, et al., 2005; Sansosti & Powell-Smith, 2008). With research-based evidence to support the development of a curriculum, these online mediums can be used as naturalistic social learning environments (Mitchell, et al., 2007). An analysis of video content on the use of self-presentation would yield a greater understanding of what persons with Asperger's have to say about themselves and an understanding of how what they say is received by the viewer (Blume, 1997a; Blume 1997b; Davidson, 2008). Once we have tapped into *what works* for persons with AS when it comes to communicating *who they are* as they attempt

to make social connections with external others, this discernment may yield the capacity to form the foundation for building stronger social communication skills online and perhaps even off-line (Davidson, 2008; Feldon & Kafai, 2008). In this way, persons with Asperger's can more fully manifest what they appear to be seeking- to initiate and maintain social interactions and to build social networks in an online community of viewers (Blume, 1997a; Blume 1997b; Davidson, 2008; Feldon & Kafai, 2008).

Overarching Research Question

From the preliminary study, the nine emergent themes formed the basis of analysis to answer the overarching research question. *How do young adults with Asperger's Syndrome make use of self-presentation in narrative YouTube video submissions for establishing and maintaining social interactions with viewers, as measured by determining which of the revelatory elements shared by the poster are predictive of eliciting and maintaining social responses?* Eight elements from the preliminary study were selected to represent the independent variables including: definition of Asperger's, description of characteristic traits, sharing of personal information, seeking to understand, seeking to be understood, seeking to help others to understand, inviting response, and a statement of why the video was made (Hand, 2009). The ninth feature from the preliminary study regarding outcomes or feedback from viewer responses inspired the concept behind the development of the dependent variables: the total response comments from viewers and whether there were consecutive exchanges of responses that would indicate a maintained dialogue between poster and viewer.

Research Questions

Research Question 1. Which video elements were predictive of eliciting a greater number of social responses from the viewers?

Research Question 2. Which video elements were predictive of a maintained dialogue between the poster and the viewer?

Delimitations and Limitations

Evidence by Siibak (2009) as well as by McKenna and Bargh (2000) suggested a link between attractiveness and online popularity. Siibak found that 79% of males and 85% of females cited good looks as being the most important factor for becoming “popular” in an online social networking site (p. 4). In this study of YouTube videos, there was no effort made to control for the degree of attractiveness of the video poster. Attractiveness is a subjective measure that was not accounted for or controlled, so it was delimited in the study.

The study was potentially limited by at least three specific factors. First, the study is limited by the very nature of Asperger’s being a Spectrum Disorder, and second, it is limited by persons who claim the disorder but may be incorrect in their self-diagnosis. A third limitation was the inability of the researcher to account for the existence of dialoguing which might occur outside of the context of the YouTube response comments. Goffman (1959) and Correll (2007) refer to private dialoguing outside of the range of access by others as *backstage* activity.

The first two limitations are closely affiliated. Because Asperger’s is on the Autism Spectrum, persons with Asperger’s are affected to different degrees along a continuum (APA, 2010). Some are greatly affected, manifest multiple aspects of the

diagnostic criteria, and manifest those traits with intensity. Others on the spectrum are less affected, have fewer characteristics, and may exhibit what traits they do have to a much lesser degree. The broad and dynamic range of the uniquely individual presentation of characteristic traits presents a primary limitation to the study, as it would not be possible to clinically discern where the individual poster would fall on the Autism Spectrum in their ability to effectively engage in social interactions. Complicating this would be the possibility that an individual poster who claimed to have Asperger's may in fact be incorrect in his or her self-diagnosis and may be manifesting some other disorder (Clarke & van Amerom, 2007). Therefore, some of the video posters included in the study may not actually have Asperger's although they claim to and others may fall anywhere along the entire spectrum of autism. Some may more closely reflect the American Psychiatric Association's DMS-IV Criteria for Asperger's Syndrome and others may be at the opposite extreme, reflecting the criteria far less, possibly skewing the results.

The inability to determine if extended conversations between the poster and viewers took place outside of the context of the post/response opportunities was considered a limitation. While dialogue external to YouTube may have been intimated within the context of written chat, there was no way of controlling for or validating whether further communication materialized. Only those interactions that took place within the written responses were measurable, when the potential existed that social interactions were being carried out beyond the scrutinized venue. For example, if a poster gave a web address, viewers could have gone directly to contacting the poster through that address rather than engaging in dialogue using the YouTube comment

response function. If indeed occurring, this could potentially skew the results, making it appear that communication between the poster and viewer was less significant in print than it was in actuality.

Definition of Terms

1. Asperger's Syndrome: The 2010 American Psychiatric Association's DMS-IV Criteria for Asperger's Syndrome (299.80A) defines persons having disorder as evidencing an impairment significant enough to qualitatively affect their social interactions. To paraphrase and elaborate upon the APA (2010) definition, the impairment is evidenced by the manifestation of at least two of the following criteria: (a) the inadequate use of nonverbal behaviors to facilitate social interactions (e.g., the use of eye contact, appropriate facial expressions, and physical mannerisms); (b) the failure to establish developmentally appropriate relationships with others; (c) the failure to spontaneously share in the interest areas, achievements, or pleasures of others; and/or (d) the failure to routinely demonstrate reciprocity emotionally and/or socially.
2. Aspie: The term *Aspie* was first coined by Willey (1999) and is commonly used by persons with Asperger's to describe themselves.
3. Chat: An exchange of consecutive written responses between the poster and the viewer for a minimum of two exchanges will be considered chat. (Ex: Viewer, Poster, Viewer, Poster)
4. Neuro-typical: The term *Neuro-typical* is used by persons with Asperger's to refer to those without Asperger's.

5. Poster: A poster is the person who contributes a video to YouTube by uploading it for public viewing.
6. Social Networking: Social Networking is the use of the Internet to connect with others who may share common interests.
7. Upload: To upload is to move information from a smaller to a larger computer system. As used in this study, it will refer to the act of moving home-made video files from personal computers to the www.YouTube.com site for public viewing.
8. Video Response: Below the posted video, there is a space for viewers to respond with comments. The initial response to the video by a viewer is the video response. Subsequent responses are considered chat.
9. Viewer: The viewer is the person watching the video who comments on the video in a written response at least once.

Summative Overview

The foundation for understanding the direction of this study begins first by understanding the nature of Asperger's Syndrome, which is rooted most significantly in the inability to comfortably initiate and maintain social relationships (APA, 2010). Chapter 1 described how concepts emergent in the preliminary study were used in the development of the primary research question and how that question served to drive the subsequent research described herein. *How do persons with Asperger's Syndrome use self-presentation in YouTube videos for initiating and sustaining social interactions with viewers?* The purpose and significance of the study were outlined, as well as definitions, delimitations and limitations. The study is delimited by the absence of attention to poster attractiveness and limited by three factors, including the very nature of AS as spectrum

disorder, self-identification versus medical diagnosis, and the inability to determine if dialoguing outside of the context of the YouTube chat takes place between the poster and viewers.

The extensive nature of the Review of Literature in Chapter 2 attempts to provide a framework for understanding Asperger's more deeply, for understanding the use of the Internet for social networking, and the significance of self-presentation in the online presence. Further, the use of computer-mediated technologies and the online presence of persons with disabilities and with Asperger's are examined. The use of YouTube for social networking is reviewed and then the question is posed as to whether persons with Asperger's are creatively using YouTube for online social networking by the posting of self-presentation narratives.

Chapter 3 describes the methodology from the sampling, to the development of variables, to the data collection process, and through to the methods of analysis. The development of the eight factors derived as emergent themes in the preliminary study were used as independent variables (Hand, 2009). The dependent variables were also rooted in the preliminary study as inspired by the thematic element which alluded to viewer responses. Two dependent variables reflected the total number of viewer responses and the presence or absence of maintained dialogue between the poster and viewer. The content was analyzed using a pre-structured data collection instrument developed to reflect the absence, presence, and/or frequency of certain social elements within the videos. Once the content analysis data were collected, multiple regression and logistic regression were conducted using SPSS to determine which of the video elements in the self-presentations was predictive of eliciting and maintaining social responses.

Chapter 4 presents and describes the findings, supporting the conclusion that elements of self-presentation within the YouTube videos have a relationship with the formation of connectedness between the poster and viewers. Chapter 5 provides a discussion of those results, as well as their implications.

Chapter II

REVIEW OF LITERATURE

In order to more fully understand persons with Asperger's who are posting self-presentations via YouTube, the definition of Asperger's should be clarified. Although Asperger's Syndrome is generally considered to be at the high end of Autism Spectrum Disorders (ASD) and is often used interchangeably with High Functioning Autism (HFA), the nature of the definition has created debate amongst scholars as to how AS can or cannot be differentiated from Autism (APA, 2010). Some research proposed that it is a syndrome or disorder distinctively apart from the Autism Spectrum because of specific features such as pedantic or excessively formal speech (Ghaziuddin & Gerstein, 1996; Paul, Orlovski, Marcinko, & Volkmar, 2009). Wing (1981) noted characteristically different issues with "gesture, posture, movement, eye contact, choice of clothing, proximity to others" (p. 116). Further, she suggested, the most obvious impairment is in two-way social interactions directly related to the person's "lack of ability to understand and use the rules governing social behaviour (sic)" (p. 116). However, the current consensus of the American Psychiatric Association is that while the syndrome demonstrates specific features that mark it as distinctive, it still meets all of the other criteria for the earmarks of a classic autism diagnosis and this would be primary to any secondary diagnostic considerations (APA, 2010). This vein of reasoning was supported by Attwood (2007), Macintosh and Dissanayake (2004), Miller and Ozonoff (2000),

Williams et al. (2008), and Wing (2005). Regardless of debate as to the precise label, the characteristic traits of persons with HFA, Asperger-type autism, or Asperger's Syndrome are what demarcate them as meeting the criteria for the DSM-IV classification of Asperger's Disorder (APA, 2010).

Statement of Purpose

Persons with Asperger's Syndrome typically express an affinity with online activities (Attwood, 2007; Blume, 1997b) and this affinity has perhaps led them to explore YouTube as venue for social networking. The following review of literature examines critical pieces in order to establish the framework for understanding the totality of the research design and subsequent findings on how young adults with Asperger's Syndrome make use of self-presentation in narrative YouTube video submissions for establishing and maintaining social interactions with viewers.

The literature review first examines the characteristics of Asperger's which affect the social interactions of persons with the syndrome. These aspects are addressed as being foundational to understanding persons with AS as individuals and as individuals within the greater population of persons with AS (Adams, Green, Gilchrist, & Cox, 2002; Attwood, 2007; Colle, Baron-Cohen, Wheelwright, & van der Lely, 2008; Ghaziuddin & Gerstein, 1996; Heflin & Aliamo, 2007; Losh & Capps, 2003; Paul, et al., 2009). The topics of autism and Asperger's Syndrome and their characteristics have been increasingly apparent in traditional forms of media, such as newspapers. For example, Academic Search Complete showed 267 newspaper articles cited on autism and/or Asperger's between January, 2000, and December, 2005. The number of references increased to 411 from January, 2006, to February, 2011. A Google search for newspaper

references of the two terms revealed a tripling of references between January, 2003, and the present, and a current sampling of over 4,590,000 newspaper sources available online as of February 11, 2011 (Google, 2011).

Numbers of references to the topics of autism and Asperger's have increased as well on YouTube, a more newly emerged and ever emerging media form. On a single day, February 11, 2011, YouTube had 124 new videos posted on autism and 15 on AS, bringing the total postings to over 19,600 for autism and 5,310 for AS (YouTube, 2010d). Therefore, as a part of the review of literature, a background of that online presence in the form of posted videos on the topic of AS is detailed directly from the YouTube search engine.

To frame the microcosm of persons with Asperger's within the macrocosm of the general population using that online context, it is important to establish the current definition of Online Social Networking (Boyd & Ellison, 2008; Garton, Haythornthwaite, & Wellman, 2006; Gross & Acquisti, 2005; Wellman, 1997) and the uses of it by the general population as portrayed in the literature (Acar, 2008; Christ, 2008; Correll, 2007; Goodings, Locke, & Brown, 2007; Haridakis & Hanson, 2009; Kim, et al., 2009; McKenna & Bargh, 2000; Orr, et al., 2009; Papacharissi & Rubin, 2001; Raacke & Bonds-Raacke, 2008; Sheeks & Birchmeier, 2007; Siibak, 2009; Thelwall, 2008; Tufekci, 2008; William & Merten, 2008; Yang, Hsu, & Tan, 2010; Ying, et al., 2009). As represented by the preponderance of the literature available, self-disclosure and presentation of self in social networks are viewed as an essential aspect of any online presence (Acar, 2008; Davidson, 2008; Ellison, Heino, & Gibbs, 2006; Goffman, 1959; Goodings, et al., 2007; Kim et al., 2009; Kramer & Winter, 2008; Levin & Abril, 2009;

Mikami, Szwed, Allen, Evans, & Hare, 2010; Schouten, Valkenburg, & Peter, 2009; Siibak, 2009; Strano, 2008; Tufekci, 2008). For persons with Asperger's, Theory of Mind, or the ability to take the perspective of another person into consideration, may influence their ability to effectively portray self online (Attwood, 2007; Baron-Cohen, 1989; Beaumont & Sofronoff, 2008; Bowler, 1992; Heflin & Aliamo, 2007; Kaland, et al., 2007; Klin, 2000; Murphy, 2006).

The effective use of computer-mediated technologies for persons with disabilities, persons on the Autism Spectrum, and Asperger's is explored (Alcantud, Dolz, Gaya, & Martín, 2006; Bache & Derwent, 2008; Barnard-Brak & Sulak, 2010; Chau, Eaton, Lamont, Schwellnus, & Tam, 2006; Chen, Wu, Lin, Tasi, & Chen, 2009; Curran, Walters, & Robinson, 2007; Davies & Morgan, 2005; Faja, et al., 2008; Grabinger, 2010; Grabinger, Aplin, & Ponnappa-Brenner, 2008; Klin, 2000; Martínez-Marrero & Estrada-Hernández, 2008; Miles, Ferguson, & Hagiwara, 2007; Mitchell, et al., 2007; Rajendran, et al., 2005; Sansosti & Powell-Smith, 2008; Sapp, 2009; Scott, Bisig, & Bugmann, 2007; Standen, Brown, Anderton, & Battersby, 2006; Stodden & Roberts, 2009; Stumbo, Martin, & Hedrick, 2009; Sugasawara & Yamamoto, 2007; Tam, et al., 2007; Törmänen, Takala, & Sajaniemi, 2008; Wallergård, Eriksson & Johansson, 2008). Next, computers for online social networking by persons with disabilities is addressed by a limited number of authors (Bowker & Tuffin, 2002; Bowker & Tuffin, 2003; Seymour & Lupton, 2004). Even less frequently found to appear in the literature, is usage of computer-mediated social networks by persons on the Autism Spectrum (Brownlow & O'Dell, 2006; Clarke & van Amerom, 2007; Davidson, 2008; Jordan, 2010; Lange, 2007; Waltz, 2005).

Examination of persons with AS engaged in online social networking is followed by a description of YouTube, the users of YouTube, and their motivations (Boyd, 2008; Campbell, 2009; Haridakis & Hanson, 2009; Mislove, Massimiliano, Krishna, Druschel, & Bhattacharjee, 2007; Yang, et al., 2010; Ying, et al., 2009; YouTube, 2010b; YouTube, 2010a). Finally, the path of research leads to the examination of existing literature to assess the use of YouTube by persons with Asperger's in order to explain how they make use of self-presentation in narrative YouTube video submissions for establishing and maintaining social interactions with viewers. At this juncture, there have been no published studies that address YouTube users with Asperger's or their use of YouTube for social networking.

Theory: Philosophical Orientation and Theoretical Perspective

Seeking to understand and assist persons with other abilities is philosophically rooted in both Humanism and Pragmatism (Mazzelli, et al., 2001). Primarily, the human being behind the participant is valued and research that will prove of practical utility for the furthering of positive life gains for persons with Asperger's Syndrome is also valued. One of the elemental components of living as a person in society, as a *social human*, includes engaging dynamically with other persons. Individuals with Asperger's Syndrome can benefit from increasing their ability to perform this aspect of their humanity with the social fulfillment they seek by engaging in the video forays (Atkin, 1991). As noted by Atkin (1991), with a humanistic orientation, "Integration into society becomes the prime objective for all" (p. 39).

As an outgrowth of the Humanism and Pragmatism, this study was approached from the theoretical perspective of Symbolic Interaction, an orientation relevant in

examining self and self-in-relation-to others (Mazzelli, et al., 2001; Merriam, 2007; Patton, 2002). Therefore, it became relevant in analysis of the data to determine whether the YouTube video postings were a form of self-disclosure for the individual and whether any meaning could be ascribed to that *self-as-social-being* or *social self* in relation to external others through these virtual social interactions via video postings and subsequent chat. Essential to any Symbolic Interactionist (SI) study of self-disclosure and social connectedness is Goffman's 1959 work *The Presentation of Self in Everyday Life*. Goffman's book is considered a classic and his conceptualization of *front stage* and *backstage* behaviors are relevant to any study of on-line social communication or social networking, where users present themselves through the role or persona they assume and as they enter into public and private online conversations.

Tibbetts (2004) lamented the gap in symbolic interaction literature as applied to the cognitively disabled but claimed that clinical accounts further our understandings of “*cognition, belief states, self, and self-other relations*, central concepts for symbolic interactionists” (p. 25). Further, he stated that “...a fundamental working assumption of symbolic interaction theory... is that social behavior is structured by interactional contexts, including: narrative settings, participants' discourse, negotiated order and negotiated identities, expectations, and interpretations” (p. 25). Although Tibbetts applied SI to persons with cognitive challenges, it may be extrapolated that, theoretically, SI could equally apply to the study of persons with Asperger's in their presentation of *self* and their engagement in *self-other relations*. Persons with AS are not cognitively disabled and it is the non-disabled population that is typically the targeted group focused upon by symbolic interactionists. Additionally, as stated by Tibbetts, persons with

autism demonstrate a significantly different type of “neurological modeling” that appears “to warrant a separate analysis” (p. 27).

Characteristics of Asperger’s which Affect Social Interactions

Persons with Asperger’s demonstrate communication eccentricities that impact their social interactions (Attwood, 2007; Heflin & Aliamo, 2007). Some are related to speech, such as monotonicity, unique pitch and cadence (Attwood, 2007; Heflin & Aliamo, 2007) while others are stylistic (Adams, et al., 2002; Colle, et al., 2008; Ghaziuddin & Gerstein, 1996). Explaining characteristic communication styles of persons with Asperger’s, Colle et al. (2008) typified Aspergian interactions as “one-sided,” “oblivious to the listener’s interest or the listener’s affective states,” and “showing a relative insensitivity” (p. 29). These characteristics have all the earmarks of a monologue, rather than a reciprocal act of communication. Further, Colle et al. described this “monologue” as being delivered “often with undue intensity as if to persuade the listener of their point of view” (p. 29) and Ghaziuddin and Gerstein (1996) typified them as being uniquely pedantic. Colle et al. proposed that even the narrative discourse style of persons with AS differed from that of people who are Neuro-typical. The authors provided an extensive introduction into the way persons with AS typically communicate as a precursive insight into how the participants with AS will approach a narrative task (Colle, et al., 2008; Losh & Capps, 2003). Colle et al. contributed to our understanding of the styles of AS communication through observational analysis. Narrative discourse was relevant to the study of YouTube posts where persons with AS conduct one-sided monologues with the viewer, in essence a narrative dialogue that is asynchronous.

With a distinctive style of narrative discourse, Colle et al. (2008) pointed out persons with AS typically do not adjust their speech to accommodate the listener. Instead, "...they may speak in the same way to a friend or a stranger, they may make irrelevant comments, and they may have difficulty interpreting indirect expression" (p. 29). The finding was relevant in the choices made by individuals with AS to post personal narratives on the World Wide Web, where the poster knew he or she could potentially reach an audience with millions of unknown viewers unknown (YouTube, 2010b). No distinction in such a circumstance is being made between friend or stranger, private or public, what might be of interest to the viewer or not.

Asperger's Online

As December (1996) described, Internet communications leave a "trail of artifacts" that can be collected for study because of their "mediated form" (para. 37). Persons with Asperger's are producing a direct trail of archival data in the form of Internet blogs, personal websites, issue oriented websites, forums, chatroom participation, and YouTube videos of self-narratives (Blume, 1997a; Blume, 1997b; Brownlow & O'Dell, 2002; Clark & van Ameron, 2006; Hand, 2009; Jones, Zahl, & Huws, 2001; Lorence, 2007). There is an evidential trail of an online presence by persons with Asperger's as presented by Clark and van Ameron (2006). The original data from these authors, collected on May 30, 2006, appear in Table 2.1 with a replication of the search using the same terms on February 14, 2011. For comparative purposes relevant to the current study, the search was replicated to demonstrate at least a continued presence online by persons with AS. As represented in Table 2.1, the more recent data collected using the same search terms shows a sizeable increase in the volume of blogs, chatroom

activity, homepages, listservs, and personal web pages accessible from a search of Google and Yahoo. As a whole, the presence on Google indicated a 100% increase in the volume of items for the search terms and on Yahoo there was an increase of 1000% where the total was ten times as great, going from approximately two million items to twenty million items in the five years between Clark and van Ameron's search and the search replicated as background for this study.

Table 2.1

Asperger's Online

SearchTerms ¹ (Clarke & van Ameron, 2006, p. 764)	Google 2006 ¹	Google 2011 ²	Yahoo 2006 ¹	Yahoo 2011 ²
asperger blog	500,000	3,880,000	237,000	5,090,000
asperger blogs	599,000	518,000	169,000	4,640,000
asperger syndrome blog	306,000	494,000	141,000	2,330,000
asperger syndrome blogs	363,000	679,000	102,000	2,660,000
asperger chat rooms	204,000	21,700	27,500	357,000
asperger chatrooms (as one word ³)	--	48,500	--	44,400
asperger syndrome chat rooms	197,000	51,700	21,200	240,000
asperger syndrome chatrooms (as one word ³)	--	610,000	--	30,900
asperger homepage	365,000	323,000	225,000	656,000
asperger syndrome homepage	457,000	2,070,000	185,000	593,000
asperger listservs	569	12,700	625	13,400
asperger syndrome listservs	26,800	12,800	500	9,310
asperger personal page	1,510,000	243,000	472,000	1,870,000
asperger syndrome personal page	1,490,000	3,180,000	401,000	1,110,000
Total	6,018,369	12,144,400	1,981,825	19,644,010

¹ Search terms and data from Clarke & van Ameron, 2007, p. 764

² Data replicating Clarke & van Ameron (2006) from search using same terms, as conducted February 14, 2011

³ Chatroom was not in the original study, but incorporated in this count to reflect the alternative spelling.

Further evidence of Asperger's online was garnered from YouTube. When conducting an advanced search on YouTube, controlling for *Videos* and the category of *People & Blogs*, the following numbers of videos had been uploaded under the given locator tags as of February 11, 2011. There were 4,290 videos under the search term *Aspergers*; 4,270 videos under the search term *Asperger's*; 4,290 videos under the search phrase *Asperger's Syndrome*; 296 videos under the search term *High Functioning Autism*; 5,200 videos under the search term *Aspie*; and 2,370 videos under the search term *Asperges*, which is a derivation of the word's spelling that is used by some posters typically from Australia and the United Kingdom.

Definition and Uses of Online Social Networking

The definition of social networking online was most simply stated by Wellman (1997), "When a computer network connects people, it is a social network" (p. 1). Garton, Haythornthwaite, and Wellman (2006) proposed a similar definition, adding that a social network connects people with others in a social relationship rooted in "friendship, co-working or information exchange" (para 1). Boyd and Ellison (2008) and Gross and Acquisti (2005) expanded upon those definitions to include initiating contacts with strangers.

Beyond the definitions, the use of social networking for establishing connectedness with others is well documented in the literature. Haridakis and Hanson (2009) suggested that motives for using the Internet include "interpersonal utility, social utility, social or interpersonal interaction, and chatting with others" (p. 319). Tufekci (2008) distinguished between non-social or instrumental Internet use and social or expressive Internet use. She suggested that the expressive Internet is represented by "the

practice and performance of technologically mediated sociality” (Tufekci, 2008, p. 547) where the Internet is utilized to “perform and realize social interactions, self-presentation, public performance, social capital management, social monitoring, and the production, maintenance and furthering of social ties” (p. 548). Further rationale for social interaction would be supported by users’ engagement in “social tagging” activities (Ying, et al., 2009) by video co-viewing, (Haridakis & Hanson, 2009) and through video sharing (Yang, et al., 2010).

Expanding upon the concept of connectedness with others using the internet, Haridakis and Hanson (2009) found that YouTube viewing and sharing holds the added dimension of supporting social networking activities before, during, and after the viewing. The social networking activities could be applied to the study of poster/viewer interactions in response to the videos. Papacharissi and Rubin (2001) found that persons who are not typically satisfied with their face-to-face interactions with others tended to use the Internet for more fulfilling interpersonal interactions. Additionally, Thelwall (2008) found that some users of online social networking sites utilized the medium as a means of planning face-to-face meetings beyond the physical limits of the Internet.

Much research indicated that social networking venues provide the opportunity for connecting with others for common interests (Acar, 2008; Blume, 1997a; Blume, 1997b; Davidson, 2008; Haridakis & Hanson, 2009; Raacke & Bonds-Raacke, 2008; Thelwall, 2008). Raacke and Bonds-Raacke (2008) found that the majority of college students in their study spent approximately three hours per day on social networking sites to connect with friends or to network with new friends. Acar (2008) and Thelwall (2008) provided analysis also reflective of this aspect of social networking. Conversely,

communications in Social Networking Sites (SNSs) may be solely for the purpose of simply connecting with others, for engaging in the act of communication “for its own sake” (Thelwall, 2008, p.1321).

Social Networking Sites can also serve as a *meeting place* for initiating and maintaining online interactions with others (Correll, 2007; Davidson, 2008; Tufekci, 2008). Correll, an anthropologist, Davidson, a cultural geographer, and Tufekci, a sociologist with an emphasis on cultural identity, all identified SNSs as a virtual place, where communication could comfortably unfold (Correll, 2007; Davidson, 2008; Tufekci, 2008). A shared, virtual place would be highly relevant to erasing geographical and social barriers between those with AS and the rest of the social world. Correll’s (2007) ethnographic research described how participants viewed a lesbian chatroom as evolving from a SNS into a virtual *place* with props such as chairs and a bar, wherein patrons would have a real presence while interacting with each other. Davidson (2008) explained, “The comfort experienced online means it is often described as more than a ‘means of communication.’ The medium can itself be an accessible ‘meeting place’” (p. 796). Tufekci (2008) proposed that a user’s SNS profile was not static, “...rather, it is a locus of social interaction that evolves and changes to reflect various dynamics within social networks and communities” (p. 546).

Some researchers noted that being *seen*, gives credence to the concept of SNSs as virtual spaces with a physical nature that transcends geography (Davidson, 2008; Tufekci, 2008). Being *seen* implied making an appearance and being recognized by others (Tufekci, 2008), a concept important to the study of persons with AS online because of their issues with spatial proximity and face-to-face interactions (APA, 2010;

Attwood, 2007; Davidson, 2008; Heflin & Aliamo, 2007). Tufekci (2008) found that while most sites had privacy controls, a significant number of users do not use them, which she rationalized as being evidential of the “purpose of using these sites...to be seen” (p. 549).

Being affirmed and engaging in the opportunity to affirm others was recognized as a factor in SNS use (Tufekci, 2008). Tufekci (2008) shared anecdotal evidence of internet exchanges where the primary purpose of the online interaction “was not the content of the message, but the act of leaving the message as a means of acknowledging the other person” (p. 557). Hand (2009) noted that some YouTube video posters with AS sought affirmation from viewers and others showed an appreciation of affirmative feedback when it was received.

Another use of Social Networking Sites is for enhancing one’s career or making professional connections (Acar, 2008). Acar (2008) stated, “The ‘internet communities’ that form these social networks enable people to set up contacts with individuals they would like to get to know for either professional or personal reasons who they otherwise would be unlikely to meet” (p. 63). Rather than forming new connections, SNSs can also be utilized to make existing connections stronger or more effective. In the transcriptions examined in the qualitative preliminary study, several of the posters revealed how their AS affected them at work (Hand, 2009). Some incorporated pleas for compassion from coworkers, requests for employers to explain things more clearly, or even specific instructions for employers to write down tasks if there was more than one thing to do at a time.

Siibak (2009) focused on adolescents and their perceptions of online networking directly for the purpose of initiating friendships. Siibak found that 63% of the teenaged females and 44% of males in the study were online because they wanted to gain new friends and network for new acquaintances with common interests. These data suggested that online SNSs are a strong conduit for Neuro-typical teen relationship initiation and development, perhaps indicating a similar purpose for the online social interactions of teens with Asperger's. Acar (2008) added that the Internet is a venue where one can get to know new people and Siibak agreed that SNSs are for "building connections with new people" (p. 1). Beyond initiating relationships, the Internet is also used for maintaining and/or strengthening existing friendships. Siibak stated that SNSs are "for strengthening the ties between off-line friends..." (p. 1).

Anonymity online serves a valuable function and is important because face-to-face communication is an area of difficulty for persons with AS (Attwood, 2007; Heflin & Aliamo, 2007; Henault, 2006; Kim, et al, 2009; Patrick, 2008). Kim et al. (2009) found that individuals who are lonely and depressed have a higher preference for online interactions than do persons not identifying themselves as depressed or lonely. Kim et al. claimed that online interactions "might be the 'Prozac of social communication,' relatively less risky and easier than face-to-face communication because of its greater anonymity..." (p. 451). Depression and loneliness are also common in individuals with AS (Attwood, 2007; Heflin & Aliamo, 2007; Henault, 2006; Patrick, 2008). In this way, the study by Kim et al. would be in agreement with Blume (1997b) and Davidson (2008) regarding individuals with AS who were seeking the anonymity of online communication to ease loneliness while avoiding the face-to-face interactions that make them less

comfortable (Blume, 1997a; Blume, 1997b, Davidson, 2008). McKenna and Bargh (2000) saw anonymity, reduced importance of physical appearance, and physical distance as “gating features” (p. 57) to relationship development, and one’s greater control over the time and pace of interactions as having an impact on online social interaction. Orr et al. (2009) suggested that specific features of online communication are appealing to persons using computer-mediated communication. These features included anonymity, conversation control, “the bridging of physical barriers,” (p. 337) and perceived issues related to physical attractiveness. Further, Orr et al. explained that the anonymity of online communication was significant due to “the removal of many of the verbal and nonverbal cues associated with face-to-face interactions” (p. 339). The study by Orr et al. was similar to the understandings of online communication as described by Blume (1997a; 1997b) and Davidson (2008), where the social discomfort of persons with Asperger’s was described as being somewhat alleviated through the anonymity afforded in online communication.

According to Christ (2008), “For some, technology has become a crutch and an addiction. For others, technology equalizes or even liberates” (p. 25). Internet social networking provides a means of ending isolation for individuals with Asperger’s and gives them a sense of empowerment (Blume, 1997a; Blume, 1997b; Davidson, 2008). Blume (1997b) agreed that “The level of communication possible via the Internet is changing our lives, ending our isolation, and giving us the strength to insist on the validity of our own experiences and observations” (para. 66). Davidson’s (2008) critical theory work demonstrated how the Internet was used not only to connect with others with AS, but how it was a liberating tool for social challenge and change in the acceptance of

AS not as a disability, but as a difference. The online connections for persons with AS, with each other and with Neuro-typicals, was empowering because “Simply put, for many autistics the Internet is Braille” (Blume, 1997, para. 61), a means for closing the communication gap and creating a common language and understanding in a shared space.

As suggested in the literature, it appears that persons with Asperger’s are forming Internet communities with each other (Blume, 1997a; Blume, 1997b; Davidson, 2008). Blume (1997a, 1997b) and Davidson (2008) asserted that persons with Asperger’s are forming virtual communities with others- others like themselves and others who understand them. Social connections made through posting and dialoging are one of the first steps in the community building (Davidson, 2008; Goodings, et al., 2007). The community building leads to the formation of identity in a shared culture (Davidson, 2008). Hand (2009) found numerous YouTube videos which showed the poster talking about his/her experiences as a person with AS wherein they would ask the viewer questions similar to this paraphrase, “Are you like this too? Does this happen to you?” Davidson (2008) relied upon her experience as a cultural geographer to attest, “The sense of shared cultures that experiential affiliations create may differ across time and space, but they are also associated with less tangible ‘axes of identity’, as discussed by geographers of gender, ‘race’, sexuality and (dis)ability...” (p. 793).

Researchers are using SNSs as data sources for understanding human behavior (Acar, 2008; Colle, et al., 2008; Kramer & Winter, 2008; Mikami, et al., 2010; Orr, et al., 2009; Valkenburg, Jochen, & Schouten, 2006; Young, Dutta, & Dommety, 2009). Orr et al. (2009) stated that online “forums provide opportunities for social interactions that shy

individuals might otherwise avoid” (p. 337) and individual differences such as shyness help to account for why online communication is used by some people and not others. Sheeks and Birchmeier (2007) also asserted that shy individuals have a greater reliance upon SNSs than non-shy individuals for seeking satisfying relationships. While shyness isn’t exactly the same as the lack of social skills demonstrated by persons with AS, there are similarities, such as not interacting with others or acting like a loner (Aston, 2003; Attwood, 2007; Heflin & Aliamo, 2007; Henault, 2006; Patrick, 2008). This comparison between Neuro-typical shyness and the lack of social skills is relevant to studies of persons with AS because those two traits may be perceived as being the same by others, even though the cause is not the same.

Williams and Merten (2008) examined SNSs and blogging behavior, suggesting that blogs “...contain intimate, candid, and observable self-disclosure ...” (p. 254). These online resources are an ideal data source for researchers because blogging especially consists of “individuals voluntarily posting information about themselves---personal thoughts, feelings, beliefs, activities---in a public arena with unlimited access for anyone with an Internet connection” (William & Merten, 2008, p. 254). They noted that the degree to which a blog author posts personal information is based solely upon the poster’s personal judgment, making it a prime opportunity for researchers to conduct “unobtrusive observations of authentic human behaviors and interactions with no ‘real’ contact or interference” (William & Merten, 2008, p. 254).

Self-Disclosure and Presentation of Self in Social Networks

Goffman (1959) was the first to address the dramaturgical concept of self-presentation in his pivotal work *The Presentation of Self in Everyday Life*. The basic

premise of his Symbolic Interactionist work was that individuals will attempt to control the impression they make upon others by manipulating aspects of their projected self, such as their appearance, mannerisms, affect, etc, in ways analogous to an actor performing a practiced role for an audience. Ellison, Heino, and Gibbs (2006) explain Goffman:

These impression management behaviors consist of expressions given (communication in the traditional sense, e.g., spoken communication) and expressions given off (presumably unintentional communication, such as nonverbal communication cues). Self-presentation strategies are especially important during relationship initiation, as others will use this information to decide whether to pursue a relationship (pp. 417-418).

Self-presentation creates a single opportunity to make an impression, to present one's *self* to another. Essential to self-presentation is the process of disclosure (Goffman, 1959; Schouten, et al., 2009). Schouten et al. (2009) observed that in computer-mediated communication (CMC) there were higher levels of self-disclosure compared to revelations of self in face-to-face communications because individuals could express greater control over their self-presentation in online venues. Online, they were more apt to disclose aspects of their "inner self that are not easily disclosed in real life" (Schouten, et al., 2009, p. 2). Further, Schouten et al. found that those with low "public self-awareness" (p. 2) were less apt to discern how they are perceived by others and they had less inhibition about disclosing personal aspects of their inner self. As explained by Schouten et al., self-disclosure online is singularly stimulated by "...the absence of visual cues about the face alone" (p. 3).

Tufekci (2008) described self-disclosure as the way in which a person constructs a public and semi-public self in order to produce a “social ‘me’” (p. 547) and through that social persona, interactions and relationships with others are affirmed. Tufekci regarded this process of developing the socially presented self as social grooming and asserted, “An inability, unwillingness or lack of talent in social grooming activities may be of real detriment to a person’s interests through a disadvantage in accumulation of social capital...” (p. 546). Mikami et al. (2010) found that, controlling for age, gender, ethnicity, and parental income, there was a positive correlation across time between teens and their adult patterns of behavior in online communications. Teens who were well-adjusted demonstrated more normalized patterns of online self-presentation as adults, while teens with social issues and behavioral problems portrayed atypical behaviors online in the baseline and then again as adults in their follow-up online self-presentations (Mikami, et al., 2010). The authors described a 1993 Steiner cartoon for *The New Yorker* which portrayed a dog in front of a computer who says to another dog, “On the Internet, no one knows you’re a dog” (p. 55). On the basis of their current findings, they concluded that, “on the internet, you behave like the dog that you are” (Mikami, et al., 2010, p. 55), meaning that online self-presentations, while contrived, are still representative of the truer, offline “social me” (Tufekci, 2008, p. 547). The lack of essential social grooming skills as described by Tufekci (2008) may be a distinctive disadvantage for persons with Asperger’s in the development of engaging online self-presentations.

Kramer and Winter (2008) reported that persons with “high values in self-efficacy with regard to self-presentation” (p. 114) had more friends listed on their SNSs, provided

more personal information in the completed fields, and used a greater number of words in their profiles. They also found that users with higher degrees of reported self-efficacy wrote in a more informal and humorous style, while those reporting weaker perceptions of self-efficacy wrote primarily in an objective style (Kramer & Winter, 2008).

According to Hand (2009), 92% of the YouTube videos examined in the preliminary study contained a brief descriptive narrative related to the video content, providing an artifact similar to profile descriptions in online SNSs.

Visual impressions and profile picture selection are important factors in managing an online SNS profile (Kramer & Winter, 2008). Kramer and Winter (2008) found that for users with reported low expectations for creating a positive social impression selected a portrait-style profile photo with a serious facial expression and no discernable background, whereas the users reporting moderate to high degrees of “impression management self-efficacy” (p. 113) were more likely to post a photo of themselves making a face, striking a pose, or were in a party environment as evidenced by the background or props. The visual impression of a poster using a video upload can be compared to the presentation of a profile picture in an online profile. According to the descriptive data collected in the preliminary study, 92% of YouTube videos posted by persons with Asperger’s Syndrome were of the posters talking while seated in front of their computer’s video cam or a web cam (Hand, 2009). Some were more creative and entertaining, involving music played by the poster, attempts at humor, and/or containing the use of props.

There is some evidence, as suggested by Siibak (2009), that attractiveness is an issue in online popularity. Siibak found that the majority of males and females in their

study cited good looks as being the most important factor for determining popularity in an online social networking site. Further, Siibak found that 74% of adolescent males and 66% of females in his study believe that having good looks, looking *sexy*, and wearing trendy clothing were necessary components of a profile picture in order to gain popularity amongst peers.

Strano (2008) pointed out the significance of age and gender in self-presentation and impression management. These may be factors in the YouTube video posts as well. Just as younger people use Facebook in Strano's study, the same holds true for users of YouTube. According to the YouTube fact page, 52% of the video uploading functions are used by a younger generation of posters between the ages of 18 and 34 (YouTube, 2010b). Tufekci (2008) revealed that women were four to five times more likely to use SNSs than males.

Control and lack of control appear to be issues in self-presentations online (Kramer & Winter, 2008). Kramer and Winter (2008) proposed that self-presentations take a degree of calculation and risk in controlling content of profiles online. While there is control involved in what *self* is to be delivered to the viewer, it cannot be customized to individually accommodate the viewer as would be the case in face-to-face interactions, where verbal and nonverbal cues moderate the exchange (Kramer & Winter, 2008). According to Kramer and Winter (2008), "Users of social networking sites have more control over their self-presentational behavior than in face-to-face communication, which provides an ideal setting for precise impression management as described by Goffman (1959)" (p. 106). In contrast, the authors also pointed out the lack of control afforded in online management of impression. They found that because users online are displaying

their presentation of self to a wide audience, these self-presentations lack the control of face-to-face interactions because they cannot be tailored “to the specific interaction partner” (p. 106). Ellison et al. (2006) asserted that the “pressures to highlight one’s positive attributes are experienced in tandem with the need to present one’s true (or authentic) self to others...” (p. 418). Hand (2009) found that posters revealed difficulties in social relationships, failure to maintain a romantic relationship, work-related rejections, public humiliations, teasing, bullying, and other personal details. These authentic revelations were sometimes balanced by statements about AS being a gift, not a disability.

A necessary component of effective communication is to understand and to be understood by others. Research on Theory of the Mind (ToM) suggests that there are gaps in the way persons with AS are able to take the perspectives of others (Attwood, 2007; Beaumont & Sofronoff, 2008; Bowler, 1992; Heflin & Aliamo, 2007; Kaland, Smith, & Mortensen, 2007; Kaland, Callesen, Møller-Nielsen, Mortensen, & Smith, 2008; Klin, 2000; Murphy, 2006), bringing into question the degree to which they are able to be critically aware enough of others in order to determine exactly what would be good to say for a positive impression management versus what not to say, in order to avoid creating a poor impression online or off. ToM skills are essential to comprehending another person’s perspective, in correctly *reading* another person’s verbal and nonverbal cues, and for successful communication in social interactions (Attwood, 2007; Baron-Cohen, 1989; Beaumont & Sofronoff, 2008; Bowler, 1992; Heflin & Aliamo, 2007; Kaland, et al., 2007; Kaland, et al., 2008; Klin, 2000; Murphy, 2006). In online text-based communications and chat, the user with or without Asperger’s must

rely on embedded social cues provided through text and where a visual connection with another person may be limited or nonexistent. Through an integrated understanding of the literature on the characteristic traits of persons with Asperger's (from lack of eye contact to their deficits with Theory of Mind) and what is understood about their online communications, it may be conjectured that deficits in the ToM skills of persons with Asperger's could impact their use of electronic communications (Attwood, 2007; Baron-Cohen, 1989; Klin, 2000; Wing, 1981).

Self-Presentation and Social Identity in Online Communities

Social Networks are online places where communities are built for personal or professional purposes (Acar, 2008; Davidson, 2008; Goodings, et al., 2007; Tufekci, 2008). Acar (2008) described the “‘internet communities’ that form these social networks” (p. 63) as places where strangers can be met and networked with for work or for social purposes. Goodings et al. (2007) proposed a “reorientation to psychological (or subjectivist) rather than sociological (or objectivist) definition of community is useful” (p. 465) in allowing SNS users to experience emotional connectedness and a sense of belonging without having *strong ties* to those with whom they are engaging online. Goodings et al. described the notion of “virtual togetherness” (p. 465) as the sense of belonging experienced by users despite the lack of physical proximity with fellow users. According to Davidson (2008), the basic principle of online communities is that individuals are able to “circumvent the geographical constraints of the material world and take a more proactive role in shaping their own virtual community and their position within it” (p. 793). Tufekci (2008) explained that online presences emerge, “to reflect

various dynamics within social networks and communities” (p. 546) making connections with others dynamic rather than static.

Within online communities, important issues for any user are measuring the risks and rights related to disclosure and privacy (Kim, et al., 2009; Levin & Abril, 2009; Tufekci, 2008). When users are presenting personal information online in order to engage others in a social dialogue, it appears that the issue of privacy is outweighed by the right to share and the wish to disclose. As Tufekci (2008) found, in spite of the existence of privacy controls on most SNSs, a significant number of users chose not to avail them. Tufekci rationalized this as evidence that “the purpose of using these sites is to be seen” (p. 549) through self-presentation and disclosure. Levin and Abril (2009) found that while there is a high expectation for privacy online from external agencies accessing personal information within social networks, more than 50% of users routinely shared personal information such as their real name, relationship status, name of person they are in a relationship with, educational background, current city, employer, hobbies, personal interests, favorite music and books, etc. Of the users responding, 16% gave their phone number and 6% gave their full address. Levin and Abril proposed that there is a balance between the risk and rights of disclosure because, “When individuals are allowed to act with autonomy and are treated as ends in and of themselves, their human rights, dignity, and liberty are assured” (p. 1008). Kim et al. (2009) concluded that “entertainment applications of the Internet rather than social ones” pose a greater risk to the user (p. 455).

Use of Computer-Mediated Technologies for Persons with Disabilities

There was much evidence in the literature to suggest that computer-mediated technologies are effective tools for use by persons with exceptional needs. Research consistently supports the use of computer-mediated technologies for persons with cognitive disabilities (Chen, et al., 2009; Grabinger, 2010; Grabinger, et al., 2008; Scott, et al., 2007; Standen, et al., 2006). Numerous studies have also described how persons with learning disabilities benefit from the use of computer-based interventions (Davies & Morgan, 2005; Martínez-Marrero & Estrada-Hernández, 2008; Stodden & Roberts, 2009; Sugawara & Yamamoto, 2007; Törmänen, et al., 2008). Additionally, researchers have evidenced success in the use of computer-mediated technologies for persons with physical disabilities (Alcantud, et al., 2006; Bache & Derwent, 2008; Chau, et al., 2006; Stumbo, et al., 2009; Tam, et al., 2007). Barnard-Brak and Sulak (2010) dichotomized persons with *visible* versus *invisible disability* as they compared the use of computer-mediated instructional environments between the two groups. Sapp (2009) examined the use of online educational media, also by a cross-section of persons with intellectual, physical, and sensory differences. The author proposed the benefits of a universal design for enhancing accessibility and usability in comprehension of learning modules. A universal design is one wherein users of all abilities can be accommodated without the need to adapt materials or environments.

Mitchell et al. (2007) showed that the use of computer-mediated virtual environments (VEs) for teaching social skills was significant at the intervention level because it addressed issues with face-to-face interactions and proximity, but the reality of the context was maintained. Mitchell et al. stated, “The interactive nature of learning

through role-play in VEs supports imagination and problem solving in a realistic context” (pp. 590-591). Wallergård et al. (2008) demonstrated how persons cognitively slipped into the VE experience and assimilated it as a real world scenario. These findings could provide an explanation for the ease with which the YouTube posters with Asperger’s recorded their one-sided video *dialogue* with the viewer, as if the viewer is present and participating; when in real-time, this is not something they are able to do with fluidity and comfort. It may also explain how the viewer feels comfortable listening and responding to a complete stranger as if he or she were an acquaintance. Wallergård et al. found that the VE experience of participants had physical and social aspects, such as going through physical motions in response to the virtual surroundings and speaking to a VE bus driver politely, as if he were a real person, in spite of his less than realistic appearance and behavior. Wallergård et al. suggested that their results explain how, at some level, persons are able to respond and relate to virtual others.

Citing the absence of “interface flexibility” and the “narrow choice of instructional design strategies,” (p. 3) Grabinger et al. (2008) expressed disappointment in finding that although the use of online courses by persons with disabilities had increased, the instructional presentation of the majority of programs studied failed to accommodate learners with cognitive impairments, limiting their educational access and opportunity. Perhaps that limitation is somewhat explained by Barnard-Brak and Sulak (2010), who examined the difference between *visible* and *invisible* disability for individuals with special needs in seeking accommodations in an online college course. They found that those with visible disabilities, such as physical differences, were more likely to prefer online courses and were more likely to seek accommodations than

persons with invisible disabilities who do not seek accommodations in the same ways, affording those with the visible differences a “greater access to higher education” (p. 88).

There is evidence that although persons with disabilities are interested in accessing computer-mediated technologies and indeed benefit from their use, there are issues with accessibility. Contrary to finding that online environments provided unencumbered access to a myriad of computer-mediated experiences, Curran et al. (2007) lamented the inaccessibility of the majority of sites investigated in their study. The authors clearly described the types of users with disabilities who could benefit from online access and included the specific nature of their needs for accommodations online. Only a single site met the “most basic conformance level” (p. 453) of the Web Content Accessibility Guidelines.

Use of Computer-Mediated Technologies for Persons on the Autism Spectrum

Numerous researchers have touted the benefits of computer-mediated technologies for persons with Asperger’s (Faja, et al., 2008; Klin, 2000; Miles, et al., 2007; Mitchell, et al., 2007; Rajendran, et al., 2005; Sansosti & Powell-Smith, 2008). Faja et al. (2008) demonstrated the use of computer-engineered and presented photos for significantly improving the ability of persons with Asperger’s to recognize and process faces. Facial recognition is the essential first step in engaging a listener and ultimately, nonverbal facial clues must be recognized and processed in order to maintain conversation by giving the speaker a gauge by which to judge the listener (Faja, et al., 2008). Miles et al. (2007) reported successful use of a Personal Digital Assistant (PDA) for a teenage student with Asperger’s who was trained to use the device for recording assignments and all of the essential details for their successful completion. Using the

PDA markedly improved the teen's ability to be successful in the General Curriculum, which the authors attributed to the unobtrusiveness of the device, the novelty of its use, and a high motivation for use as an escape from handwriting- a task which the student did not enjoy.

Rajendran et al. (2005) conducted an intervention involving learners with either High Functioning Autism or Asperger's Syndrome who were literal in their interpretation of social language. The study subjects were unable interpret the mind of others, which negatively affected their ability to communicate effectively and affected their ability to make and maintain social connectedness. According to Rajendran et al., the intervention incorporated the use of computer-presented Bubble Dialogue scenarios which allowed the participant to engage in role-plays of social conversation initiated by typed prompts containing either non-literal language, sarcasm, or inappropriate requests (such as asking for a large sum of money or personal information). The authors described computers as being ideally suited for increasing communication capabilities in persons with HFA and AS because they provide emotional and social distance, accommodate the need for sameness and predictability, free the user from the sensory overload that can be caused by face-to-face interactions, and allow the individual to self-pace. An added benefit of computer-mediated instruction, according to the authors, is that many persons with HFA or AS demonstrate a special interest in computers. They concluded that the use of computers would be a valuable instructional tool for enhancing communication by providing exposure to and an understanding of non-literal language, sarcasm, and the appropriateness or inappropriateness of certain communicated requests.

Sansosti and Powell-Smith (2008) reported success using computer-mediated instruction with three male students diagnosed with either Asperger's Syndrome or Pervasive Developmental Disorder–Not Otherwise Specified (PDD-NOS). The participants read Social Stories on a computer and watched video models of positive social communication skills addressing each learner's individual target behaviors, specifically engaging in and maintaining social conversation with peers. Data showed that the combined intervention of computer-presented Social Stories and video modeling was effective for increasing the overall rates of social communication for the three boys.

Mitchell et al. (2007) reported success in using computer-presented virtual reality social scenarios for teenagers on the Autism Spectrum. In each of the scenarios, based either in a café or on a bus, the student had to *speak* to other participants in the virtual environment using socially appropriate rules of engagement and make social choices, such as where to sit and with whom to speak. The student interacted with virtual characters by typing in the words he or she would use to communicate with them as if it were a real social scene. Meta-cognitive prompts interjected after each response or action, asked the user to justify the reasoning behind their responses and actions. Students' social decisions and reasonings were evaluated in real time and corrective feedback was provided for errors in social communication and social decision-making. The learners were able to develop skills in social communication and in making decisions determined to be socially relevant over time as demonstrated by shorter response intervals prior to engaging in appropriate interactions. The authors controlled for bias with naïve raters and concluded that the use of virtual reality scenarios was an effective intervention for teaching social communication and social interaction skills to teenagers

with Autism. The results of the study, according to Mitchell et al., were encouraging for exploration of how virtual environments could help to teach other types of social skills to learners on the Autism Spectrum. They concluded,

If individuals with ASDs are comfortable using virtual environments, and gain satisfaction from the experience, then perhaps this could be exploited by using collaborative environments as a vehicle for providing social encounters and social interactions, albeit in a virtual world (Mitchell, et al., p. 599).

Use of Online Social Networking by Persons with Disabilities

There is a gap in the literature for the area of online social networking by persons with disabilities. However, more work is becoming available in this area. As of May 29, 2010 in Academic Search Complete, only one full length, peer-reviewed journal article had *Disabilities* and either *Online* or *Social Networking*, in the title, but by February 11, 2011, there were eight for *Disabilities* paired with *Online* and eight for *Disabilities* paired with *Social Networking*. In ERIC, as of May 29, 2010, there were no articles with those descriptors in the title, but by February, there were eight for *Disabilities* paired with *Online* and six for *Disabilities* paired with *Social Networking*. In PsychINFO, the number increased from five to seven full-length peer-reviewed journal articles with either *Online* or *Social Networking* paired with *Disabilities*. At the first checkpoint, PsychARTICLES had no articles for any of the search terms in combination, but at the second checkpoint, there was one for *Disabilities* paired with *Social Networking*. Overall, this was a 16 % increase, from six articles to 38 articles in less than nine months.

Bowker and Tuffin (2002; 2003) and Seymour and Lupton (2004) specifically addressed persons with disabilities using online networking for purely social purposes.

These authors provided support of the efficacy of online networking venues as a means for developing and maintaining relationships, but also urged caution regarding its harsher realities. Bowker and Tuffin (2002) described the Internet as offering a *leveling ground* where persons with disabilities “can be treated on their merits as a person rather than as a disabled person” (p. 327). In 2003, the authors suggested that “Irrespective of mobile, verbal, or co-ordination abilities, the range of assistive technology devices supporting online communication provides people with disabilities an opportunity to participate in social interaction” (para. 5). Further, Bowker and Tuffin (2003) proposed that the Internet *neutralizes* the physical differences that may affect face-to-face interactions for persons with disabilities. The authors attributed the perceived success of online social interactions to “the visual anonymity” of online interactions which affords persons with disabilities “the potential to participate in social interaction beyond the stigma of a disabled identity” (para. 1).

Seymour and Lupton (2004) described additional uses to include the development of intimate relationships and the benefits of access to disability related sites. They also address “the experience of ‘body-less’ communication” (p. 297) wherein the user is able to be free of being judged for his or her physical self as may be the case in face-to-face interactions. Bowker and Tuffin (2002) explained that “We live in a world where reality is mediated by visual ontology” and a definition of one’s self is controlled by “behavioural and aesthetic norms” (pp. 327-328).

Bowker and Tuffin (2002) addressed managing presentation of self and identity online by persons with disabilities. The study participants were limited to those with physical and/or sensory impairments, with no persons manifesting cognitive disabilities

or AS included in the study. The researchers examined how participants managed presentation in online social venues in terms of their construction of identity through either withholding or revealing disability. Bowker and Tuffin found that three factors determined self-revelation: relevance of the context, desire for anonymity, and normality as defined by the desire for assimilation into the normative culture of the nondisabled.

Combining the need for social connectedness with the opportunity for self-disclosure to whatever degree chosen by the user, the Internet allows persons with disabilities to “position themselves in the social world” (Bowker & Tuffin, 2002, p. 328). However, they warn that the Internet is “a deceptive social space where people with disabilities become victims of malevolent acts” (Bowker & Tuffin, 2003, para. 1). Similarly, Seymour and Lupton (2004) concluded that the individuals in their study used online technologies “much as they would the telephone,” (p. 302) with a comfort similar to what they would experience in their own home and the safety of their “known world” (p. 302). However, that support is not without reservation, as they noted, it is a “double-edged sword” wherein the online communications exposes individuals with disabilities to a “world of strangers” who can victimize the user with the “prejudice, hostility and bad behaviour endemic in social interaction” (p. 300).

Use of Online Social Networking by Persons on the Autism Spectrum

As of May 2010, only Davidson (2008) had addressed the use of Internet by persons on the Autism Spectrum for online social networking, but as of February 11, 2011, an examination of Academic Search Complete, PsychINFO, PsychARTICLES, and ERIC demonstrated that the number of researched based publications had slightly increased to include several others. However, the gist remained the same. The Internet

is, in essence, a source of social salvation for persons on the Autism Spectrum seeking community (Brownlow & O'Dell, 2006; Clarke & van Amerom, 2007; Jordan, 2010; Waltz, 2005).

Using an ethnographic approach, Davidson analyzed the autobiographies of over 40 persons with ASD and found that they had a great deal to say about their use of the Internet for social connectedness. Quoting Singer's 1999 autobiographical work, Davidson shared, "The impact of the Internet on autistics may one day be compared to the spread of sign language among the deaf" (p.792). Blume (1997b) used this same quote in her autobiographical essay, '*Autism & the Internet' or 'It's The Wiring, Stupid.'*' Brownlow and O'Dell (2006) concur as their research described how online chat rooms were *powerful tools* for providing persons with AS the opportunity to find a voice through the Internet. Likewise, Jordan (2010) asserted, "The digital age holds unique significance for autism spectrum disorder" (p. 220) as the Internet is an opportunity for "autism's fledgling voices" (p. 220) to be heard.

Davidson (2008) addressed the way in which the Internet is an "appropriate and accommodating medium" for persons with ASD, especially considering their "characteristic preferences for communication at a socio-spatial distance" (p. 791). Jordan (2010) listed specific characteristics of persons living on the spectrum that would enhance their interest in communicating via the Internet, emphasizing that facility with computer technology enhanced by "systemizing, spatial reasoning, and engineering skills," (p. 220) traits often identified with persons on the autism spectrum that would give them an inclination to have affinity with online mediums. Brownlow and O'Dell (2006) confirmed that some qualities typical of individuals with autism, such as

proficiency with technology, ideally place them in a position to avail themselves of the Internet for expression and self-advocacy. Waltz (2004) used case studies of narratives by persons on the Autism Spectrum to reveal the “social construction of autism” and asserted that the Internet “provides a forum where people with autism can present their own ‘case studies’” (p. 430).

Jordan (2010) provided numerous other ways in which the Internet was an ideal venue for social communications by persons on the Autism Spectrum. According to her analysis of discussion boards and chat venues, the Internet allowed individuals to “interact without anxiety” (p. 220) compared to the anxiety produced in face-to-face exchanges. Jordan also highlighted the fact that the Internet allows persons with ASD to remain in a familiar setting while interacting and to control for hypersensitivities such as light or sound, further reducing their anxiety. Additionally, online interactions can be devoid of the factors that might typically influence social communications negatively, including atypical motor expressions, voice tonality, and the effective interpretation of the speaking partner’s emotions. Removing these stressors allows the individual to focus more freely on the content of the interaction and to optimize the conversational opportunity (Jordan, 2010).

Davidson’s (2008) ethnographic analysis revealed that some of the writings of persons with Asperger’s demonstrate that the Internet is a valuable resource for developing and maintaining their social relationships. Davidson quotes one of the 40 autobiographers studied, Blume (1997b), as writing ““The level of communication possible via the Internet is changing our lives, ending our isolation, and giving us the strength to insist on the validity of our own experiences and observations”” (p. 798).

Again, Davidson quoted Blume (1997a) from a piece for the *New York Times* entitled *Autistics, Freed from Face-to-Face Encounters, are Communicating in Cyberspace*, ““When the computer became able to connect me with others via the internet, my ‘real’ world expanded also”” (p. 801). Jordan (2010) referenced the online public forums at *Wrong Planet* and *Spectrum Forums*, which provide discussion boards for persons with autism and for persons who are Neuro-typical with an affinity. Since these forums are “frequently designed by individuals with autism,” (p. 221) they provide a means of conversing online as a way to “socialize without experiencing the demands associated with real-life conversations” (p. 221).

Jordan (2010) qualitatively expressed reflections of Internet users on the Autism Spectrum regarding how they were empowered through their blogging and Websites to raise public awareness, to help parents get information for understanding their children, to create foundations, to aid in research, and to advance the causes of autism through advocacy. Davidson (2008) also found that “AS writings and others’ research demonstrates that the Internet provides at least some of those on the spectrum with... the opportunities for exchanging practical advice and information with other (non-professional) experts are considered extremely important” (p. 797). In an analysis of online chat, Brownlow and O’Dell (2006) found that persons with AS “prioritized their own (and others’) firsthand knowledge over the scientific knowledge held by academics” (p. 318). This related directly to one of the most common thematic elements in the preliminary study wherein the YouTube posters frequently asked for, and received, advice from other persons with Asperger’s or from those who were considered Neuro-typical who wished to share an opinion (Hand, 2009).

Davidson (2008) explained "...autistic differences in perception and 'processing' tend to involve Other ways of being in the world, separate senses of selves and space that give rise to distinctive cultural experience, and so also, cultural expression" (p. 793). This leads to the formation of a shared online culture (Davidson, 2008). Brownlow and O'Dell (2006) asserted that "self-identification with a specific label" (p. 320) was an essential feature of online chat interactions amongst persons with AS and that "proof of diagnosis was not an overriding concern," (p. 320) but rather the affiliation or shared identity with others in the group was more important. Hand (2009) also noted that there might be an emergent culture of Asperger's as evidenced by the development of a common terminology (Aspie, Neuro-typical), common interests, common history of living with Asperger's, and a common space, albeit, virtual. All of these factors appear to fit the classic definition of a community that has emerged into a cultural entity. Davidson relied upon her experience as a cultural geographer to attest "The sense of shared cultures that experiential affiliations create may differ across time and space, but they are also associated with less tangible 'axes of identity', as discussed by geographers of gender, 'race', sexuality and (dis)ability, among others" (p. 793). According to Davidson

While those with autism have yet to literally take to the streets, increased literary presence in numerous public forums suggests that many are in fact 'coming out' with pride, asserting minority cultural status and strengthening common ties in (virtual) space (p. 795).

Description of YouTube

YouTube is more than a site for simply posting and watching videos; it is online venue for social networking (Boyd, 2008; Haridakis & Hanson, 2009; Lange, 2007; Mislove, et al, 2007; YouTube, 2010b; YouTube, 2010a). Haridakis and Hanson (2009) asserted that there is “a distinctly social aspect to YouTube use that reflects its social networking characteristics” (p. 317). Lange (2007) identified it as being a site where individuals can “experience varying degrees of engagement with videos, ranging from casual viewing to sharing videos in order to maintain social relationships” (p. 361).

The creators of YouTube distinguish it as being a social networking site, specifically by describing itself as a “forum for people to connect,” (YouTube, 2010a, para. 1) and with claims such as, “Everyone can participate in the YouTube community by watching, sharing, and commenting on videos” (2010a, para. 3). YouTube extends the concept of social networking to community formation with assertions that the site offers “a community for everyone” (2010a, para. 13) and with the pledge that it “will always be an open community” (2010a, para. 17). Not only can the videos themselves be a virtual social dialogue with the viewer, but opportunities to chat about the videos in response to these video postings extends the social nature of the experience.

YouTube offers posters the opportunity to expand their understanding of their video audience by providing specific marketing features which will give the poster feedback on their viewing demographic (Campbell, 2009; YouTube, 2010d). Using YouTube Insight, a tool available to any person with a YouTube account, users can get statistical analysis of their video’s social effectiveness (YouTube, 2010d). According to Campbell (2009), the tool enables the user to get feedback on video ratings and

comments from viewers to measure the efficacy of the poster's "social activity" (para. 6). Users can access feedback on how viewers are interacting with your video post based upon the number of views, viewer demographics, popularity, "favoriting," and "community" (Campbell, 2009, para. 6).

Users of YouTube and Their Motivations

As of February 11, 2011, there were fewer than 70 articles with YouTube in the title in Academic Search Complete and Communication and Mass Media Complete yielded only 20, many overlapping those in the other engine. Haridakis and Hanson (2009), Lange (2007), Mislove et al. (2007), Yang et al. (2010), and Ying et al. (2009) all identify YouTube as a social networking medium, with the majority of other current social networking studies focusing only upon Facebook and MySpace. However, Haridakis and Hanson (2009) and Lange (2007) are the primary authors of research relevant to the users of YouTube and their motivations. Haridakis and Hanson wrote, "YouTube is one of the new forms of social network-oriented online communication that have emerged in the past few years. It exemplifies a social environment..." (p. 317). Lange explained, "A media circuit is not a social network itself, but rather it supports social networks by facilitating and technically mediating social interactions among people within a network" (p. 363). Yang et al. confirmed YouTube use as being affiliated with social influence from "perceived network externalities, interpersonal norms, and social norms" (p. 148) indicating that the users' network, pressure from peers, and *positive judgments* regarding mass media all determine patterns of use by gender. Ying et al. described YouTube as a source of social networking through commenting features more so than through the use of "social tagging" (p. 2399).

On the motivations of viewers and posters of videos, Lange (2007) proposed that the way in which media, including videos, “are viewed, enjoyed, and forwarded reveal much about the participants and their relationships” (p. 363). Lange found that even “Making the video helped launch connections that did not exist prior to the mediated event ...to encode an interesting, affective experience” (p. 368) that could be shared with others. Lange further identified the sharing of videos as indication of differing degrees of social relationship, especially among “youth” (p. 362). Haridakis and Hanson (2009) expressed, “By the same token, the ability to share videos with others offers a social component to YouTube that suggests interpersonal motives such as inclusion, affection, and control...” (p. 318). Haridakis and Hanson further suggested that chatting, social interactions and uses, and interpersonal interactions and uses are the motivations for propelling Internet use. They stated,

The findings suggest that people do use sites such as YouTube to enhance their social circles and social lives. That, coupled with the finding that social activity was a significant predictor, supports the description of YouTube as a social medium rather than an interpersonal one (p. 331).

Lange (2007) found that YouTube users blur the lines between public and private because they appear to have “different expectations about what information can be shared or what constitutes sensitive information” (p. 364) in the interaction. However, that interaction between the poster and the viewer is a “core component of participation” (p. 377). The sharing of information through the videos sometimes prompts an interaction between the poster and the viewer, especially if the viewer comments are “of affinity” or “thoughtful” (Lange, p. 369). Further, communication in the form of “intelligent

commentary” (p. 376) stimulated closer social connections. When viewers react to the comments by the poster, “Although further interaction is not guaranteed through comments, interviewees noted that these interactions were often the initial steps in broadening social connections through media circuits” (Lange, 2007, p. 369). According to Lange, the social communications that centered on the videos enabled users to maintain connectedness with family regardless of distance and facilitated membership within social networks.

Use of YouTube by Persons with Asperger’s

Upon thorough investigation, there were no other studies directly related to the topic of the current study, *The Use of YouTube by Persons with Asperger’s Syndrome for Online Social Networking*. As of August 1, 2010, in Academic Search Complete, PsychINFO, PsychARTICLES, ERIC, and Media Search Complete only 17 full length, peer-reviewed journal articles had YouTube in the title, but by February 11, 2011, there were 69. However, none of these journal articles on YouTube remotely related to disabilities, autism, or Asperger’s. Although only tangentially related, Bowker and Tuffin (2002; 2003), Davidson (2008), Haridakis and Hanson (2009), and Lange are perhaps most significant to the study of persons with Asperger’s online.

Bowker and Tuffin, in both *Disability Discourses for Online Identities* (2002) and *Dicing with Deception: People with Disabilities’ Strategies for Managing Safety and Identity Online* (2003) provided an understanding of persons with disabilities managing their online identity through their choice to self-disclose or withhold personal information regarding disability. Davidson’s (2008) *Autistic Culture Online: Virtual Communication and Cultural Expression on the Spectrum*, provided a critical theory perspective on

persons with AS from their auto-biographical accounts. Based upon her content analysis, she argued that there is a distinctively autistic voice/language that manifests as a part of an autistic culture, especially in online communications. Davidson asserted that this stylized language creates a cultural identity online and off.

In addition to directly identifying YouTube as a social networking medium, Haridakis and Hanson (2009) and Lange (2007) examined which factors best predicted the reasons why individuals watch and share YouTube videos. Haridakis and Hanson (2009) provided insight into how YouTube can be used for developing and maintaining social connectedness through the watching, co-watching, and forwarding of videos. Lange (2007) established the two-way interaction between the poster and the viewer, with the video being the means of potentially launching a communicative exchange. Importantly, she also described how private versus public social access to the content is controlled through what is said on the videos and through how the videos are shared with others. The majority of other studies on social networking focus only upon Facebook and MySpace as venues for connectedness with others. However, few of the limited number of studies on Facebook and MySpace, and none of the few studies on YouTube, addressed persons with disabilities. More specifically, no literature existed regarding the use of YouTube by persons with Asperger's, leaving a noticeable gap in the literature.

Conclusion

In general, there is evidence from a broad range of perspectives on the use of computer-based technologies for persons running the gamut of exceptional needs, including Asperger's (Alcantud, et al., 2006; Bache & Derwent, 2008; Chau, et al., 2006; Chen et al., 2009; Curran, et al., 2007; Davies & Morgan, 2005; Faja, et al., 2008;

Grabinger, 2010; Grabinger, et al., 2008; Klin, 2000; Martínez-Marrero & Estrada-Hernández, 2008; Miles, et al., 2007; Mitchell, et al., 2007; Rajendran, et al., 2005; Sansosti & Powell-Smith, 2008; Sapp, 2009; Scott, et al., 2007; Standen, et al., 2006; Stodden & Roberts, 2009; Stumbo, et al., 2009; Sugawara & Yamamoto, 2007; Tam, et al., 2007; Törmänen, et al., 2008; Wallergård et al., 2008). Further, the literature on the use of online communications supports the belief that Internet venues are feasible opportunities for promoting and developing social connectedness with others (Acar, 2008; Blume, 1997a; Blume, 1997b; Boyd & Ellison 2008; Christ, 2008; Correll, 2007; Davidson, 2008; Garton, et al., 2006; Goodings, et al., 2007 Gross & Acquisti, 2005; Haridakis & Hanson, 2009; Kim, et al., 2009; McKenna & Bargh, 2000; Orr, et al., 2009; Papacharissi & Rubin, 2001; Sheeks & Birchmeier, 2007; Siibak, 2009; Thelwall, 2008; Tufekci, 2008; William & Merten, 2008; Yang, et al., 2010; Ying, et al., 2009). While the characteristics of persons with Asperger's directly impact their facility with offline social interactions, this review contributes to the understanding of how online venues are particularly useful for them in establishing and enhancing online associations with others through their use of self-presentation (Davidson, 2008). Self-disclosure as a primary tool for facilitating online connectedness has been researched primarily using Facebook and MySpace, but this review still contributes to an understanding of the role of self-disclosure and presentation of self as it might be applied in other online social networks (Ellison, et al., 2006; Kim et al., 2009; Kramer & Winter, 2008; Levin & Abril, 2009; Mikami, et al., 2010; Schouten, et al., 2009; Siibak, 2009; Strano, 2008; Tufekci, 2008).

There is a relative dearth of research available on the use of online social networking by persons with disabilities except for significant pieces by Bowker and

Tuffin (2002; 2003) and Davidson's (2008) ethnographic work, which contributed greatly to our understanding of online social networking by persons with autism and Asperger's through her examination of primary source documents. Neither Bowker and Tuffin nor Davidson directly reference YouTube as a social networking venue, and although Haridakis, Hanson, and Lange contributed insight into the use of YouTube as a venue for social connectedness within the Neuro-typical population of YouTube users and their motivations for co-viewing videos with others, none of the researchers touched upon the use of YouTube by persons with exceptional needs or by persons with Asperger's.

After a final gleaning of the search engines Academic Search Complete, ERIC, PsychINFO, and PsychARTICLES on February 11, 2011, the evidence suggests that there is limited research directly related to the use of online social networks by persons with Asperger's, the use of YouTube as a social networking phenomenon, and most specifically, the use of YouTube for online networking specifically by persons with Asperger's. *How do these young adults with Asperger's Syndrome make use of self-presentation in narrative YouTube video submissions for establishing and maintaining social interactions with viewers?* If indeed, the Internet is the panacea of social communication for persons on the Autism Spectrum contend, as Singer (1999) analogized sign language was for persons with deafness, then perhaps this is an area that merits scrutiny.

Chapter III

METHODS

The methodology for understanding how young adults with Asperger's Syndrome make use of self-presentation in narrative YouTube video submissions for establishing and maintaining social interactions with viewers consisted of a content analysis followed by regression analysis. This chapter contains an overview of the research design, followed by specific details for understanding the processes behind each phase of the study. Such a thorough task analysis of the individual steps is valuable in order to allow for a reliable replication of the study. Further information includes the refinement of the sampling pool, the procedures for locating and saving the videos selected for the sample, and the procedures for collecting the data. The development and description of the dependent and independent variables are detailed. The topics of reliability and validity are addressed and followed by a comprehensive depiction of the essential components of the data analysis.

Research Design

The research design evolved out of the preliminary study (Hand, 2009). Working from a grounded theory perspective using transcribed YouTube videos, the preliminary study was conducted to determine which thematic elements would emerge that might explain the significance of the hundreds of YouTube video postings by persons with Asperger's Syndrome. The videos from the preliminary study were from a purposive

sample, selected as being representative critical cases after the viewing of over one hundred postings. Descriptive data were collected on twenty-six videos and further analysis was conducted on eight of those with full transcriptions and mining for emergent themes. Nine themes within the self-presentations emerged and included: definition of Asperger's, description of characteristic traits, sharing of personal information, seeking to understand, seeking to be understood, seeking to help others to understand, inviting response, a statement of why the video was made, and outcomes or feedback from viewer responses. The preliminary study inspired and influenced the development of the current study.

The current study consisted of a random sampling of 147 YouTube video postings by persons with Asperger's Syndrome over the apparent age of 20 engaged in disclosive, discursive video monologues. A content analysis was conducted on these videos using the eight thematic categories considered reflective of presentations of self. These eight elements served as the foundation for the development of the independent variables (IVs). The ninth thematic element from that preliminary study, which reflected viewer responses, served as the inspiration for the creation of the two dependent variables (DVs) in the current study: total response comments and whether there were consecutive exchanges of responses that would indicate a maintained dialogue between poster and viewer. The DVs and the IVs were used in regression analysis for understanding how young adults with Asperger's Syndrome make use of self-presentational features in narrative YouTube video submissions for establishing and maintaining social interactions with viewers. The regression analysis included multiple and logistic regressions for determining the significance of the eight IVs in predicting the two DVs.

Refining the Sampling Pool

Sampling and data collection took place between November 14, 2010, and December 6, 2010, with the content being analyzed using a pre-structured data collection instrument developed to reflect the absence, presence, and/or frequency of certain social elements within the video self-disclosures (see appendix A). At the time of sampling, there were approximately 9,000 YouTube videos with *Asperger's*, *Asperger's Syndrome*, or *Aspie* as a label in the title, tag, or description (YouTube, 2010d). With a delimiting search function, that number was reduced to precisely 2,340 video postings that included *Asperger's Syndrome* as a label in the title, tag, or description, when controlling for several additional factors. First, the settings were controlled for *Relevance by Upload date* over the options of *View count* and *Rating*. Next the factor of *Upload date* was defined as *Anytime*, rather than the options of *Today*, *This week*, or *This month*. Further, the settings were controlled to include *Result Type* wherein *Videos* was selected, instead of *Channels* and *Playlists*. The search was further delimited by sorting for *Relevance* wherein *People & Blogs* was the option chosen instead of *All*, *News & Politics*, or *Education*.

Still, not all of these 2,340 videos were equally suitable for use in the study as defined by its purpose. The videos available were an olio of many types, with some videos made by parents showing their children with autism, others of a documentary nature filmed by teachers, clinicians, doctors, etc., and some with cartoons or songs created to parody and/or mock people with Asperger's. The primary qualification of the sample was defined by whether the selected video was a self-disclosive narrative by a single poster claiming to have Asperger's Syndrome. The qualification was further

refined to delimit the study to include only videos which met specific criteria: (a) a single subject poster self-identifying as having AS; (b) the age of the poster being greater than 20 years of age (according to data provided by the poster in the video, the poster's *Channel*, or that the poster's age visually appeared to be older than 20); (c) the topic of the posting confined to Asperger's Syndrome issues; and (d) no cartoons or animated graphics in the video.

Age, in some cases, was the one subjective aspect of the selection criteria. There was often an exact age given by the poster either written in the *Profile* description on his or her individual *Channel* or sometimes it was stated directly in the video content. The *Channel* was immediately accessible by clicking on the poster's screen name. If the age was not written or stated in the video, then the poster's age was estimated based upon a visual assessment by the coder and two other persons external to the study. The estimated ages were then averaged and it was determined that if the average did not fall within the range delineated by the criteria, then the video would be eliminated from the study. This method was utilized in order to preclude the use of videos by persons under the age of legal consent.

Locating Videos for Inclusion

To locate videos that met the selection criteria, several steps were followed. According to the control function selected, the YouTube videos are presumably ordered chronologically by upload date and accessed randomly by the page a viewer selects (YouTube, 2010c). However, beyond several pages, the consistency of the chronological presentation of videos becomes less precise, with newer videos mixed in with older videos. Additionally, the order is always shifting as posters add or delete videos. For

this study, videos meeting the established criteria were selected from postings uploaded over a 43-month period, from May of 2007 to November 2010 (YouTube, 2010d). A random sampling of videos was taken by the search for *Asperger's Syndrome*, as controlled by *Videos, Upload Date, Anytime, Persons & Blogs*, selecting videos that met the established criteria, with a total of 147 cases in the final data set.

It is possible to locate YouTube videos according to the upload date on which they were posted (YouTube, 2010c), but this upload date is based upon a zero point, with the time of search being considered the zero point and all postings being dated outward from there. For example, videos are dated as being uploaded *seven minutes ago, seven days ago, seven weeks ago*, and so on. A precise date of posting is discerned by opening the video and locating the date of upload in the information line under the video that includes the poster's screen name, the date of upload, and number of *likes* versus *dislikes*. That upload date was converted into a continuous variable, with "1" meaning the video was posted in the month of November 2010, "2" representing a posting in October 2010, "3" for videos posted in September 2010, etc, all the way back to "43" for videos posted in May of 2007 or 43 months previous to the start of data collection in month "1" or November of 2010.

Once a video search is refined by topic, *People & Blogs*, and upload date, then the videos are visually presented to the viewer as a series of individual icons arranged in sets of twenty on a page (YouTube, 2010c). Typically, although not in every case, the first video or the last per page are advertisements either related to the viewer's demographic interests or suggested videos prompted by the viewer's previous search topics, leaving approximately nineteen videos on average per page that could potentially be considered

as being directly related to the refined search. At the bottom of each page, seven numbered page tabs are available at a time for viewing selection, along with the option of *Next* which gives the viewer the next set of seven pages to examine (YouTube, 2010c). In the case of this study, there were 2,340 videos, so mathematically there should have been approximately 123 pages of randomized videos. However, there were only 50 pages accessible for sampling and no information was available on the YouTube site to explain why the proposed number of videos does not match the number of pages available. Other searches repeatedly verified this phenomenon. For example, on December 28, 2010, with the same sorting variables, there were 4,030 videos listed; which should have yielded 212 pages available for searching and accessing content. However, only 50 pages were actually accessible. Correspondence with YouTube offered no replies or solutions for further accessing the unavailable pages.

Sample Selection

The sampling method consisted of the following precise and reproducible strategy. The first start page presented in response to the refined search was the start point of the video selection. It was estimated that 150 videos would be the targeted number of cases to be included in the sample. The total number of videos from the refined search, 2,340 was divided by the number of desired cases, 150, and yielded 15.6 or 16 as the sampling interval or skip factor. Every 16th video would be considered for the sample. The first video on page one was designated as the start point and the 16th video was first to be considered for sample. If it met the four selection criteria previously identified (single subject poster self-identifying as having AS, age of poster older than 20, topic of the posting confined to Asperger's Syndrome issues, no cartoons or animated

graphics). If it did not meet the criteria, then the video immediately following it on the page was considered, then the next, and so on, until the first video was selected. Then, the second video considered for selection was the 16th video beyond the one selected previously. It too had to meet the five selection criteria. If it did not meet the criteria, then the video immediately following it on that same page was considered, then the next, and so on, until the second video was selected. When page 50 was reached, the process simply continued back to page one, but still maintained the consideration of every 16th video. The process was repeated until all of the videos for the study sample were collected.

Saving Videos and Basic Data

Videos cannot be saved offline due to the copyright law cited by YouTube, which explicitly states that is illegal to upload and save videos because they are the property of the poster (YouTube, 2010a; YouTube, 2010c). However, it was essential to have the ability to relocate each video selected for the study at the time of sampling so that it continued to be available at and beyond the time of data collection. YouTube offers a *Favorites* option for members and all selected videos in the study were saved online as *Favorites* in the researcher's private YouTube account. To guarantee the confidentiality of the posters selected for the study, other YouTube members were blocked from being able to view the researcher's video selections and after the completion of the study, all videos were deleted from the *Favorites* file.

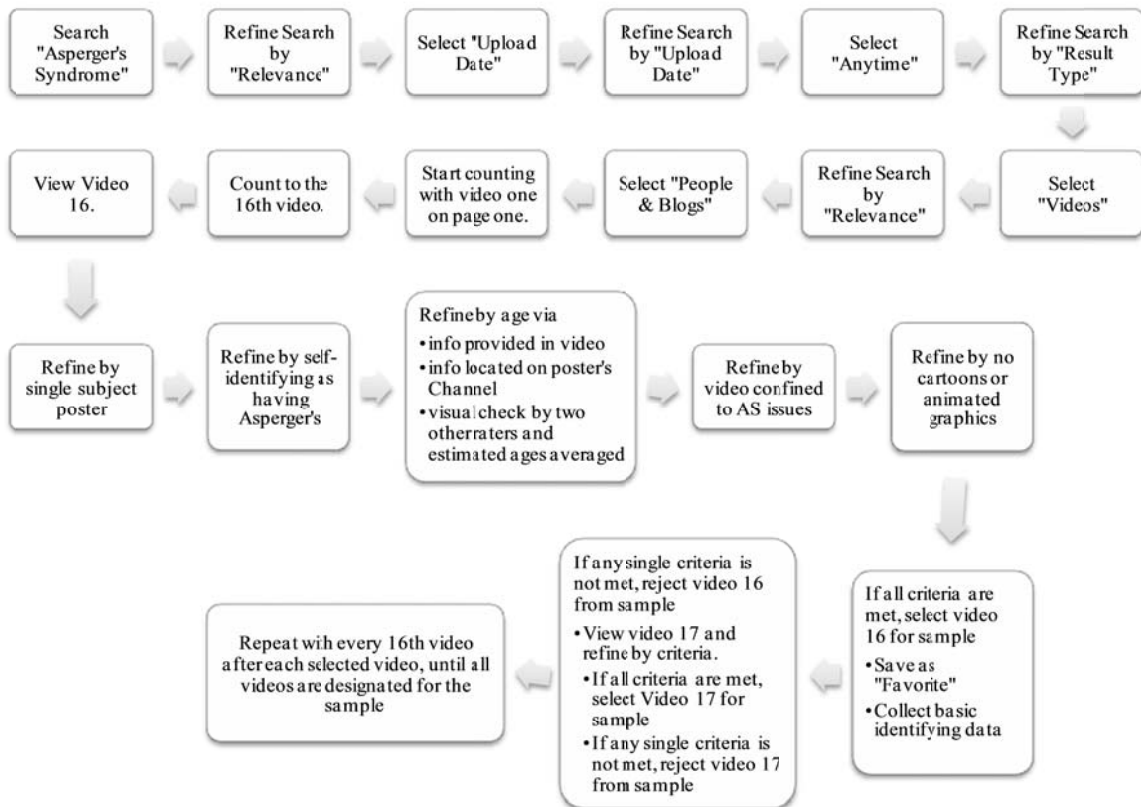
Basic information was collected at the time of sampling as a safeguard in case the poster chose to remove the video from public access and move it to his or her YouTube *Channel*. Channels allow viewers to enter into a more private networking space shared

with the poster (YouTube, 2010c). The basic information saved included the URL link, the title of the video, the date posted, the screen name of poster, the number of responses generated by the posting, and the gender of poster. Finally, for every video selected, the first 25 viewer comments and any direct responses from the poster to those viewer's making comments were copied for analysis.

A flowchart of the procedures used for the sampling is included here. The chart details each step.

Figure 2.1

Flowchart of Sampling Methodology



Procedures

Once the video sample was drawn and basic identifying data collected so that the videos could be accessed again for the coding of content, then the process of previewing and sorting the videos began. All of the videos were previewed in their entirety to determine that all criteria were met. Viewing of the videos and data collection took place in the researcher's home using Flash Player on an HP Laptop. The coding instrument was in the form of a Microsoft Office Excel spreadsheet and data were collected by one coder from multiple viewings of each single video, with data collection taking place between November 14, 2010, and December 6, 2010. The data collection spreadsheet contained the eight elements from the preliminary study and served as an anticipatory guide of the topics mentioned by the posters in their presentations of self (Hand, 2009). The one component of sharing personal information was open-ended and emergent feature in this category were added to the data collection instrument for consideration in subsequent videos.

Development and Description of Independent Variables

There were a total of eight independent variables (IVs) created to reflect the specific topics mentioned by the individual in his or her self-disclosive, descriptive discourse. Derived from thematic elements reflected in the preliminary study, the development and essential features of each independent variable are described (Hand, 2009).

IV 1: Sharing of Personal Information

The first independent variable for the sharing of personal information was a summative index of individual factors, which reflected each element of self-presentation

through the sharing of personal information as featured in the videos. From the content analysis of the 147 videos included in the sample, 27 different types of personal information were self-disclosed by the posters for inclusion in this single variable. Elements included ranged from mundane disclosures such as having a bad head cold to highly personal disclosures related to issues of intimacy, obsessive interests, and/or victimization.

Specifically, the elements included in the first IV for the sharing of personal information included whether the poster stated his or her name, age, educational background or school experiences. Also included were references to the poster's work environment, cognitive ability or processing, religious beliefs or affiliations, and medically related topics such as doctor's visits for medicine or co-morbid medical diagnoses. Additional elements included mention of depression, therapy, stress, general health related issues such as backaches, diet, exercise, and involvement or lack of involvement in sports. Self-presentation elements mentioned in the videos that related to the poster's understanding of his or her own Asperger's or understandings of Asperger's in general were also considered as further examples of sharing personal information and included: the mention of an obsessive interest; referencing obsessive behaviors, such as hand-flapping or walking on tiptoes; and stating a fear or phobia. Also in the category of sharing personal information via the presentation of self were factors related to social connectedness and relationships with others. These included: the category of family with any mention of family in general, siblings, or extended family members; specific references to parents; friends; and more intimate relationships with members of the opposite sex, or in the case of gay or lesbian posters, with members of the same sex.

References to social relationships in general were coded as personal sharing, as were the mention of a need for acceptance by others and the topics of bullying, sexual abuse and victimization by rape, and violence. Some videos were posted in response or in reaction to other videos about Asperger's Syndrome or videos that affected the Aspergian community. Personal opinions rendered on these topics were the final factor included in the sharing of personal information as a part of the poster's presentation of self.

To create the final IV based upon these individual factors as described, the singular elements were first labeled for the sharing of personal information and then coded either "1" for "No," the item was not included in the video or "2" for "Yes," it was included in the video.³ A frequency run on SPSS, in fact indicated that the greatest number of individual categories of shared personal information included was 16 and that the videos with zero to five categories of shared personal information comprised 53.1 percent of the videos. Restated, slightly more than half of the videos contained only zero to five specific elements of personal information shared. Based upon this revelation, the variable was recoded as having either a high or low number of categories of private information shared with the viewer.

To accomplish this transformation, first all of the "2" codes were added for each individual factor in the videos to create the new recoded variable. For example, if 15 of the 27 topics were mentioned in the video, then the new sharing of personal information variable was coded 15. Although the range of potential personal information categories was from zero to 27, it was not expected that any single individual poster would express all 27. The transformation was labeled as a new independent variable and was coded as

³ The decision to use "1" and "2" for coding rather than "0" and "1" was made in order to allow "0" to be used for representing missing cases at a later point in another phase of the analysis.

being either “1” for *low* numbers of shared personal information topics or “2” for *high* numbers of shared personal information topics. To achieve this recode efficiently, videos with zero through to five categories of personal information were transformed to “1” as being a *lower* number of items shared and those with six through 16 categories presented were transformed to “2” as being a *higher* number of elements shared.

IV 2: Definition of Asperger’s

Other aspects of sharing information through the poster’s presentation of self included giving a precise definition of Asperger's Syndrome according to APA or the providing of a paraphrased definition in explanation of what having Asperger's meant to the poster. Some posters would directly read the APA definition or read a definition from an alternative Internet source. Others would paraphrase these sources or even provide their own version of a definition for the viewer. The independent variable for providing some form of a definition of Asperger’s was coded either “1” for “No,” the item was not included in the video or “2” for “Yes,” it was included in the video.

IV 3: Description of Characteristics

Describing at least one specific characteristic trait of AS was also included as an example of personal sharing in the form of self-presentation. The described characteristic could be one that the poster believed to be typical of persons with AS in general or one that the poster believed he or she personally presented. The independent variable for describing characteristic traits was coded either “1” for “No,” the item was not included in the video or “2” for “Yes,” it was included in the video.

IV 4: Why Made

Why Made was another independent variable included in the video analysis to indicate whether the poster provided a direct statement as to why the video was made. Why the video was made was considered an important element because, when presented by the poster at the start of the video, it served to purposefully establish contact with the viewer. It appeared to be an attempt to capture the viewer's attention through the establishment of an explicit rationale for the making and posting of the video and/or by indicating a preview of some personal elements of the content which may be of interest to the viewer. When stated at the end of the video, Why Made served as a summation of the previously shared video content considered valuable enough to be uploaded on YouTube by the poster. It was coded in the same way as the majority of other independent variables for either presence or absence in the video.

IV 5: Invites Response

Some posters specifically made a statement to invite viewer response on the video content. Statements directly asking the viewer to comment on the video or to contact the poster fell into this category of IV. A paraphrased example would be, "I would like for you to tell me what you think. Please let me know." As with the other variables, Invites Response was also coded either "1" for "No," the item was not included in the video or "2" for "Yes," it was included in the video.

The next three independent variables were created to reflect the general purpose of the video self-disclosures. These purposes were derived as emergent themes in the preliminary study and included Seeking to Understand, Seeking to be Understood, and

Seeking to Help Others Understand (Hand, 2009). All were coded either “1” for “No,” the item was not included in the video or “2” for “Yes,” it was included in the video.

IV 6: Seeking to Understand

Seeking to Understand was an independent variable created to denote the poster’s personal quest to understand what Asperger’s Syndrome is and/or to understand his or her Asperger’s in light of a more informed perspective. Any statement or phrase that appeared to be an attempt by the poster to seek information about or affirmation of his or her Asperger’s from the viewers was coded as being present. Self-disclosive statements such as these paraphrased examples were included: “I need to know if I am like other people with the same problems,” or “If you have Asperger’s too, do you do this? Is this ‘normal’ for us?”

IV 7: Seeking to be Understood

Seeking to be Understood was an IV created to reflect the poster’s desire to be personally understood for *who* he or she *is* as an individual with AS. The comments were personal to the poster and reflected a need to make clear some aspect of how that poster wanted the Neuro-typical world to understand and/or treat him or her as an individual person rather than as a member of the broader group of all persons with Asperger’s. For example, these types of paraphrased statements would be coded as present for Seeking to be Understood: “I’m just like you! I have my ups and downs!” or “I want people to know that I am really trying.”

IV 8: Seeking to Help Others Understand

By contrast, the IV of Seeking to Help Others Understand, was more reflective of self-revealing statements which appeared to be instructive regarding Asperger’s and/or

informative about people with Asperger's as a population group. Seeking to Help Others Understand was designated to denote statements made to help a viewer with AS, or the viewer who suspects he or she may have AS, to better understand themselves. Additionally, this variable encompassed instructive statements which were geared toward educating a Neuro-typical viewer who may have been watching the video to learn about AS. Examples of the former might include (paraphrased), "If you have AS, you have to understand that it's okay to ask your boss for further directions," or "I recommend you read 'X' because that really helped me to understand my AS when I was first diagnosed." An example of the latter would be, "If your employee has AS, you need to understand that we are often visual learners and might need you to show us what to do instead of just telling us."

Development and Description of the Dependent Variables

Two dependent variables (DVs) were designated to address the different aspects of the primary research question. The concept for using viewer and poster responses as dependent variables was derived from one of the emergent themes in the preliminary study regarding the importance of viewer comments to the poster (Hand, 2009). In order to determine if the self-presentations were effective in eliciting viewer comments, the DV Total Response Comments was developed. To ascertain whether a dialogue was maintained, the presence of consecutive exchanges between the poster and the viewer were assessed. As inspired by the thematic element regarding viewer responses emergent in the preliminary study, the development and essential features of each dependent variable in the current study is described.

DV 1: Total Response Comments

First, in evaluating whether there were certain video elements and/or combinations of video elements in the YouTube presentations of self that were predictive of eliciting positive social responses from the viewers, the videos were analyzed to establish the total number of response comments each received from viewers. However, several considerations had to be made. Not all of the videos were online for the same duration of time, so those videos online for a longer period had a greater opportunity to accrue responses than those that were just recently uploaded. Although the opportunity to gain viewer response comments existed to a greater extent for videos that were online for a longer period, that was not always the case. Some videos posted in the last month of sampling or those, coded as being online for only one month, would sometimes have more responses than other videos that were online for three years. Some older videos had from zero to tens of thousands of comments and newer ones could have from zero to hundreds. To control for the number of responses over time, only the first twenty-five responses for each were taken. Since sampled videos were randomly taken from a period spanning 43 months, this methodological decision gave each video a more equitable chance to amass viewer responses, but still capped the number of responses that would be counted for analysis. The dependent variable for the total number of response comments analyzed ranged from zero to 25.

DV 2: Consecutive Exchanges between Poster and Viewer

In order to determine if there were certain self-revelatory video elements that were predictive of a maintained dialogue between the poster and the viewer, data were analyzed for evidence. The filming and uploading of the disclosive video was assumed

to be the primary opportunity by the poster to initiate communication with viewers through his or her self-presentation. Then the viewers had the opportunity to respond about the video content or to the poster with a written comment. To validate whether the poster did indeed wish to connect with the viewer at least at a minimal level, the number of consecutive exchanges between the poster and one or more viewers was examined. If the viewer made a comment and the poster responded only once, that was not indicative of an attempt on the part of the poster to maintain an ongoing dialogue with the viewer. Only a minimum exchange of at least two responses from the viewer and two responses in kind from the poster to that same viewer were considered as evidence of a maintained dialogue. A dichotomous dependent variable was developed, wherein a code of “2” indicated “Yes,” a minimum of two consecutive exchanges were made by the poster in response to viewer comments. For videos wherein the poster made only one or no responses at all, a code of “1” was assigned for “No,” a minimum of two consecutive exchanges were not made between the poster and one or more viewers. Since not all of the videos elicited viewer responses, videos with no responses were coded with “0” as missing data.

Reliability and Validity

Reliability was addressed through consistency in the coding of the data (Creswell, 2009). The simplicity of the data collection instrument was a development factor considered in the goal of reducing errors and increasing reliability by yielding consistent results across each viewing for analysis. The sampling methodology is precisely described and the data collection instrument is well developed in order to accurately

reflect the content of the videos to afford another researcher the opportunity to reliably replicate this study.

The design of the data collection instrument has face validity, as it appears to measure the basic social elements of the videos (Creswell, 2009). Since the variables or content of the instrument are based upon the elemental features gleaned from a content analysis of the YouTube videos in the study, there is content validity. Because the study was focused primarily upon the manifest content of the videos (observable surface content) and not on the posters' intended meanings, the sampling instrument was adequate to meet all the demands of internal validity. As noted earlier, the coded variables were evident, primarily gleaned from the posters own verbal discourse and/or written summaries of his/her video content. The content was coded in limited coding categories, with the majority of the variables coded as either being absent (1) or present (2), leaving a smaller likelihood for coding errors.

In the study, the sample was randomized to the greatest degree necessary given the unique features of the sampling frame and the limited capacity for controlling the selection of the sampling units. While it was not a goal to make generalizations about the broader population of persons with Asperger's outside of this study, but instead to understand what is happening within a much smaller microcosm of the individuals within the population of YouTube contributors with Asperger's, the sample size was small and a smaller size yields a lesser degree of precision (Creswell, 2009; Mertler & Vannatta, 2005).

Data Analysis

Correll's (2007) content analysis of online data sources and several other current studies lend support to the methodological choice of beginning this study by conducting a content analysis of the video postings. Nemeth and Gropper (2008) believe that "Internet studies are rapidly approaching disciplinary status in academia" (p. 39). Seale and Abbott (2007) contribute valuable lessons for online researchers, especially regarding homepage authorship, and key components of methodology. Significant to studies addressing online narratives posted by persons with other abilities, Seale (2007) analyzed the personal homepages of persons with Down's Syndrome. Seale and Abbott (2007) present an argument as to why a content analysis for thematic elements alone is a better methodology for this particular population than including online interviews or even surveys. They explain that with "the added issue of impersonation to consider, that it is not possible to be certain that anyone with an online presence is in fact who they claim to be" (p. 187).

Multiple regression was used by Acar (2008) in an exploratory study of online social networking, by Haridakis and Hanson (2009) in their study of YouTube co-viewing behaviors, and by Schouten et al. (2009) in their analysis of on-line self-disclosures. Regression is an effective means of obtaining predictive statistics (Mertler & Vannatta, 2005). In order to create a linear combination that best predicts the degree of relationship between the dependent variable and two or more independent variables when there are no covariates, multiple regression was a rational choice. After the coding of the videos, preliminary analysis was conducted to determine if it would be possible to utilize a multiple regression model for determining which of the video elements was predictive

of eliciting and maintaining positive social responses from the viewers. All screening indicators were conducive with conducting the multiple regression analysis.

Goodings et al. (2007) used emergent theme content analysis of selected MySpace conversations and evaluated them according to the principles of Discursive Psychology, discourse analysis, and conversation analysis. The authors illuminated the importance of going beyond emergent themes into the importance of analyzing shared communications line by line to mine the data for meaning. Acar (2008) also made use of content analysis in examining online social networking behaviors, as did Levin and Abril (2009) in their study of the self-reported attitudes, beliefs, and online behaviors for a population of almost 2,500 University students. Levin and Abril's analysis first consisted of content analysis for emergent themes, then followed up with cross tabulations, Pearson Chi-squares, and one-way ANOVAs, for quantifying the degree to which the general population typically shares personal information on social network systems.

Analysis Overview

A content analysis was first conducted on the 147 YouTube videos to determine the absence or presence of the eight specific elements shared in the disclosive narratives. These elements formed the basis of self-presentation and were used to develop the independent variables. The one category of self-presentation broadly defined as shares personal information was open-ended. Approximately ten basic elements considered as personal information were initially included on the coding instrument as a foundation for this open-ended category. As posters shared additional topics not represented on the original list, the new topic was added as a category. Additional information was gleaned at the time of the content analysis, to include each of the elements considered for the

dependent variables: the total number of viewer responses and the absence or presence of a maintained dialogue between the poster and the viewer. Gender was also noted.

Descriptive Analysis and Data Screening

Once the content analysis was conducted, data were descriptively analyzed using SPSS for means, standard deviations, ranges, and frequencies (Mertler & Vannatta, 2005). Descriptive analysis was performed for both of the dependent variables and the eight independent variables. To clarify some of the factors described, some additional information is warranted.

Only the first twenty-five viewer responses were counted for each video in order to control for the difference in the amount of time the video was online. It was considered that analysis could be conducted to control for time by evaluating the videos based upon the number of comments elicited divided by the number of months the video has been online, but the number of response comments displayed by YouTube was found to be inconsistent in its accuracy. For example, the number of viewer response comments could be reported to be 254, but occasionally, the actual number could be more or less. The number provided by YouTube would include response comments by the poster on some counts, but not on others where only viewer comments were counted. For some of the videos, comments were counted but they had been deleted by the viewer, by the poster, or by YouTube, completely removing the comment from view but still counting it in the total number of video responses. For other videos, those deleted comments were not included in the counts at all. The inaccuracy became more problematic the more response comments there were to confirm or refute. Therefore, capping the total response comments at 25 became the most viable way of accurately counting the

response comments of viewers while accounting for the length of time in which the video had been posted online.

Contrary to the way zero responses were dealt with for counting the number of total response comments from viewers, cases with no viewer responses were removed from the analysis for the DV examining consecutive exchanges, because videos without a single viewer response negated the opportunity for the poster to reply and then to engage in subsequent dialogue. Therefore, only 65 videos were included for determining the presence of dialogue in the form of consecutive exchanges between the viewers and the poster.

Analysis with Multiple Regression

It is important to justify the rationale for methodological choices at the level of analysis. In order to address Research Question 1, whether there were certain self-disclosive video elements that were predictive of eliciting a greater number of social responses from the viewers, it was determined that the videos would be analyzed using multiple regression with backward reductions of the least significant elements. For answering Research Question 1, it was necessary to create a linear combination that best predicts the degree of relationship between the dependent variable and two or more independent variables when there were no covariates. In this case, multiple regression was the most rational choice for analysis of the first research question.

A backwards stepwise elimination was selected for the analysis as being preferable to forward stepwise. In forward regression, the individual IVs are placed into the models one at a time in an order predetermined by the researcher. By opting for backward elimination, all of the predictors were present in the first model as having an

equal opportunity for being significant in predicting the DV. With each run, the program determined which element had the largest *P* value (or the least significant factor), removed it and refitted the model. Each step thereafter reduced the least significant predictor from the model, until all the elements were tested and refined to those with significant *P* values. In this manner, the DV was tested separately with eight of the IVs using the backward elimination (Mertler & Vannatta, 2005).

Mertler and Vannatta (2005) recommended screening of the data prior to analysis in order to assess for adherence to assumptions regarding linearity, homoscedasticity, and normality. Linearity was tested by conducting scatter plots and homoscedasticity was evaluated using the Levene Test. Normality was evaluated through the examination of histograms and considerations of the values for Skewness and Kurtosis. Tests of Normality included Kolmogorov-Smirnov and Shapiro-Wilk. A preliminary regression to calculate the Mahalanobis' Distance was not conducted because outliers were not considered to be an issue because all of the responses were capped at 25. Screening was also conducted to check for missing data in each of the different methods of analysis. Data were assessed prior to analysis for adherence to all assumptions as described above and all indications were favorable for the study to proceed.

For Research Question 1, the total number of response comments was the DV. The IVs were: defining Asperger's Syndrome, sharing a description of the characteristics of Asperger's, the number of shared personal information categories recoded as an ordinal variable, Seeking to Understand, Seeking to be Understood, Seeking to Help Others Understand, stating why the video was made, and inviting a response from the viewer.

Analysis with Logistic Regression

To address Research Question 2, logistic regression was used to determine if there were certain video elements in the self-presentations that were predictive of a maintained dialogue between the poster and the viewer. The data had to be analyzed to determine the extent to which certain factors would increase the odds that a maintained dialogue would occur. Logistic regression is an effective option for creating a linear combination of independent variables to determine the odds of being in one group when there is one categorical (two categories or dichotomous), two or more mixed independent variables, and no covariates. To conduct the logistic regression, data were screened and assessed to determine adherence to all assumptions. First, a preliminary linear regression was conducted, then co-linearity diagnostics and Mahalanobis' Distance were checked. Chi square was examined and binary logistic regression was conducted using the categorical independent variables (Mertler & Vannatta, 2005). All indications were conducive for the study to proceed.

For the logistic regression, the dependent variable was dichotomous and represented a minimum of two consecutive exchanges of responsive comments between the poster and one or more viewers. The IVs were defining Asperger's Syndrome, sharing a description of the characteristics of Asperger's, the number of shared personal information categories recoded as an ordinal variable, Seeking to Understand, Seeking to be Understood, Seeking to Help Others Understand, stating why the video was made, and inviting a response from the viewer.

Conclusion

To explain how young adults with Asperger's Syndrome made use of self-presentation in narrative YouTube video submissions for establishing and maintaining social interactions with viewers, the revelatory elements shared by the poster were examined to determine which were predictive of eliciting and maintaining social responses. A meticulous sampling methodology was developed and the data collection process yielded a plethora of information on the presentations of self as portrayed in 147 YouTube videos by posters with Asperger's. The data were used as the foundation for the creation of eight independent variables and two dependent variables, with which analysis was conducted through multiple regression and logistic regression after screening to determine adherence to all assumptions. Chapter 4 addresses the results of the regression analyses and presents the tables to illustrate the findings. In Chapter 5, an overview of the entire research process and subsequent findings are given, including an interpretation and discussion of the regression results. Conclusions and implications are also delineated.

Chapter IV

RESULTS

The following research questions were addressed as the overarching emphasis of the study was to determine how young adults with Asperger's Syndrome made use of self-presentation in narrative YouTube videos as a means of establishing and maintaining social interactions with viewers. The study was accomplished by examining which of the disclosive or revelatory video elements were predictive of eliciting social responses from the viewers and of a maintained dialogue between the viewer and the poster for a minimum of two consecutive written exchanges.

Research Questions:

Research Question 1. Which video elements were predictive of eliciting a greater number of social responses from the viewers?

Research Question 2. Which video elements were predictive of a maintained dialogue between the poster and the viewer?

The sample consisted of 147 disclosive YouTube videos posted by 80 persons with Asperger's Syndrome, with approximately one third of the postings by females (N=46). The mean for the total response comments was approximately seven comments per video (SD = 8.81), including those videos with zero comments elicited. For 65 videos analyzed using the DV for consecutive exchanges, with no evidence of exchanges equal to 1 and the presence of consecutive exchanges equal to 2, the mean was 1.34 for videos

evidencing communicative exchanges indicative of maintained dialogue ($SD = 0.48$). In fully one third of the videos in which a viewer responded (33.8 %), there was evidence that the poster and viewer exchanged two or more consecutive responses (ex. viewer initial response, poster response to initial comment, viewer follow-up response, poster response to follow-up comment).

Of independent variables with the greatest percentage of videos displaying a particular measured elemental feature in the self-disclosures, the most frequently presented elements were those in which the poster was seeking to be understood by others (83%), the poster described the characteristic traits of Asperger's (74%), the poster provided an explanation of why the video was made (73%), and the poster sought to help others to understand Asperger's (64%). Slightly less than half (46%) of the videos shared at least one of the categories of personal information disclosed in the self-presentations. Only about 20% of the videos contained directly stated appeals by the poster for the viewer to respond.

Table 4.1 reports descriptive statistics for each of the dependent and the eight independent variables used in the study, including data for range, mean, standard deviation, and the percentage of the videos coded "Yes," which denoted that the specific variable measured was present in the video.

Table 4.1

Descriptive Statistics for Study Variables

Variables ¹	Range	M	SD	% Yes
DV Total Response Comments	1-25	6.95	8.81	--
DV Consecutive Exchanges	0 ² -2	1.34	0.48	33.8
IV Defines	1-2	--	--	27.2
IV Describes Characteristics	1-2	--	--	73.5
IV Invites Response	1-2	--	--	19.7
IV Seeks to Understand	1-2	--	--	21.8
IV Seeks to be Understood	1-2	--	--	83.0
IV Seeks to Help Others	1-2	--	--	63.9
IV Shares Personal Info	1-2	--	--	46.3
IV Why Made	1-2	--	--	72.8

¹ N=147 for all variables except Consecutive Exchanges (N =65)

² Missing values assigned 0

Regression Analysis Using Research Question 1

Which video elements were predictive of eliciting a greater number of social responses from the viewers?

To address Research Question 1, as to whether there were certain video elements in the presentations of self more predictive of eliciting a greater number of social responses from the viewers, the videos were analyzed using multiple regression. The total number of response comments was regressed on the eight study factors using backward elimination. The first model contained all eight of the individual factors and each subsequent model had the least significant predictor removed until the best fit was presented.

As seen in Table 4.2, the model which most significantly predicted the total number of viewer responses was significant at the .01 level and accounted for 6% of the variance. This final model contained only two elements as significant predictors: a shared description of the characteristics of Asperger's and the number of shared personal information categories recoded as an ordinal variable ($R^2_{adj} = .06$, $F = 4.48$, $df^1 = 1$, $df^2 = 143$, $p = .01$). The total number of viewer responses by the individual study elements of sharing a description of the characteristics of Asperger's, the number of shared personal information categories recoded as an ordinal variable, seeking to help others to understand, stating why the video was made, and inviting a response from the viewer, in combination accounted for 8% of the variance and appeared significant at the .05 level ($R^2_{adj} = .08$, $F = 2.30$, $df^1 = 1$, $df^2 = 140$, $p = .05$). The model with the stated rationale for why the video was made removed in the backward regression accounted for 7% of the variance and increased the significance of the model to .03 ($R^2_{adj} = .07$, $F = 2.74$, $df^1 = 1$, $df^2 = 141$, $p = .03$). By removing an invited response from the poster to the viewers (InviteRe), the significance was increased to the .02 level and accounted for 3% of the variance ($R^2_{adj} = .03$, $F = 3.37$, $df^1 = 1$, $df^2 = 142$, $p = .02$). When the elements of seeking to understand, defining Asperger's Syndrome, and seeking to be understood were included in the models, there was not a significant association. The R^2_{adj} , F , df^1 , df^2 , Beta Coefficients, degrees of freedom, and significance levels for each model tested are displayed in Table 4.2.

Table 4.2

Backward Regression for Individual Study Factors by Total Number of Viewer Responses

Final Model	R^2	R^2_{adj}	Beta	t	Significance	Correlations		F	df^1	df^2
						Zero-order	Partial			
7	0.24	0.06	0.15 ^a	1.75 ^a	0.01	0.18 ^a	0.14 ^a	4.48	1	143
			0.17 ^b	2.00 ^b		0.20 ^b	0.16 ^b			

^a Shares Personal Information

^b Describes Characteristics

Logistic Regression Analysis Using Research Question 2

Which video elements were predictive of a maintained dialogue between the poster and the viewer?

To address Research Question 2, binary logistic regression analysis was used to determine if there were certain video elements that were predictive of a maintained dialogue between the poster and the viewer. The dichotomous dependent variable represented the minimum of two consecutive exchanges of responsive comments between the poster and one or more viewers and the IVs again were defining Asperger's Syndrome, sharing a description of the characteristics of Asperger's, the number of shared personal information categories recoded as an ordinal variable, Seeking to Understand, Seeking to be Understood, Seeking to Help Others Understand, stating why the video was made, and inviting a response from the viewer.

As illustrated in Table 4.3, the classification table, with a cut value of 0.50, showed that the model was fairly accurate in classifying the subjects (66.2%), but the odds ratios (ExpB) were fairly small, indicating that a relationship between the DV and the IVs was not likely. The Chi Square ($\chi^2 = 7.16, p = .52$) showed that the model was not truly predictive of group membership. A negative Beta Coefficient indicated an

inverse relationship between the DV and a single IV, Seeking to Understand one's own Asperger's. When this specific independent variable was removed from the equation, there was an increased significance to the overall model. The inclusion of Seeking to Understand one's own Asperger's appears to suggest that its inclusion in the video is a significant predictor of a decreased probability of a maintained a dialogue between the poster and the viewer (B= -1.52, S.E. = 0.89, Wald = 2.90, p = .04). All other combinations of elements and/or individual elements were not significant.

Table 4.3

Logistic Regression for Individual Study Factors by Presence of Consecutive Exchanges

Variables	<i>Beta</i>	<i>S.E.</i>	<i>Wald</i>	<i>S^a</i>	<i>S^b</i>
Defines AS	-0.42	0.64	0.43	0.51	0.54
Describes Characteristics	0.50	0.75	0.44	0.51	0.97
Invites Response	-0.31	0.98	0.10	0.75	0.23
Shares Personal Info	0.19	0.65	0.08	0.78	0.53
Seeks to Understand	-1.52	0.89	2.90	0.09	0.04
Seeks to be Understood	-0.72	0.77	0.90	0.34	0.19
Seeks to Help Others	0.31	0.77	0.16	0.69	0.80
Why Made	-0.58	0.72	0.65	0.42	0.72
Constant	-0.67	0.26	6.54	0.01	--

^a Step with Variables in the Equation

^b Step with Variables not in the Equation

Chi Square = 7.16; Cox & Snell R² = 0.10; Nagelkerke R² = 0.14; *df* = 1

Conclusion

The purpose of the study was to determine how young adults with Asperger's Syndrome made use of presentation of self in YouTube videos as a means of establishing and maintaining social interactions with viewers. The data were analyzed by examining

each of the self-disclosive video elements in an effort to decipher which were predictive of eliciting social responses from the viewers and of maintained dialogue between the viewer and the poster for a minimum of two consecutive written exchanges. The analysis of the elements using multiple regression and logistic regression yielded some significant results.

Backward Regression was used to determine which video elements were predictive of eliciting social responses from the viewers. Accounting for 6% of the variance, the model which was most significant in predicting the DV was the one containing a shared description of the characteristics of Asperger's and the number of shared personal information categories ($R^2_{adj} = .06$, $F = 4.48$, $p = .01$). Model 4 accounted for 8% of the variance and was significant at the 0.05 level ($R^2_{adj} = .08$, $F = 2.30$). It included the elements of sharing a description of the characteristics of Asperger's, the number of shared personal information categories, seeking to help others to understand, stating why the video was made, and inviting a response from the viewer. Model 5 accounted for 7% of the variance when why the video was made was deleted. The reduction increased the level of significance to 0.03 ($R^2_{adj} = .07$, $F = 2.74$). Model 6 accounted for 3% of the variance and included only the number of shared personal information categories, seeking to help others to understand, and sharing a description of the characteristics of Asperger's. Using only the combination of these three factors increased the significance to the 0.02 level ($R^2_{adj} = .03$, $F = 3.37$). Finally, in Model 7 a shared description of the characteristics of Asperger's and the number of shared personal information categories were the most significant combination in eliciting a greater number of viewer responses ($R^2_{adj} = .06$, $F = 4.48$, $p = .01$).

The logistic regression was conducted to determine whether the poster with more self-revelatory elements contained in his or her video was more likely to engage with the viewer in a maintained dialogue consisting of a minimum of two consecutive exchanges. The overall model was not predictive of determining membership and one element, Seeking to Understand one's own Asperger's, appeared to have a significant inverse relationship with the DV when removed from the equation ($B = -1.52$, $Wald = 2.90$, $p = .04$). This suggested that the inclusion of the element Seeking to Understand one's own Asperger's in the video was a significant predictor of a decreased probability of a maintained a dialogue between the poster and the viewer. No other combinations of elements and/or individual elements were significant.

Chapter V

DISCUSSION

For persons with Asperger's Syndrome, there are characteristic difficulties in establishing and maintaining face-to-face social interactions; however, the Internet accommodates their need for spatial distance, allows them to remain in a familiar setting while interacting, controls for hypersensitivities, and reduces anxieties (APA, 2010; Attwood, 2007; Davidson, 2008; Heflin & Aliamo, 2007; Jordan, 2010; Kanner, 1956). According to Jordan, online interactions can also remove those factors which might negatively impact social communications, such as atypical motor expressions, voice tonality, or the inability to effectively interpret the emotions of the speaking partner. With the growing popularity of YouTube.com, an Internet video-based phenomenon, persons with Asperger's have chosen to utilize this medium to post more than 5,000 online narrative self-disclosures using home-made videos. Because one of the most pervasive characteristics of AS is the inability to initiate and maintain social relationships, it appears a paradox that the YouTube posters with Asperger's are willing to connect with strangers through very personal self-disclosures using this very public medium.

Research has substantiated that online venues are spaces wherein persons with AS are able to form social connections and community in an unthreatening, more comfortable way compared to face-to-face interactions (Blume, 1997a; Blume 1997b;

Brownlow & O'Dell, 2006; Clarke & van Amerom, 2007; Davidson, 2008; Jordan, 2010; Waltz, 2005). This study was conducted to investigate the content of YouTube video self-presentations by young adults with Asperger's Syndrome to discern how the posters made use of the disclosive narrative videos as a means of establishing and maintaining social interactions with viewers. A content analysis and subsequent regression analysis was conducted on 147 video postings by persons over the age of 20 self-disclosing their AS. The topic of the posting was confined to Asperger's Syndrome issues and no cartoons or animated graphics appeared in the videos selected. The data suggests that specific features associated with self-presentation and a combination of those features appeared to be predictive of the total number of viewer responses. No features emerged that were predictive of a maintained dialogue between the poster and the viewer.

Review of the Literature

Persons with Asperger's have specific characteristics that affect their social interactions. Wing (1981) noted the most obvious impairment for persons with Asperger's is in two-way social interactions, which is at least partially explained by their lack of eye contact, unusual gestures, posture, movements, and issues with proximity. Other researchers demonstrated communication eccentricities that could explain difficulties in social interactions, such as one-sided, pedantic, intensive narratives where the person with AS appears uninterested in the listener's reactions or viewpoints (Attwood, 2007; Colle, et al., 2008; Ghaziuddin & Gerstein, 1996; Heflin & Aliamo, 2007). Colle et al. also noted that persons with AS typically do not adjust their speech to differentiate between when the listener is a stranger or a friend. Such characteristics have the earmarks of a monologue, rather than a typical communication which would take

place through reciprocal exchanges refined through feedback, verbal and nonverbal, between the speaker and the listener.

To frame the microcosm of persons with Asperger's within the macrocosm of the general population using the Internet for social communication, it is important to establish the definition of online social networking and the uses of it by the general population as portrayed in the literature. Social networks develop when computers are used to connect people for the development of existing friendships, the exchange of information, co-working, or for the initiation of friendships with strangers (Boyd & Ellison, 2008; Garton, et al., 2006; Gross & Acquisti, 2005; Wellman, 1997). The use of social networking for establishing connectedness with others is well documented. Haridakis and Hanson (2009) and Tufekci (2008) distinguished between instrumental Internet use and social Internet use, with Tufekci first suggesting that the Internet is utilized to "perform and realize social interactions, self-presentation, public performance, social capital management, social monitoring, and the production, maintenance and furthering of social ties" (pp. 547-548).

Further rationale for social interaction would be supported by users' engagement in *social tagging* activities (Ying, et al., 2009) by video co-viewing, (Haridakis & Hanson, 2009) and through video sharing (Yang, et al., 2010). Papacharissi and Rubin (2001) found that persons who are not typically satisfied with their face-to-face interactions with others tended to use the Internet for more fulfilling interpersonal interactions. Thelwall (2008) found that some users of online social networking sites utilized the medium as a means of planning face-to-face meetings beyond the physical limits of the Internet. Social Networking Sites (SNSs) can also serve as the *meeting place* for initiating and

maintaining online interactions with others (Correll, 2007; Davidson, 2008; Tufekci, 2008).

Numerous researchers cited the motivation for online social networking as being for connecting with others who may share common interests (Acar, 2008; Blume, 1997a; Blume, 1997b; Davidson, 2008; Haridakis & Hanson, 2009; Raacke & Bonds-Raacke, 2008; Thelwall, 2008). Acar and Siibak (2009) agreed that SNSs are an Internet venue where one can get to know new people. According to Siibak, beyond initiating relationships, the Internet is also useful for maintaining and/or strengthening existing friendships. Acar proposed that another use of Social Networking Sites is for enhancing one's career or making professional connections. Conversely, according to Thelwall, communications in SNSs may be solely for the purpose of connecting with others, for simply engaging in the act of communication for the sake of the connectedness it affords.

Kim, LaRose, and Wei (2009) found that individuals who are lonely and depressed have a higher preference for online interactions than do persons not identifying themselves as depressed or lonely. McKenna and Bargh (2000) and Orr et al. (2009) agreed that anonymity, reduced importance of physical appearance, removal of the verbal and nonverbal cues that are associated with face-to-face interactions, and one's greater control over the time and pace of interactions have an impact on the use of Internet for social interactions.

As represented by the preponderance of the literature available, self-disclosure and presentation of self in social networks are viewed as an essential aspect of any online presence (Kramer & Winter, 2008; Schouten, et al., 2009; Tufekci, 2008). Self-presentation creates a singular opportunity to make an impression, to present one's *self* to

another. Essential to self-presentation is the process of disclosure (Goffman, 1959; Schouten, et al., 2009). Kramer and Winter (2008) and Schouten et al. agreed there were higher levels of self-disclosure online compared to revelations of self in face-to-face communications because individuals could express greater control over their self-presentation in the online venues and they did not have to rely on facial visual cues for the feedback that might indicate the need to check the degree of disclosure. Online, they were more apt to disclose more personal aspects of their private lives, especially those with low “public self-awareness” who were less apt to discern how they were perceived by others and were more likely to disclose (Schouten, et al., p. 2). Tufekci (2008) described self-disclosure as the way in which a person constructs a public and semi-public self in order to produce a social persona and through that persona, interactions and relationships with others are affirmed.

Self-disclosures take place comfortably online perhaps because of the sense of “virtual togetherness” (Goodings, et al., 2007, p. 464) or the sense of belonging experienced by users despite the lack of physical proximity with fellow users. According to Davidson (2008), individuals are able to forgo the geographical limitations of the offline world and create their own presence in an online community. Tufekci (2008) explained that online presences emerge and make connections with others dynamic rather than static.

Ellison et al. (2006) suggested that there is a certain pressure in a self-presentation to highlight positive attributes as well as to disclose one’s authentic self to others. Caring about the perception of others in reaction to a presentation of self online would require taking the perspective of the viewer. For persons with Asperger’s, Theory of Mind

(ToM) may influence their ability to effectively portray self online (Attwood, 2007; Baron-Cohen, 1989; Beaumont & Sofronoff, 2008; Bowler, 1992; Heflin & Aliamo, 2007; Kaland, et al., 2007; Klin, 2000; Murphy, 2006). ToM skills are essential to comprehend another person's perspective, in order to correctly discern another person's verbal and nonverbal cues, and for successful communication in social interactions (Attwood, 2007; Baron-Cohen, 1989; Beaumont & Sofronoff, 2008; Bowler, 1992; Heflin & Aliamo, 2007; Kaland, et al., 2007; Kaland, et al., 2008; Klin, 2000; Murphy, 2006). Research on ToM suggests that there are gaps in the way persons with AS are able to take the perspectives of others. It may be possible that deficits in the ToM skills of persons with Asperger's can impact their use of electronic communications where they, as the user, must rely on embedded social cues provided through text and where a visual connection with another person may be limited or nonexistent.

There was much evidence in the literature to suggest that computer-mediated technologies are effective tools for use by persons with disabilities, Autism Spectrum Disorders, and Asperger's. Barnard-Brak and Sulak (2010) dichotomized persons with "visible" versus "invisible disability" in computer-mediated instructional environments (p. 81). Sapp (2009) examined the use of a universal design in online educational media for enhancing accessibility and usability by a cross-section of persons with intellectual, physical, and sensory differences. Research consistently supports the use of computer-mediated technologies for persons with cognitive differences (Chen, et al., 2009; Grabinger, 2010; Grabinger, et al., 2008; Scott, Bisig, & Bugmann, 2007; Standen, et al., 2006). Numerous studies have also described how persons with learning disabilities benefit from the use of computer-based interventions (Davies & Morgan, 2005; Martínez-

Marrero & Estrada-Hernández, 2008; Stodden & Roberts, 2009; Sugawara & Yamamoto, 2007; Törmänen, et al., 2008). Additionally, researchers have evidenced success in the use of computer-mediated technologies for persons with physical disabilities (Alcantud, et al., 2006; Bache & Derwent, 2008; Chau, et al., 2006; Stumbo, Martin, & Hedrick, 2009; Tam, et al., 2007).

Numerous researchers have touted the benefits of computer-mediated technologies for persons with Asperger's (Faja, et al., 2008; Klin, 2000; Miles, et al., 2007; Mitchell, et al., 2007; Rajendran, et al., 2005; Sansosti & Powell-Smith, 2008). According to Rajendran et al., many persons with HFA or AS demonstrated a special interest in computers, enhancing the benefit of computer mediated instruction. Mitchell et al. showed that the use of computer-mediated virtual environments (VEs) for teaching social skills was significant at the intervention level because it addressed issues with face-to-face interactions and proximity. Faja et al. demonstrated the use of computer-engineered and presented photos for significantly improving the ability of persons with Asperger's to recognize and process faces, an essential skill for developing social connectedness.

Computer use for online social networking by persons with disabilities is addressed by a limited number of authors (Bowker & Tuffin, 2002; Bowker & Tuffin, 2003; Seymour & Lupton, 2004). Appearing even less frequently in the literature is the study of online social networking behaviors in persons on the Autism Spectrum (Brownlow & O'Dell, 2006; Clarke & van Amerom, 2007; Davidson, 2008; Jordan, 2010; Lange, 2007; Waltz, 2005). Davidson analyzed the autobiographies of over 40 persons with ASD and found that they had a great deal to say about their use of the

Internet for social connectedness. Brownlow and O'Dell concur as their research described how online chatrooms were used to provide persons with AS the opportunity to find a voice through the Internet. Likewise, Clarke and van Amerom, Jordan, and Waltz agreed that the Internet is an opportunity for persons with autism to be heard and for them to interact with less anxiety than would be experienced in face-to-face exchanges. The anonymity of interactions online especially benefits this population because face-to-face communication is an area of difficulty for persons with AS (Attwood, 2007; Heflin & Aliamo, 2007; Henault, 2006; Kim, et al, 2009; Patrick, 2008).

While much of the literature on social networking focuses primarily on the use of Facebook and MySpace, some authors recognize that YouTube is also a site that can be used for that purpose. YouTube is more than a site for simply posting and watching videos; it is an online venue for social networking because of the opportunities to share videos, comment on the videos, and to tag favorites (Boyd, 2008; Haridakis & Hanson, 2009; Lange, 2007; Mislove, et al., 2007; YouTube, 2010b; YouTube, 2010c). Lange (2007) explained that while the express purpose of YouTube is not specifically that of being a social network, it supports that function by mediating social communications amongst its users. Similarly, Haridakis and Hanson described YouTube as a new form of “social network-oriented online communication” (p. 317). Ying et al. (2009) emphasized that YouTube is a source of social networking through commenting features.

Currently, there have been no published studies that address the motivations of YouTube users with disabilities or with Asperger's for social networking or otherwise. There is a gap in the existing literature that leaves the following question unaddressed:

How are persons with Asperger's using self-presentation in narrative YouTube videos for establishing and maintaining social interactions with viewers?

Methods

In order to address this overarching question, two refined research questions were developed to reflect the ways in which the poster, through the self-presentational features of the video uploads, attempted to interact with the viewers by instigating their responses and by attempting to engage in a sustained online conversation with viewers.

Research Question 1. Which video elements were predictive of eliciting a greater number of social responses from the viewers?

Research Question 2. Which video elements were predictive of a maintained dialogue between the poster and the viewer?

A content analysis and subsequent regression analysis were conducted on 147 YouTube videos to determine the absence or presence of the eight specific elements which formed the basis of disclosive self-presentations. These elements were used to develop the independent variables: Defines Asperger's (Def), Describes Characteristics (DesChar), Shares Personal Info (spitotrec), Seeks to Understand (SeekUn), Seeks to be Understood (SeekBeUn), Seeks to Help Others (SeekOthU), Invites Response (InvitesRe), and Why Made (WhyMa). The one category of self-presentation broadly defined as shares personal information was open-ended.

The dependent variables were also rooted in the preliminary study, inspired by the thematic element which alluded to viewer responses (Hand, 2009). The two dependent variables developed for the current study reflected the total number of viewer responses (TotRCom) and the presence or absence of maintained dialogue between the poster and

viewer (ConsecEx). The content was analyzed using a pre-structured data collection instrument developed to reflect the absence, presence, and/or frequency of certain social elements within the videos. Once the content analysis data were collected, multiple regression and logistic regression were conducted using SPSS to determine which of the video elements in the self-presentations were predictive of eliciting and maintaining social responses.

Sample and Data Collection

To locate videos that met the selection criteria, several steps were followed. On the YouTube Homepage, a random sampling of videos was located through a refined search using the term *Asperger's Syndrome*, as controlled by *Videos, Upload Date, Anytime, Persons & Blogs*. Videos were selected that met established criteria, with a total of 147 cases in the final data set. The criteria consisted of a single subject poster self-identifying as having AS, older than 20 years of age, posting on a topic confined to Asperger's Syndrome issues, with no cartoons or animated graphics included in the video.

The first page presented in response to the refined search was the start point of the video selection. The total number of videos from the refined search, 2,340 was divided by the number of targeted cases for the sample, 150, and yielded 15.6 or 16 as the sampling interval or skip factor. The first video on page one was designated as the start point and the 16th video was first to be considered for sample. If it met the four selection criteria, the video was selected for inclusion. If it did not meet the criteria, then video immediately following it on the page was considered, then the next, and so on, until the first video was selected. Then, the second video considered for selection was the 16th

video beyond the one selected previously. The process was repeated until all of the videos for the study sample were collected.

Videos could not be saved offline due to the copyright law cited by YouTube, which explicitly states that is illegal to upload and save videos because they are the property of the poster (YouTube, 2010c). However, it was essential to have the ability to relocate each video selected for the study at the time of sampling so that it continued to be available at the time of data collection. YouTube offers a *Favorites* option for members and all selected videos in the study were saved online as *Favorites* in the researcher's private YouTube account. To guarantee the confidentiality of the posters selected for the study, other YouTube members were blocked from being able to view the researcher's video selections and after the completion of the study, all videos were deleted from the *Favorites* file.

Basic information was collected at the time of sampling as a safeguard in case the poster chose to remove the video from public access and move it to his or her YouTube *Channel*. Channels allow viewers to enter into a more private networking space shared with the poster (YouTube, 2010c). The basic information saved included the URL link, the title of the video, the date posted, the screen name of poster, the number of responses generated by the posting, the duration of video in minutes and seconds, and the gender of poster. Finally, for every video selected, the first 25 viewer comments and any direct responses from the poster to those viewer's making comments were copied for analysis.

Once the video sample was drawn and basic identifying data collected so that the videos could be accessed again for the coding of content, then the process of previewing and sorting the videos was conducted. All of the videos were previewed in their entirety

to determine that all criteria were met. Viewing of the videos and data collection took place in the researcher's home using Flash Player on an HP Laptop. The coding instrument was in the form of a Microsoft Office Excel spreadsheet and data were collected by one coder from multiple viewings of each single video, with data collection taking place between November 14, 2010, and December 6, 2010 (see Appendix A). The data collection spreadsheet served as an anticipatory guide using the thematic elements emergent in the preliminary study which might have been touched upon by the poster in their presentation of self (Hand, 2009). One of the elements, shares personal information, was open-ended and topics that fell into this category were appended.

Measures and Variables

There were a total of eight independent variables (IVs) created to reflect the specific topics mentioned by the individual in his or her self-disclosive, descriptive discourse. Derived from thematic elements reflected in the preliminary study, the development and essential features of each independent variable is described (Hand, 2009). The first independent variable for the sharing of personal information was ordinal and reflected self-presentation through a low or high degree of personal disclosure as featured in the videos. From the content analysis of the 147 videos included in the sample, a total of 27 different types of personal information were self-disclosed by the posters for inclusion in this single variable.

The elements specifically included in the first IV for the sharing of personal information were: whether the poster stated his or her name; age; educational background or school experiences. Also incorporated were references to the poster's work environment, cognitive ability or processing, religious beliefs or affiliations, and

medically related topics such as doctor's visits for medicine or co-morbid medical diagnoses. Additional elements consisted of any mention of depression, therapy, stress, general health related issues such as head colds, diet, exercise, and involvement or lack of involvement in sports. Self-presentation elements revealed in the videos that related to the poster's understanding of his or her own Asperger's or understandings of Asperger's in general were also considered as further examples of sharing personal information and included: the mention of an obsessive interest; referencing obsessive behaviors, such as hand-flapping or walking on tiptoes; and stating a fear or phobia. Also in the category of sharing personal information via the presentation of self were factors related to social connectedness and relationships with others. These included: the category of family with any mention of family in general, siblings, or extended family members; specific references to parents; friends; and more intimate relationships with members of the opposite sex, or in the case of gay or lesbian posters, with members of the same sex. References to social relationships in general were coded as personal sharing, as was the mention of a need for acceptance by others and the topics of bullying, sexual abuse and victimization by rape, and violence. Some videos were posted in response or in reaction to other videos about Asperger's Syndrome or videos that affected the Aspergian community. Personal opinions rendered on these topics were the final factor included in the sharing of personal information as a part of the poster's presentation of self.

The number of individual elements related to the sharing of personal information coded present in each of videos was totaled for each video and ultimately transformed into summative index. The independent variable was coded as being either "1" for *low* numbers of shared personal information topics (zero to five elements) or "2" for *high*

numbers of shared personal information topics (six to sixteen elements). Videos with a lower number of shared elements (zero to five) accounted for 53.1% of the sample.

The remaining independent variables were coded either “1” for absent or “2” for present in the videos. Other aspects of the poster’s presentation of self included providing of a paraphrased definition in explanation of what having Asperger's meant to the poster or giving a precise definition of Asperger's Syndrome. Some posters would read the APA definition verbatim or read a definition from an alternative source, but also precisely. Others would paraphrase these sources or even provide their own version of a definition for the viewer. Describing at least one specific characteristic trait of AS was also included as an example of self-presentation. The described characteristic could be one that the poster believed to be typical of persons with AS in general or one that the individual believed that he or she personally presented.

A direct statement of why the video was made was considered to be important for inclusion in the study. When presented by the poster at the start of the video, it served to purposefully establish contact with the viewer by attempting to capture his or her attention through the establishment of an explicit rationale for the making and posting of the video and/or by indicating a preview of some personal elements of the content which may be of interest to the viewer. When stated at the end of the video, Why Made served as a summation of the previously shared video content considered valuable enough to be uploaded on YouTube by the poster.

Some posters specifically made a statement to invite viewer response on the video content. Statements directly asking the viewer to comment on the video or to contact the

poster fell into this category of IV. A paraphrased example would be, “I would like for you to tell me what you think. Please let me know.”

The next three independent variables were created to reflect the general purpose of the video self-disclosures. These purposes were derived as emergent themes in the preliminary study and included Seeking to Understand, Seeking to be Understood, and Seeking to Help Others Understand (Hand, 2009). First, Seeking to Understand was an IV developed to denote the poster’s personal quest to understand what Asperger’s Syndrome is and/or to understand his or her own Asperger’s in light of a more informed perspective. Any statement or phrase that appeared to be an attempt by the poster to seek information about or affirmation of his or her Asperger’s from the viewers was coded as being present. Self-disclosive statements such as these paraphrased examples were included: “I need to know if I am like other people with the same problems,” or “If you have Asperger’s too, do you do this? Is this ‘normal’ for us?”

Seeking to be Understood was an IV created to reflect the poster’s desire to be personally understood for *who* he or she *is* as an individual with AS. The comments were personal to the poster and reflected a need to make clear some aspect of how he or she wanted the Neuro-typical world to understand and/or treat him or her as an individual person rather than as a member of the broader group of all persons with Asperger’s. For example, these types of paraphrased statements would be coded as present for Seeking to be Understood: “I’m just like you! I have my ups and downs!” or “I want people to know that I am really trying.”

By contrast, the IV of Seeking to Help Others Understand, was more reflective of self-revelatory statements which appeared to be instructive regarding Asperger’s and/or

informative about people with Asperger's as a population group. Seeking to Help Others Understand was designated to denote statements made to help a viewer with AS or who suspects they have AS to better understand themselves. Additionally, this variable encompassed instructive statements which were geared toward educating a Neuro-typical viewer who may have been watching the video to learn about AS. Examples of the former might include (paraphrased), "If you have AS, you have to understand that it's okay to ask your boss for further directions," or "I recommend you read 'X' because that really helped me to understand my AS when I was first diagnosed." An example of the latter would be, "If your employee has AS, you need to understand that we are often visual learners and might need you to show us what to do instead of just telling us."

Two dependent variables (DVs) were designated to address the different aspects of the primary research question. The concept for using viewer and poster responses as dependent variables was derived from one of the emergent themes in the preliminary study regarding the importance of viewer comments to the poster (Hand, 2009). First, in evaluating whether there were certain video elements in the YouTube presentations of self that were predictive of eliciting social responses from the viewers, the videos were analyzed to establish the total number of response comments each received from viewers. To control for the number of responses over time, it was necessary to take only the first twenty five responses for each. Since sampled videos were randomly taken from a period spanning 43 months, this methodological decision gave each video a more equitable chance to amass viewer responses, but still capped the number of responses that would be counted for analysis. The dependent variable for the total number of response comments analyzed ranged from zero to 25.

The second DV was created to determine whether there were certain self-revelatory video elements that were predictive of a maintained dialogue between the poster and the viewer. In order to validate whether the poster did indeed wish to connect with the viewer at least at a minimal level, data were analyzed for evidence of consecutive exchanges between the poster and one or more viewers. The filming and uploading of the disclosive video was assumed to be the primary opportunity by the poster to initiate communication with viewers through his or her self-presentation. Then the viewers had the opportunity to respond about the video content or to the poster with a written comment. If the viewer made a comment and the poster responded only once, that was not indicative of an attempt on the part of the poster to maintain an ongoing dialogue with the viewer. Only a minimum exchange of at least two responses from the viewer and two responses in kind from the poster to that same viewer were considered as evidence of a maintained dialogue. A dichotomous dependent variable was developed, wherein a code of “1” was assigned for videos with no evidence of a consecutive exchange between the poster and one or more viewers, and a code of “2” indicated that reciprocal written comments were made by the poster in response to viewer comments for a minimum of two consecutive exchanges. Since not all of the videos elicited viewer responses, videos with no responses were coded with “0” as missing data.

Analysis and Findings

Research Question 1: Which video elements were predictive of eliciting a greater number of social responses from the viewers?

To address Research Question 1, a multiple regression procedure with backward eliminations was performed to assess the best factors for predicting the dependent

variable. Data were assessed prior to analysis for adherence to all assumptions for linearity, normality, and homoscedasticity. All indications were satisfactory for the study to proceed. The total number of response comments was the DV and the IVs were defining Asperger's Syndrome, sharing a description of the characteristics of Asperger's, the number of shared personal information categories recoded as an ordinal variable, Seeking to Understand, Seeking to be Understood, Seeking to Help Others Understand, stating why the video was made, and inviting a response from the viewer.

The model which most significantly predicted the total number of viewer responses was significant at the .01 level and accounted for 6% of the variance. This model contained two elements: a shared description of the characteristics of Asperger's and the number of shared personal information categories recoded as an ordinal variable ($R^2_{adj} = .06$, $F = 4.48$, $df^1 = 1$, $df^2 = 143$, $p = .01$). The total number of viewer responses by the individual study elements of sharing a description of the characteristics of Asperger's, the number of shared personal information categories recoded as an ordinal variable, Seeking to Help Others to Understand, stating why the video was made, and inviting a response from the viewer, in combination accounted for 8% of the variance and appeared significant at the .05 level ($R^2_{adj} = .08$, $F = 2.30$, $df^1 = 1$, $df^2 = 140$, $p = .05$). The model with the stated rationale for why the video was made removed in the backward regression accounted for 7% of the variance and increased the significance of the model to .03 ($R^2_{adj} = .07$, $F = 2.74$, $df^1 = 1$, $df^2 = 141$, $p = .03$). By removing an invited response from the poster to the viewers, the significance was increased to the .02 level and accounted for 3% of the variance ($R^2_{adj} = .03$, $F = 3.37$, $df^1 = 1$, $df^2 = 142$, $p = .02$). When the elements of Seeking to Understand, defining Asperger's Syndrome,

Seeking to be Understood were included in the models, there was no degree of significant association.

Research Question 2: Which video elements were predictive of a maintained dialogue between the poster and the viewer?

To address Research Question 2, logistic regression was used to determine if there were certain video elements in the self-presentations that were predictive of a maintained dialogue between the poster and the viewer. Again, data were screened and assessed to determine adherence to all assumptions. All indications were conducive for the study to proceed. The dichotomous dependent variable for a maintained dialogue consisted of a minimum of two consecutive exchanges of responsive comments between the poster and one or more viewers and the IVs again were defining Asperger's Syndrome, sharing a description of the characteristics of Asperger's, the number of shared personal information categories recoded as an ordinal variable, Seeking to Understand, Seeking to be Understood, Seeking to Help Others Understand, stating why the video was made, and inviting a response from the viewer.

The classification table, with a cut value of 0.50, showed that the model was fairly accurate in classifying the subjects (66.2%), but the odds ratios (ExpB) were fairly small, indicating that a relationship between the DV and the IVs was not likely. The Chi Square ($\chi^2 = 7.16$, $p = .52$) showed that the model was not truly predictive of group membership. A negative Beta Coefficient indicated an inverse relationship between the DV and a single IV, Seeking to Understand one's own Asperger's. When this specific independent variable was removed from the equation, there was an increased significance to the overall model. The inclusion of Seeking to Understand one's own Asperger's appears to

suggest that its inclusion in the video is a significant predictor of a decreased probability of a maintained a dialogue between the poster and the viewer ($B = -1.52$, $S.E. = 0.89$, $Wald = 2.90$, $p = .04$). All other combinations of elements and/or individual elements were not significant.

Limitations

The study was limited by at least three specific factors- first, by the very nature of Asperger's being a Spectrum Disorder, second, by persons who claim the disorder but may be incorrect in their self-diagnosis, and third, by the inability of the researcher to account for the existence of backstage dialoguing. The first two limitations are closely affiliated. Because Asperger's is on the Autism Spectrum, persons with Asperger's are affected to different degrees along a continuum (APA, 2010). The broad and dynamic range of the uniquely individual presentation of characteristic traits presents a primary limitation to the study, as it would not be possible to clinically discern where the individual poster would fall on the Autism Spectrum in their ability to effectively engage in social interactions. Complicating this would be the possibility that a poster who claimed to have Asperger's, may in fact be incorrect in his or herself-diagnosis and may be manifesting some other disorder (Clarke & van Amerom, 2007). Therefore, some of the video posters included in the study may not in fact have Asperger's although they claim to and others may fall anywhere along the entire spectrum of Autism, with some more closely reflecting the American Psychiatric Association's DMS-IV Criteria for Asperger's Syndrome than others, possibly skewing the results.

The inability to determine if extended conversations between the poster and viewers took place outside of the context of the YouTube backstage chat beyond the

post/response opportunities was considered a limitation (Correll, 2007; Goffman, 1959). While dialogue external to YouTube may have been intimated within the context of written chat, there was no way of controlling for or validating whether further communication materialized. Only those interactions that took place within the written responses were measureable, when the potential existed that social interactions were being carried out beyond the scrutinized venue. For example, if a poster gave a web address, viewers could have gone directly to contacting the poster through that address rather than engaging in dialogue using the YouTube comment response function. If indeed occurring, this could potentially skew the results, making it appear that communication between the poster and viewer was less in print than it was in actuality.

Discussion and Conclusion

The primary assumption of the study was that the videos were purposeful attempts by the posters to engage with viewers for social connectedness and networking. The results of the content analysis indicated that the videos were highly self-disclosive narratives that served as a foundational introduction of self, much as one would present personal aspects of oneself in face-to-face interactions. If these videos were not for the specific purpose of fostering interaction, the narratives contained therein would have been bereft of the self-disclosure that allowed others to *know* who the poster was as a person and more specifically as a person with Asperger's. The narratives would have been lacking in attempts to engage viewers by sharing personal information about potentially mutual interests, such as the topic of Asperger's. These discourses would have been absent of directed questioning to solicit information about the viewer to get to know who they are, minus attempts to engage viewers in socially reciprocal exchanges,

and free of verbal invitations for feedback. As indicated by the analysis, it appeared that some aspects of the personal information shared by the poster in their self-presentations made it more likely that there would be an increased number of responses from viewers. However, there was no support in the data to substantiate that the inclusion of specific self-presentational features were predictive of a maintained dialogue between the poster and the viewer. According to the data, one feature of the self-presentation, Seeking to Understand one's own Asperger's, may have decreased the probability of that ongoing communicative exchange from occurring.

Research Question 1: Which video elements were predictive of eliciting a greater number of social responses from the viewers?

According to the results from the multiple regression, the specific content of the disclosures was important in predicting social connectedness. The most significant model for predicting the total number of responses from viewers consisted of a description of the characteristics of Asperger's and the sharing of personal information. The more information provided by the posters in their presentation of self was predictive of a greater response from viewers. This was particularly the case for the elements of sharing personal information and describing the characteristics of Asperger's. The significance of these two factors could be attributable to any of several effects.

First, this finding is consistent with the qualitative findings of Davidson (2009) who suggested that persons on the Autism Spectrum go online seeking community. By revealing a higher amount of information appealing to a broader audience, the poster is metaphorically *net casting* in an effort to capture more viewers. The broader the range of topics, the wider the net is cast to engage others for community and network building.

By covering a higher number of topics in the shares personal information category, it may have become more likely that the poster would touch upon any single topic that would be appealing to a specific type of viewer in a diverse audience. The responsive audience could include other persons with Asperger's seeking information, affirmation or connectedness; friends and family members of persons with AS seeking understanding and support; and the coworkers, employers, and educators who work side-by side with persons with AS who may also be seeking greater insight. If only a low number of topics were presented, fewer viewers might have found what they were looking for within the content and would thereby have felt less compelled to communicate in response to it.

As proposed by Bowker and Tuffin (2002;2003) and Seymour and Lupton (2004), irrespective of issues confronted by persons with Asperger's in face-to-face interactions, online venues open opportunities that enable them to engage more easily with others than would be conventional for them. The liberating effect of the Internet affords a more comfortable *sharing of self* for initiating the process of establishing connectedness. The high degree of self-disclosure in the video postings could be reflective of this liberation and appears to be suggestive of an increased response from viewers as they partner in that freedom.

The nature and degree of the disclosure could also be attributable to the characteristic *lack of social filter* or difficulty for persons on the Spectrum to effectively employ social rules regarding self-revelation to strangers. Sharing the description of the characteristics of Asperger's Syndrome, including the listing of one's own personal characteristics, and the revelation of personal information, regardless of the intimate nature of some of those revelations, could be attributable to the "lack of *savoir-faire*" as

described by Kanner (1956, p. 58). However, high degrees of self-revelation are also noted in the online interactions of the Neuro-typical population, as described by Kramer and Winter (2008) and Schouten et al. (2009) amongst others, so it may be argued that the sharing of high amounts of personal information is perhaps a universal effect of online communication in general. Still, it is notable that specific to the population of persons on the Autism Spectrum and unlike the Neuro-typical population, the initiation of personal sharing for connectedness with others online by persons with AS, is contrary to what would be considered typical for them in face-to-face opportunities.

Third, a higher number of topics in the self-presentation overall reveals a richer portrait of *who the poster is as a person and as a person with AS*. Sharing personal information and describing the characteristic traits of one's Asperger's are intensely disclosive of the individual's private self in such a way that perhaps, it would be more likely for the viewer to respond as if he or she *knew* the poster better, even if that knowing was in an asynchronous, if not virtual sense. As in profiles on social networking sites, the profiles offered through the presentation of self in the video postings are crafted for the purpose of attracting viewers. By having these two features significantly predict viewer responses, the results appear indicative of the successful fulfillment of that tacit purpose.

Research Question 2: Which video elements were predictive of a maintained dialogue between the poster and the viewer?

In the logistic regression analysis, the data indicated that the content of the self-presentations were not predictive of a maintained dialogue through a consecutive exchange of responses between the poster and one or more viewers. Further, the data

suggested that the inclusion of one specific element in the video, Seeking to Understand one's own Asperger's, may have decreased the probability of a maintained dialogue.

The lack of maintained poster responses across the board was not disconcerting, but rather, perhaps, understandably indicative of one of the limitations of the study. Because it was impossible to discern where on the Autism Spectrum the poster was in terms of his or her high ability, emerging ability, or inability to socially engage others offline, that range of alterity could have impacted the online results. The poster with Asperger's who responded to viewers was either at the point of being socially able and willing to interact, in an emergent state with his or her ability to comfortably develop social connectedness, or possibly, the individual was not at all ready and was unable to engage due to the intensity of his or her autism.

Likewise, as suggested Tufekci (2008), online self-presentations, while contrived, are still reflective of the offline social self, and as described by Mikami, et al. (2010), behaviors online are reflective of behaviors offline. The lack of essential social grooming skills as described by Tufekci (2008) may be a distinctive disadvantage for persons with Asperger's in the maintenance of online dialogue because Theory of Mind deficits would interfere with their ability to, consistently and effectively, respond to and expand upon viewer comments. While the Internet eases many of the conditions that make offline interactions difficult or uncomfortable for persons with AS to maintain social relationships, some skill sets, such as those associated with Theory of Mind, perhaps would not be alleviated to the same degree.

Still, it would appear logical that the one element of Seeking to Understand one's own Asperger's would have been included in the videos because persons with AS have

been found to prioritize their own knowledge and the knowledge of non-academic others as being more meaningful, using the Internet to exchange advice (Brownlow & O'Dell, 2006; Davidson, 2008, Waltz, 2004). As noted by Brownlow and O'Dell, online venues can be opportunities for persons to self-identify with the particular label of Asperger's. Davidson referred to the online affiliations by persons with AS with other persons on the Spectrum that help to create their "axis of identity" (p. 793). Haridakis and Hanson (2009) expressed that control could be an interpersonal motive for sharing YouTube videos. Perhaps in seeking to understand, the posters are attempting to discern their own identity through empowering self-disclosures, giving viewers the opportunity to comment upon and clarify that sense of self as presented by the poster. Thus using YouTube as the medium of exchange in Seeking to Understand one's own autism would be perceived as a viable and valued means of eliciting that feedback.

Yet, the data suggested that the inclusion of Seeking to Understand one's own Asperger's in the video may have had an inverse effect in eliciting viewer responses. This too is understandable when viewed in light of the potential audience of viewers. For viewers who are also persons on the Spectrum online seeking a deeper understanding of their own AS through the viewing of YouTube postings as a source of information, a video poster seeking the same thing offers little in the way of answers to their questions. Such a viewer might choose to continue on to view and comment upon other videos that afford them a greater understanding of their AS or the affirmation they are seeking. Also, because Theory of Mind is not typically a strength for persons with AS, any viewers with Asperger's may not be able to take the perspective of the poster who is seeking a response for the purpose of affirmation, support, or knowledge-based feedback.

For friends, coworkers, teachers, and family members of persons with Asperger's online at YouTube seeking understanding of the Syndrome, the video by a poster who is also seeking to understand may not be considered the most reliable source for providing the type of information needed to fulfill their motivation for viewing. This demographic of viewers may also choose not to post a response at all or, if they do comment once, they may not be interested in continuing the exchange through a maintained dialogue with an otherwise willing poster.

In answer to the question of whether the video elements were predictive of a maintained dialogue between the poster and the viewer, it appears that there is a potential contradiction between what persons on the Spectrum report as being the outcome of their online experiences, and what the data on a maintained dialogue suggested. Brownlow and O'Dell (2006), Clarke and van Amerom (2007), Davidson (2008), Jordan (2010), Lange (2007), and Waltz (2005) suggested that social networking online enables persons on the Spectrum to be freed of the constraints that their limit ability to be comfortable in connecting offline. However, when regarding the existence of *extended* online interaction between the poster and the viewers using YouTube as a social medium, the data did not support it. Perhaps, it must be considered that what is said through the elements included in the videos may not be as important as the outcome, which is the elemental act of sharing for the purpose of establishing the connectedness for its own sake rather than maintaining that connectedness through an ongoing dialogue. Communication forms the basis of social interactions and the YouTube video communications may be solely for the purpose of simply and comfortably connecting

with others, for engaging in the social act of communication, each to the best of his or her ability.

Implications for Future Research

Further research is needed to fill significant gaps in the existing literature across disciplines. The effective use of virtual environments and online social networking sites for persons with disabilities and for persons with on the Autism Spectrum are areas which could be addressed. Online environments, synchronous and non-synchronous, could be used as venues for the exploration of community building for persons with Asperger's and for persons with disabilities, visible and invisible (Barnard-Brak & Sulak, (2010). It should be acknowledged that Davidson (2008, 2009) has contributed significant qualitative work, but future studies could expand upon her work by utilizing Facebook, MySpace, and YouTube as resources for hearing the *autistic voice*.

In answering how young adults with Asperger's make use of self-presentation for establishing and maintaining social interactions with viewers, it may be important to not only examine what they said, but also to examine how much they said. The possibility exists that sheer volume of content could be as significant as the content itself. To that end, another study is currently in production to determine whether the number of study factors emphasized by the poster is predictive of eliciting and maintaining positive social responses. Ethnographic and quantitative pieces focusing on online social network use by persons with disabilities and on the Autism Spectrum would contribute to our understandings of others and of other ways of being.

Implications for Curriculum and Instruction

From a business perspective, Campbell (2009) described how the Hot Spots feature of the YouTube Insights user tool could be used to help the video poster to

evaluate the attention his or her video has garnered and to establish where the viewer may “losing interest” (para. 6) in order to” make appropriate adjustments in future videos” (para. 6). This feedback is differentially delivered by YouTube, using numbers, narrative descriptions, and visual aids such as pie charts and bar graphs. If such relevant feedback can be automatically given regarding viewer patterns in response to a user’s video postings, it would be feasible and beneficial to develop and implement an instructive curriculum for posters across populations on how to use such feedback effectively.

The study results also indicated that describing the characteristics of Asperger’s and sharing personal information are important factors in eliciting responses from viewers. Also relevant, the poster Seeking to Understand his or her own Asperger’s was more likely to evidence a decrease in the probability of a maintained dialogue with one or more viewers. An innovative curriculum could focus upon the most productive ways in which to use self-presentation in online social networks for the purposes of basic social connectedness, initiating and maintaining relationships, building community, and enhancing career opportunities. It could be designed to help the poster to understand and effectively use the feedback features of the YouTube Insights user tool in conjunction with the being critically aware of the productive use of self-presentational features in the videos that have the potential to affect the nature of the feedback. Curriculums could successfully target specific populations that utilize online venues for those purposes.

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Appendix A: Data Collection Instrument

Appendix A: Data Collection Instrument

This section is representative of the larger collection instrument:

VARIABLE		Gender	Define	Describes	spiName	spiAge	spiMed	spiObIn	spiPhob	spiWrkE	spiEdu	spiFrien	spiIntim
CASE	1												
	2												
	3												
	4												
	5												
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VARIABLES included on the entire collection instrument and coding

IV Definition Asperger's (Def) 1- No 2- Yes

IV Describes Characteristics (DesChar) 1- No 2- Yes

IV Number of Shared Personal Info (spitotrec) 1= low (0-5 elements) 2= high (6-16 elements) to include:

Shares Personal Information: Name (spiName) 1- No 2- Yes

Shares Pers Info: Age (spiAge) 1- No 2- Yes

Shares Pers Info: Medical (spiMed) 1- No 2- Yes

Shares Pers Info: Obsessive Interest (spiObIn) 1- No 2- Yes

Shares Pers Info: Phobia (spiPhob) 1- No 2- Yes

Shares Pers Info: Work Experiences (spiWrkE) 1- No 2- Yes

Shares Pers Info: Education (spiEdu) 1- No 2- Yes

Shares Pers Info: Friendship (spiFrien) 1- No 2- Yes

Shares Pers Info: Intimacy (spiIntim) 1- No 2- Yes

Shares Pers Info: Bullying Experiences (spiBully) 1- No 2- Yes

Shares Pers Info: Stress (spiStres) 1- No 2- Yes

Shares Pers Info: Family Relationships (spiFamR) 1- No 2- Yes

Shares Pers Info: Obsessive Behavior (spiOBeh) 1- No 2- Yes

Shares Pers Info: Social Relations General (spiSoRG) 1- No 2- Yes

Shares Pers Info: Therapy (spiTher) 1- No 2- Yes

Shares Pers Info: Depression (spiDepr) 1- No 2- Yes

Shares Pers Info: Need for Acceptance (spiNedAc) 1- No 2- Yes

Shares Pers Info: Cognitive Processing (sdiCogPr) 1- No 2- Yes

Shares Pers Info: Reactive Opinion (SpiReact) 1- No 2- Yes

Shares Pers Info: Religion (spiRelig) 1- No 2- Yes

Shares Pers Info: Parenting (spiPare) 1- No 2- Yes

Shares Pers Info: Sports (spiSport) 1- No 2- Yes

Shares Pers Info: Physical Health (spiHeal) 1- No 2- Yes

Shares Pers Info: Diet (spiDiet) 1- No 2- Yes

Shares Pers Info: Exercise (spiExer) 1- No 2- Yes

Shares Pers Info: Sex Abuse/Rape (spiSexAb) 1- No 2- Yes

Shares Pers Info: Violence (spiViole) 1- No 2- Yes

IV Seeking to Understand (SeekUnd) 1- No 2- Yes

IV Seeking to be Understood (SeekBeUn) 1- No 2- Yes

IV Seeking to Help Others Understand (SeekOthU) 1- No 2- Yes

IV Statement Why Video Made (WhyMa) 1- No 2- Yes

IV Invites Response (InviteRe) 1- No 2- Yes

DV Total Number of Response Comments (TotRCom) 0 to 25 (capped at 25)

DV Consecutive Exchanges w/Same Viewer (ConsecEx) 1=No 2=Yes 0= no
opportunity

Appendix B IRB Approval Form

Appendix B IRB Approval Form

Valdosta State University Graduate School
Institutional Review Board Oversight Screening Form
for Graduate Student Research

Project Title: The Use of YouTube by Persons with Asperger's Syndrome for Online Social Networking

Name: Mary Ann Hand **Faculty Advisor:** Ellen Wiley

Department: Curriculum, Leadership & Technology **Please indicate the academic purpose of the proposed research:**

E-mail: mchand@valdosta.edu Doctoral Dissertation

Telephone: 229-560-3149 Master's Thesis

Other:

1. YES NO **Will you utilize *existing identifiable private* information about living individuals?** “Existing” information is data that were previously collected for some other purpose, either by the researcher or, more commonly, by another party. “Identifiable” means that the identities of the individuals can be ascertained by the researcher by name, code number, pattern of answers, or in some other way, regardless of whether or not the researcher needs to know the identities of the individuals for the proposed research project. “Private” information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place or information provided for specific purposes that the individual can reasonably expect will not be made public (e.g., a medical record or student record).
- Note: If you are using data that: (1) are publicly available; (2) were collected from individuals anonymously (i.e., no identifying information was included when the data were first collected); (3) will be de-identified before being given to the researcher, (i.e., the owner of the data will strip identifying information so that the researcher cannot ascertain the identities of individuals); or (4) do not include any private information about the individuals, regardless of whether or not the identities of the individuals can be ascertained, your response to Question 1 should be NO.*
2. YES NO **Will you *interact* with individuals to obtain data?** “Interaction” includes communication or interpersonal contact between the researcher and the research participant, such as testing, surveying, interviewing, or conducting a focus group. It does not include observation of public behavior when the researcher does not participate in the activities being observed.
3. YES NO **Will you *intervene* with individuals to obtain data?** “Intervention” includes manipulation of the individual or his/her environment for research purposes, as well as using physical procedures (e.g., measuring body composition, using a medical device, collecting a specimen) to gather data for research purposes.

If you answered YES to ANY of the above questions, your research is subject to Institutional Review Board oversight. Please discard this form and complete and submit an IRB application. Do not begin your research until your application has been reviewed by the IRB and you are informed of the outcome of the review.



If you answered NO to ALL of the above questions, your research is not subject to Institutional Review Board oversight. Stop here, sign below, secure your faculty advisor's signature, and submit this form to the Graduate School. Please remember that, even though your project is not subject to IRB oversight, you should still observe ethical principles in the conduct of your research.

STUDENT CERTIFICATION: I certify that my responses to the above questions accurately describe my proposed research.

Student's Signature: _____ Date: _____

FACULTY ADVISOR CERTIFICATION: I have reviewed the student's proposed research and concur that it is not subject to Institutional Review Board oversight.

Faculty Advisor's Signature: _____ Date: _____

AUTOBIOGRAPHICAL STATEMENT

I am a National Board Certified Language Arts teacher of learners with exceptional needs, employed at Lowndes High School in Valdosta, Georgia. I have 28 years of K-12 teaching experience, across five systems and four states, in the areas of Special Education, English as a Second Language, Secondary Education Language Arts, and Gifted Education. I currently have fifteen teenagers with Asperger's voluntarily enrolled in an after-school social group where they have assigned me the titled role of being their *Neuro-typical Translator*.