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REPRESENTATIONS

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MONITORING THE CONSTRUCTED SELF: AVATARS, OUR ON-LINE
REPRESENTATIONS

By

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ABSTRACT

MONITORING THE CONSTRUCTED SELF: AVATARS, OUR ON-LINE
REPRESENTATIONS

By

Lynn A. Rampoldi-Hnilo

Avatars are graphical on-line images that individuals create to represent themselves in virtual social interactions. In this digital form, individuals can define all aspects of their physical appearance without morphology constraints. Research suggests that individuals differentially monitor their self-presentations (Snyder, 1974, 1979), with some using external cues to create self-presentations (high self-monitors) and others integrating their own internal aspects (low self-monitors). This study was designed to test these concepts with avatars as the new self-presentation form. Specifically, self-presentation, sensitivity to expressive behaviors, other-directedness and social comparison were examined in relation to individuals' created avatars across three contexts. Individuals (N = 169) completed two on-line surveys and participated in a repeated measures design, with individuals creating one avatar for each of three contexts – to interact in an on-line chatroom with either: a group of friends; strangers; or a future employer. The first survey consisted of background questions and the individual trait measures. After participants had created their avatars, they answered questions regarding corollary dimensions of self-monitoring that they encoded into their self-presentations. A content analysis was conducted of the 507 avatars to determine the types and frequency of nonverbal presentation elements. Will individuals who monitor themselves highly in their self-presentations in real-life also monitor their on-line representations and present themselves distinctly in different on-line contexts? Findings suggest that individuals did not differ their types of portrayal, demographics, or presentation characteristics of their

avatars across situations by self-monitoring dimensions. In general, participants reported encoding more internal cues (attitudes and feelings), less external cues (environmental based) and more cross-situation variability in their avatar representations across situations. For the most part, there were few findings related specifically to the monitoring dimensions: self-presentation, sensitivity to expressive behaviors, other-directedness and social comparison.

Due to the lack of prediction with these subscales in this new environment, it is necessary to consider the validity of the self-monitoring construct. This author suggests greater explication of the sensitivity to expressive behavior measure – which was the most predictive – and reintegration of the acting dimension.

ACKNOWLEDGMENTS

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CHAPTER ONE

Introduction

Careful consideration of individual behavior variations as they relate to social contexts needs to be studied to increase our understanding of social behavior (Shaw & Costanzo, 1982). Research suggests that individuals differentially monitor their self-presentations (Snyder, 1974, 1979), with some using external cues to create self-presentations and others using their own internal aspects in their self-presentation. These people have been characterized as high and low self-monitors, respectively.

On-line environments provide another form of social interaction that have begun to be explored by researchers (Turkle, 1995; Waskul & Douglass, 1997; Walther, 1996). Originating from these cyberspace worlds is a new form of self-presentation, a graphical icon that represents individuals – the avatar. Individuals can define all aspects of their physical appearance, be represented by any form they desire, and encode them into these virtual personae or objects. These constructed identities are conveyers of nonverbal expression which can be a function of presentation needs and situational demands. It is predicted that virtual worlds will be another environment that will lend itself to self-monitoring, especially if provided with a self-presentation context. Furthermore, it is expected that individuals will encode specific appearance qualities (nonverbal expressions) into their avatars depending on their self-monitoring type, as a function of the given situation.

This study tests concepts derived from self-monitoring theory and literature in a new area of self-presentation – on-line selves. First, the importance of self-presentation will be discussed and then key elements that influence individuals' self-presentations: (1) the personality trait of self-monitoring, (2) the influence of goals – specifically the presentation function, and (3) the importance of contextual demands are discussed. Next, on-line representations known as avatars will be defined as a means of nonverbal expression and in terms of the physical appearance and presentation literature. Concepts regarding the likelihood of monitoring one's on-line environments and individuals' perceptions of virtual and computer interactions will also be linked to avatars as nonverbal conveyors of information.

From these conceptions, a series of research questions arise. Will individuals who monitor themselves highly in their self-presentations in real-life also monitor their on-line selves and present themselves distinctly in different on-line contexts? Will those low in self-monitoring dimensions have avatars that reflect more of their personality style and represent themselves similarly across situations, as found in the real world? Given the ability to tailor one's self-presentation entirely without limitations, as compared to the real domain where people are born with certain physical characteristics, will all individuals begin to monitor themselves more or perhaps less? Self-monitoring has been considered, for the most part, a personality variable. If self-monitoring does not reliably predict an individual's self-presentation across contexts, such as in virtual environments like graphical on-line chatrooms (social interaction context), then this theory will need to be revised.

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<u>Self-Presentation</u>

*The image of myself which I try to create in my own mind in
order that I may love myself is very different from the image
which I try to create in the minds of others in order that
they may love me.   -W.H. Auden*

Self-presentation is ubiquitous. Almost every social situation provides an

opportunity to influence how others think about us (Arkin & Shepperd, 1989).

Individuals self-present themselves or manage impressions of others to control images

that are projected in real or imagined social interactions (Schlenker, 1980). Often,

individuals conscientiously create images of themselves to present to others based on the

situational context (e.g. party vs. classroom) and goals (e.g. to present a positive image to

a new employer) (Fiske & Taylor, 1991). William James (1890) made similar points by

suggesting that "man has as many social selves as there are distinct groups of persons

about whose opinion he cares. He generally shows a different side of himself to each of

these different groups" (p. 294).

These notions of situation specificity of self-presentation or impression

management, have by some, been considered a form of acting. Goffman (1959, 1963)

states that regardless of setting, the presentation of self is a performance designed to

create a certain impression. To create a successful impression one needs the very

elements used in a dramaturgical production, such as the proper setting, costumes, correct

props, skill, and sometimes even rehearsal. Implicit in self-presentation, especially when

compared to acting, is the public nature of the behavioral activity (Arkin & Shepperd,

1989; Goffman, 1959; Leary, 1993; Schlenker and Weigold, 1989). From the

dramaturgical perspective on selves (Burke, 1937, Burke, 1966; Duncan, 1962; Goffman,

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1959, 1961), the roles people play are always changing due to feedback from the audience (Edgely & Turner, 1975), the relationships between the act, agent, agency, scene, and purpose (Burke, 1966); and can be considered a product of the scene itself (Goffman, 1959).

However, defining self-presentation in terms of acting has been criticized as taking a needlessly cynical viewpoint of human beings. Cuzzort (1969) suggests that Goffman frames humans as nothing but con artists, who have no choices in their performances. Furthermore, individuals are capable of morality in their self-presentations, but only if they are not hiding behind a mask (Cuzzort, 1969; Oravec, 1996). One way to resolve the debate is to recognize that a mask does not necessarily have to be false. Individuals may manage their self-constructions and can "create the appearance of consistency or conflict in the ensemble or composite character associated with him- or herself" (Oravec, 1996, p. 56). In other words, people's presentations are on a continuum and can reflect as much or as little about themselves as they choose either within or across situations. Research suggests that the ability to encode and decode nonverbal information, or expressive behaviors (e.g. acting, physical presentation), may be attributed to certain personality traits (Infante, Rancer, & Womack, 1990). One personality trait that has been well linked to self-presentation is the construct self-monitoring.

Self-Monitoring

Research has shown that some people are more likely to monitor their environment for cues so as to enact the most suitable self-presentation strategy for the given situation (Webb, Marsh, Schneiderman, & Davis, 1989; Alexander & Lauderdale,

1977). Snyder (1979) proposes that a basic tenet of most theories of the self is that individuals can and do exercise control over their self-presentations. Specifically, he was interested in understanding how self-monitoring processes influence individuals' verbal and nonverbal presentations of self (Snyder, 1974, 1979). Snyder postulates that there are differences in the extent individuals oversee their self-presentations and that "these differences may be conceptualized in terms of the social psychological construct of self-monitoring" (Snyder, 1979, p. 88). In general, self-monitoring refers to the styles in which individuals plan, self-present, and regulate expressive and nonverbal behaviors in social situations (Snyder & Cantor, 1980; Snyder, 1974). It is suggested that individuals differ in their monitoring styles, such that some people rely more on situational/environmental cues as to how to present themselves (high self-monitor), while others' self-presentations are more dependent on internal aspects, for instance attitudes and feelings (low self-monitor). At the theoretical core of the self-monitoring perspective, there seems to be an individual difference variable regarding the extent to which people manage their self-presentation strategies in social interactions (Shaw & Costanzo, 1982).

As stated previously, research and layperson models already suggest that self-presentation is pervasive and used by all people at one time or another, but what Snyder's formulation brought to the area of impression management was the idea that self-monitoring processes are differentially evident in different persons (Shaw & Costanzo, 1982). Findings suggest that high self-monitors act as the situation demands (Snyder, 1974, 1979; Snyder & Monson, 1975), discern the meaning of nonverbal behaviors better (Snyder, 1979), are better able to adopt the behavior of another type of person (Lippa, 1976), show high cross-situation variability in behavior (Snyder & Swann, 1976) and

place more emphasis on surface characteristics in considering romantic partners (Snyder & Simpson, 1984) and in judging a potential job applicant (Snyder, Berscheid & Matwychuk, 1988). Low self-monitors are found to act more on their own internal demands (Snyder, 1974, 1979; Snyder & Monson, 1975), show less situation variability in their behavior (Snyder & Swann, 1976), are attracted to people with high attitude similarity (Jamieson, Lydon & Zanna, 1987) and place more weight on information about personal disposition for a potential job candidate (Snyder, Berscheid & Matwychuk, 1988).

Replication has been difficult with regard to self-monitoring and self-presentation. Part of the difficulty arises from the multidimensionality of the self-monitoring scale. Snyder (1974, 1979) originally developed five hypothetical components of the self-monitoring construct: (1) concern with social appropriateness of one's self-presentation; (2) attention to social comparison information; (3) ability to control and modify one's self-presentation; (4) the use of modifying one's self-presentation in particular situations; and (5) cross-situation variability of social behavior. There have been numerous factor analytic studies that have examined the self-monitoring scale and concluded that there are multiple factors (Briggs, Cheek, & Buss, 1980; Gabrenya & Arkin, 1980; Dillard & Hunter, 1989), not unidimensionality as claimed by Gangestead and Snyder (1985). Three factors have been found consistently: extraversion/sociability, other-directedness, and acting (Dillard & Hunter, 1989). A fourth factor, speaking ability, was found in Gabrenya and Arkin's (1980) study. This scale has been shown to be multidimensional at both the primary level and the second-order level (Dillard & Hunter, 1989).

Because Snyder's Self-Monitoring Scale was multidimensional and generally factored into three dimensions not the five conceptualized, Lennox and Wolfe (1984) set out to reevaluate the theoretical structure presented by Snyder (1974). First it was determined that four of the items were measuring the construct of extraversion which was not part of Snyder's five hypothetical components; thus those items were dropped. Another sample was given the scale, minus the four extraversion items, and four factors emerged. They were: cross-situational variability (the ability to modify one's behavior in given situations), acting ability (ability to act or entertain), ability to modify self-presentation (the ability to regulate one's self-presentation in everyday life) and concern for appropriateness (loaded items that measured concern with appropriate presentation and attention paid to social comparison information). After applying face validity and further analyses, it was suggested that measuring acting ability from a theatrical perspective was not a good measure of social interaction skills; the ability to modify self-presentation most likely was more relevant to real life (Lennox & Wolfe, 1984; Briggs, et. al, 1980). After narrowing Synder's construct based on his descriptions of a high self-monitor, Lennox and Wolfe (1984) determined that two factors best represented self-monitoring: ability to modify self-presentation and sensitivity to expressive behaviors of others. From the remainder of the items that were not part of their self-monitoring scale due to their relationship with social anxiety, another measurement emerged that tapped the tendencies to conform. The subscales cross-situation variability and attention to social comparison information were used to create the Concern for Appropriateness Scale (Lennox & Wolfe, 1984).

Several authors have suggested that the subscale scores on the self-monitoring scale should be treated separately to predict behavior (Lennox & Wolfe, 1984; Miell & Le Voi, 1985). Scale analyses indicate that the two subscales composing the revised self-monitoring scale correlate dissimilarly on some variables, therefore should be considered separately (Lennox & Wolfe, 1984). The subscales from the Concern for Appropriateness Scale both measure interesting dimensions that may provide better insight as to how individuals self-present on-line. Therefore, self-monitoring will be interpreted in terms of the four subscales that represent different aspects of the construct: self-presentation, sensitivity to expression, other-directedness (cross-situation variability), and social comparison.

Goals and Impression Management

People describe and express themselves in a multitude of ways, many of which are influenced by goals they want to achieve. The ability to obtain important goals (e.g. friendship, romance, a job promotion) depends, in part, on the impressions or set of impressions one gives (Leary, 1993). Individuals can plan, adopt, and carry out strategies that will influence the impression that others make of them (Arkin, Appleman, & Burger, 1980; Jones & Pittman, 1982). "Social life requires that people communicate a sense of who they are and what they are likely to do, and specifying the properties of one's identity serves important intrapersonal and interpersonal functions" (Schlenker & Weigold, 1989, p. 244).

In the virtual world, people communicate their identity both through text (verbal communication) and images (nonverbal) (Damer, 1998; Waskul & Douglass, 1996; Turkle, 1995). Focusing on individuals' on-line representations in the form of an image,

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or avatar, suggests this form of presentation be studied within the nonverbal research area. Patterson (1983, 1987) has suggested considering nonverbal behavior within a functional perspective. For example, one could emit nonverbal behavior in the service of intimacy, service-task, or self-presentation functions. The advantages of the functional approach are: (1) to enable identification of reasons for or causes of particular behavior patterns; (2) allow for a holistic assessment of all nonverbal expressions, not just single channel descriptions (e.g. look at more than one type of visual cue); (3) provide links between nonverbal behavior patterns and social psychological processes so that a function is manifested in certain nonverbal behaviors (Patterson, 1983). In particular, a presentation function is posited where "the focus of the individual's behavior is to present or enhance an identity or image, either at the individual or relationship level" (Patterson, 1987, p. 114). Patterson (1987) notes that presentational behavior patterns are purposeful in nature. Therefore, the induced goal of creating a virtual self-presentation should fall within this function. In other words, people will be motivated to manage their images if the impressions they create are related to the goals they seek or the demands of the situation (Leary, 1993). Extending the application of the presentation function to virtual self-presentation, this study predicts that individuals' self-monitoring styles will be manifested in their nonverbal expression of their on-line representations, as a function of the given context.

The disadvantages to the functional approach include: uncertainty with inferences about functions identified (e.g. people may be unaware of their purpose); and many behavior patterns can serve more than one function and this weakens prediction making (Patterson, 1983). In this instance, it is suggested that nonverbal behavior will be

influenced by the function of the goal to present oneself within a specific context; however the encoding of representational elements due to one's monitoring of the environment may or may not be a conscious function. In order to rule out alternative functions as causal factors and to ensure that the presentation function is the most relevant function, explicit self-presentation directions will be given to the participants. Trait research considers that trait behaviors across time and situations are fairly consistent (Infante, Rancer, & Womack, 1990), thus, their influence may be strategically automatic (e.g. scripted behavior) or inherent in people's activities. Therefore, this presentation context is one in which the possible disadvantages of the functional approach should be of minimal concern.

Contexts and Cross-Situational Consistency

Researchers have been debating the relative influence of situational and dispositional determinants of human behavior for many years (Epstein, 1979; Mischel, 1973; Snyder & Monson, 1975). Situationalists believe that situations primarily determine behavior. This position gained a stronghold in the scientific community when Mischel (1968), who reviewed both past and current research, reported that the cross-situational correlation coefficients are rarely higher that .30. In other words, there was only a small relationship between one's behavior in one situation to that of their behavior in another situation.

From the trait perspective, it has been suggested that there are broad dispositions that explain people's behaviors: particularly there should be behavioral cross-situational consistency (Allport, 1966; Alker, 1972; Cattell, 1950). Although there was much evidence to the contrary, researchers' intuitions and experiences with people suggest that

individuals do behave consistently across situations (Bem & Allen, 1974). Bem and

Allen (1974) believe the problem lies with the tradition of research being based on

nomothetic assumptions about the nature of individual differences rather than idiographic

assumptions. From an idiographic standpoint, individuals would not be expected to have

the same traits related to one another nor have the same traits relevant to one's self

(Allport, 1937; Bem & Allen, 1974). Therefore, "only to the extent that all of the

individuals in the sample scale the behaviors in the same way will the cross-situational

correlations be high" (Bem & Allen, 1974, p. 510).

Taking a moderate viewpoint, people most likely vary to the extent that situational

and dispositional factors influence their self-presentation behaviors (Bem & Allen, 1974;

Leary, 1993). Snyder and Monson (1975) suggest these individual differences (that rely

more on situation or disposition) can be conceptualized in terms of self-monitoring.

Individuals who self-monitor are aware of their situation and want to behave

appropriately, therefore allow more environmental cues to inform self-presentation

expression (Snyder, 1974; 1979). By comparison, those who monitor less are not

concerned as much with the situation, but are guided by their dispositions and other

personality characteristics.

Assuming individuals differentially use dispositional and situational information

in their self-presentation, it is relevant to remember that goals do influence individual's

self-expressions and can be induced by situational factors. Situations influence self-

identification in two ways: (1) they provide opportunities and constraints that influence

people's needs and values which in turn effect behavior-outcome contingencies and (2)

they activate relevant information in people's memories which cue goals, scripts, and

identity images (Schlenker & Weigold, 1989). Some social scientists predict that if the attainment of important goals is salient then image construction will be based more on the situational pressures rather than one's self-concept (Leary, 1993; Schlenker & Weigold, 1989). The key here is to create situations that will induce individuals to follow situational demands (e.g. to get a job), but to also provide situations that will influence behavior based on personality or internal cues. It is expected that those who are high self-monitors will monitor the environmental cues across all the situations and represent their on-line entities to best fit these situations, whereas, low self-monitors will be more consistent across contexts with their constructed presentations due to their internal demands.

Different situations have inherent demands embedded in them, i.e. obtaining a job, making friends, etc. (Leary, 1993). Therefore, it is important to account for situations that require different representations. People are more likely to create an ideal self-portrait when presented with economic rewards, therefore contexts related to obtaining a job or being on the job will trigger the goal of making a good impression (Buss & Briggs, 1984; Jones & Wortman, 1973). Buss and Briggs (1984) suggest that it is hard to remain superficial or be deceptive in presentation with deeper social relationships, such as friends, family members and spouses. Furthermore, findings have shown it makes a difference in self-presentation strategies if dealing with a friend or with strangers (Brown & Garland, 1971; Baumeister & Jones, 1978). In this study, three contexts will be used that represent a wide range of self-presentation strategies based on the situation. Individuals will be asked to create an image for interacting with: a) a future employer, b) friends, and c) strangers. Having a stranger context is especially relevant to

on-line interactions, since many times people are interacting with strangers and people's first interactions usually begin at this level.

Avatars: on-line graphical self-presentation

One progressive way of interacting in the virtual world was presented first to the public in the cyberpunk novel entitled Snow Crash by Neal Stephenson (1992). In this futuristic setting, computer users conduct business in a virtual world called the Metaverse, a powerfully enhanced version of today's Internet. The Metaverse is a virtual world that contains homes, stores, bars, streets, office buildings, mass transit, and anything that computer users or hackers wish to create. Users were represented by highly realistic graphical people called avatars. Although, we have nothing as sophisticated at this point, many companies such as Intel, Microsoft and other Fortune 500 companies, are creating virtual chat rooms on the Web that allow for avatar interactions (Darlin, 1996; Halfhill, 1996; Riedman, 1996).

The continuing immersion of bodies into cyberspace and the ubiquity of telecommunication technologies has been termed progressive embodiment (Nowak & Biocca, 1999). Furthermore, this movement has led users' virtual bodies to being more prevalent and salient in virtual environments (Nowak & Biocca, 1999). Personal on-line representations of individuals are particularly well suited for virtual social interactions since they let individuals see each other in their constructed forms. This, in turn, allows communication to be enhanced with nonverbal information. "In order to have an identity bestowed on oneself, it is necessary to be in a context in which one can identify with others and be identified" (Waskul & Douglass, 1997, p. 378). Although this citation referred to text-based chatrooms, it can easily be applied to graphical chatrooms.

However, caution should be used. Logic would suggest that with electronic representation, identities will be achieved more quickly. Researchers suggest that due to the fluid body, a person's virtual form is not necessarily a consistent predictor of one's identity (Benford, Greenhalgh, Bowers, Snowdon, & Fahlen, 1995; Nowak and Biocca, 1999). For instance, someone else may also have the same avatar or a different body was chosen to represent that person the next day (e.g. same identity, different form). Public description of one's attributes, however, remains a key way to control impressions (and therefore social identity), but "may or may not correspond to the private perceptions of the person" (Shaw & Costanzo, 1982, p. 331). If this situation is valid, self-monitoring will be a useful predictor. The most widely used virtual representation currently implemented is the avatar.

The word avatar originates from the Sanskrit language which can be interpreted as "God's appearance on Earth" (Damer, 1998). Other definitions include an incarnation in human form or a variant version of a continuing basic entity (Merriam-Webster, 1988). Another variation, originating from Hindu, refers to the avatar as an incarnation or an embodiment of a deity or spirit in an earthy form (Nowak & Biocca, 1999). These constructed forms allow individuals to experience various worlds and relationships from the perspective of its inhabitants (Turkle, 1995; Vilhajalmsson, 1996). For purposes of this study, an avatar is the digital body or object an individual has chosen to represent oneself within cyberspace. The avatar can take many forms; from a human to an alien to a flower to a monkey or even a toaster. An avatar is a virtual persona (Damer, 1998) with no constraint on shape.

Avatars interact and inhabit virtual worlds that can be made up of large three-dimensional cities, space stations, castles, restaurants/bars and fantasy places that don't look like anything in the real world (Damer, 1998). "Virtual worlds run on ordinary computers without any exotic hardware and tie into the Internet through a regular phone line" (Damer, 1998, p. xvii). These worlds were conceived from two parent technologies: the text-based virtual community and the computer game. For the most part, they have been built up around the text-based chatrooms (Suler, 1997) to allow for greater self-expression.

Avatar worlds have provided an environment where communities (groups of individuals) have formed and many types of interpersonal relationships have developed; as did in the text-based chatrooms (Turkle, 1995; Parks & Roberts, 1998). "I use avatar worlds to build new friendships, to strengthen the ones I have, and build up my own personal community" (Damer, 1998, p. xviii).

Personal Cyberspace Monitoring

The question then arises, will individuals also monitor their on-line presentation in a new computer environment where self-presentation may be more easily constructed? Current research indicates that first impressions are more manageable in computer-mediated communications (CMC; for example: e-mail, on-line chatrooms) which can be enhanced by lack of detracting physical cues (e.g. unattractive, a slob) (Walther, 1996). In other words, reduced communication cues through the absence of the physical being make first impressions more pliant. The information one presents about "oneself is more selective, malleable, and subject for greater self-censorship in CMC than in face-to-face [FtF] interaction because only verbal and linguistic cues – those that are most at our

discretion and control – are our displays" (Walther, 1996, p. 20). Users are constantly

enhancing the systems to communicate more information, including the development of a

wide variety of symbols, phrases, and acronyms that attempt to approximate FtF

nonverbal behaviors in e-mail and in the text-only chat environments (Walther, 1993;

Lee, 1996; Curtis, 1997). These symbols have been termed as smileys or emoticons and

are computer icons that reflect emotion, for example, a smiley face is a colon followed by

a parenthesis (Reid, 1995). Older theories, such as social presence (Short, Williams &

Christie, 1976), suggested that the lack of cues in computer-mediated environments

created ineffective interpersonal exchanges, whereas, Walther's (1992, 1993, 1995, 1996,

1997) research program has indicated that CMC users have compensated by developing

these on-line relational cues. As previously acknowledged, users are quick to modify

their computer environments to give themselves greater opportunity for expression. It is

not a surprise, then, that the text-based chatrooms are now giving way to the "newer

graphical/auditory chat environments, the addition of even relatively simple sight and

sound options has provided considerably more elbow room for subtlety in communication

and creative self-expression" (Suler, 1997, p.1). Therefore, individuals may also convey

nonverbal information with a constructed virtual persona or object for presentation

purposes in these environments. A virtual individual can be thought of as "a selection or

compilation of various traces, records, imprints, photographs, profiles, and statistical

information that pertain (or could reasonably be said to pertain) to an individual – along

with writings done, images produced, sounds associated with, and impressions managed

by the individual" (Oravec, 1996, p. 47). It is expected that physical information

provided in a virtual environment will convey a significant and distinct portion of

nonverbal information that was not previously provided by text-only chatrooms thus enabling the self-presentation function of nonverbal behavior (Patterson, 1987).

Nonverbal Communication

Visual communication represents encoded information, which for some have meaning and for others represent no shared knowledge. With respect to human-type images (e.g. pictures of people), individuals have had extensive training in decoding people's faces, emotions, and demographic information (e.g. gender and ethnicity) (Infante, Rancer, & Womack, 1990).

Physical information plays a large role in the formation of initial impressions in face-to-face interactions (Dion, Berscheid, & Walster, 1972; Walther, 1993). Nonverbal communication research indicates that "the face carries the most information about emotion, followed by body, followed by tone of voice" (Argyle, 1988, p. 83). There is great uniformity in the encoding and decoding of facial expressions, even across cultures (Ekman, 1978). Facial expressions can be reflective of one's environment, but often are modified by display rules dictated by a given situation (Ekman, 1972). "Display rules may be a product of individual characteristics and learning, cultural norms, and situational constraints" (Patterson, 1983, p. 50; Ekman, 1972). In this case, the individual characteristic, self-monitoring is expected to influence one's display rules and in turn manifest itself in the on-line expression or form.

Individuals can quickly make attributions about individuals based on appearance in face-to-face interactions and actually have more faith in nonverbal cues provided from the body, especially when presented with conflicting verbal information (Burgoon, Buller, & Woodall, 1996; Argyle, 1988). "In the 'real' world of five senses, people freely

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can experiment with language, voice modulation, dress, hand gestures, facial expressions, body language, even perfume – all as ways to communicate nuances in meaning" (Suler, 1997, p. 1). Although individuals can change things about themselves, there are many physical attributes that are difficult to mask or change without the help of cosmetic or fashionable manipulation (Reid, 1995). For instance, changing one's gender, ethnicity, and age can be enhanced or covered, but not easily changed permanently. Many individuals suffer from body self-esteem and image issues. Ideal weight or body shape and physical attractiveness (such as set by society) require behavioral changes and/or surgery to acquire the society norm: if it is not already genetically encoded.

However, virtual environments present individuals with the freedom to define all aspects of their appearance in any way they see fit. The virtual body can be constructed and reconstructed to reflect any image (Turkle, 1995), personality, or goal-based reflection that an individual wishes to create. From the constructionist point of view, the individual "can now modify the signs that represent a human body, changing how one identifies oneself and thus how one identifies others" (Lipton, 1996, p. 340-341). Assuming that "this is a semiotic field that extends the use of clothing and other cues in the social construction of the self" (Nowak & Biocca, 1999, p. 14), then the opportunity for individuals to experience new roles and explore different parts of themselves can be achieved easily (Turkle, 1995).

Aspects of Appearance

Oscar Wilde said, "It is only shallow people who do not judge by appearances. The true mystery of the world is the visible, not the invisible." In this section, the

alteration of physical appearances and its influences on an individual's perceptions will be discussed.

Appearance can be an influential mode of communication. "Some aspects of physique can be altered very little, but even so other people are likely to decode it, in terms of personality properties" (Argyle, 1988, p. 233). Many nonalterable aspects of physical appearance, such as sex, age, race, height and beauty can function as a nonverbal message, if interpreted by the receiver (Infante, Rancer, & Womack, 1990). The literature based on stereotypes provides validity for this statement. However, there is a substantial portion of our physical appearance that is under our control and can be considered a communication message. Clothes are one of the easiest self-presentation aspects to modify. Although many times weather and normative conventions dictate what individuals should wear, there are many social occasions that motivate individuals to create a specific image (Argyle, 1988; Fiske & Taylor, 1991). For example, Von Beyer (1981) found that women attending a job interview wore more feminine clothes and accessories if they had been told the interviewer held traditional views about women. Information can be conveyed simply by the manner of what and how an individual wears their clothes. Individuals who had dramatic communication styles (high energy) and who like to leave a lasting impression on others were found to rate high on fashion innovativeness (Gorden, Infante, & Braun, 1985). This finding indicates that these people may use clothing as a means of expressing themselves (Gorden, Infante, & Braun, 1985).

Aspects of appearance and clothing have some perceptually agreed meanings (see Argyle, 1988, for a review). Gibbins (1969) found that English adolescent girls reported

a high degree of agreement on the kinds of girls who might wear various items. Hamid's (1968) sample also found a similar high level of agreement in judging girls' clothing, but little agreement on faces alone. Girls who wore short skirts, bright dresses, and make-up were rated as sophisticated, attractive, but immoral. In a classic study, "Sissons (1971) found that an individual's social class could be judged quite accurately, either from a still photograph of his clothes, or a recording of his voice, or from a photograph of his face" (Argyle, 1988, p. 239).

Goffman (1959) also indicated that appearance was important in one's self-presentation performance because it can be done subtly and indirectly, whereas verbal self-presentation may not be believed, especially with regards to image-oriented classifications like status. "When Goffman wrote of self-presentation, he referred not to an individual's presentation of a preexisting, subjective sense of identity or even to a public presentation that is mediated by an inner self, but rather to a public persona that is constructed in a particular social encounter" (Leary, 1993, p. 127). Self-presentation theory considers the following physical aspects of self to be important in communication: to display positive features, enhance one's physical attractiveness, display parts of the self-image (e.g. colorful, masculine), conform to norms of the situation or deliberately not, indicate group memberships and identify occupational roles (Argyle, 1988).

Most physical appearance research has focused on the decoding of physical cues and not on the encoding of interpersonal information, such as personality, into appearance (Argyle, 1988). For example, subjects rated photographs in which the clothing and the faces had been recombined independently and found clothing did communicate some particular dimensions of social meaning (Hoult, 1954). The dimensions that have been

used to decode physical cues reflect many of the same factors identified by Goffman for optimal presentation (1959). They were:

> "a) formal-informal, appropriateness for different social situations, as well as for other situations like different kinds of sport;
> b) group membership, including uniforms, social class, and membership of groups like punks and sloanes;
> c) attractiveness and fashionability, dressing up and attracting attention v. dressing down and avoiding it;
> d) colourfulness, and other ways of expressing personality or mood"
> (Argyle, 1988, pp. 235-236).
> High self-monitors have been found to more likely seek out information that is

relevant to norms of self-presentation in a situation and spend more time looking at it

(Snyder, 1974), are better able to construct images of prototypic individuals (e.g. perfect

princess) and are more likely to enter a social situation when the norms are clear (Snyder

& Gangestad, 1982). Therefore, it is not surprising that high self-monitors also report

choosing clothes that fit the situation, using clothes to maintain individuality, and

exhibiting more fashion leadership (Davis & Lennon, 1985). Snyder and Fromkin (1980)

found that the "need for uniqueness" influenced an individual's choice of clothing.

In addition to clothing, physical attractiveness has been studied extensively.

Again, findings indicate high levels of agreement on judging appearances, whereby

people had high levels of agreement in their placement of photographs of women on the

characteristic of physical attractiveness (Iliffe, 1960).

Many studies have indicated that individuals attribute certain characteristics and

stereotypes based on the physical attractiveness or unattractiveness of the individual.

Attractive men and women are considered to have more desirable personalities, better

jobs, greater marital competence, more likely to get married, and thought to be happier

(Dion, Berscheid, & Walster, 1972). Self reports confirm many of these positive

stereotypes. Attractive individuals, especially women, report being happier, more self-confident, assertive, socially skilled and in better psychological health (Mathes & Kahn, 1975). Unattractive people have been judged to be dishonest, less warm, less affectionate, less sincere, to have fewer friends and less sense of humor (Bull, 1979).

Given this brief review of physical appearance literature, it is likely that high self-monitors will create on-line representations that are more attractive and include more optimal presentation cues due to their likelihood to make judgments based on physical appearances in real life (Snyder & Simpson, 1984; Snyder, Berscheid & Matwychuk, 1988). Therefore, it is expected that participants will encode specific appearance qualities into their avatars depending on their self-monitoring type.

Computer-Mediated Interpretations

As discussed, evidence suggests that individuals do make attributions based on physical characteristics, but do individuals interpret computer images and on-line interactions the same as in the real world? Parks and colleagues have studied interpersonal relationship development through news groups (Parks & Floyd, 1996) and more recently through real-time text based virtual environments (Parks & Roberts, 1998). Relationships that developed most were: close friendships, friendships, and romances (Parks & Roberts, 1998; Waskul & Douglass, 1997). Reeves and Nass (1996) conducted a series of studies suggesting that individuals respond to computers and interact with them in similar ways as they do with humans. They found that individuals attributed personality styles to computers based on the interface designs and formed stereotyped perceptions based on the feminine or masculine sound of a computer voice. They did caution that stereotyping also may apply to avatars (Reeves & Nass, 1996), which was

sound advice considering people do engage in interpreting the facial displays of a computer (Takeuchi & Naito, 1995). Walker, Sproull, and Subramani (1994) found individuals who answered questions spoken by a stern face spent more time, made fewer mistakes, wrote more comments, but liked the experience and the face less, as compared to those viewing and listening to a neutral face. Research to date has indicated there is no ideal virtual body for all potential interactions and that the avatar design will be dependent upon the purposes of the interaction due to technological constraints (Nowak & Biocca, 1999).

With the advent of avatars, individuals may tailor an optimal or any type of representation that they want. There are no rules that say one can't adopt a completely different physical look (changing one's gender, ethnicity, or becoming a chair or an alien), personality (becoming more extroverted), try new behaviors (more sexually aggressive), or act completely different. Given these new opportunities, will individuals still monitor their computer-mediated image in different situations, as in real life? Will low self-monitors show less cross-situational variability and high self-monitors moreso? All research questions and hypotheses will be derived from the self-monitoring construct (Snyder, 1974, 1979), but will be operationized in Lennox and Wolfe's (1984) four subscales: self-presentation, sensitivity, other-directedness, and social comparison.

It is expected that virtual worlds provide a unique presentation situation, therefore: Do individuals who are high and low in self-presentation, sensitivity, other-directness, and social comparison represent themselves differently in avatar form? Avatars will be analyzed in terms of: form (e.g. human body, animal or an inanimate object), shot (e.g. face or body shot), presentation in terms of a real-life picture or a

cartoon/drawing, the optimal self-presentation dimensions (i.e. status, attractiveness, formality, colorfulness), and demographic variables (i.e. gender, age, ethnicity, socioeconomic status).

Research suggests high self-monitors are more aware of environmental cues and will vary their presentations according to what is considered the most appropriate presentation given the situation (Snyder, 1979). Therefore, high self-monitors generally show more presentation variation across situations (Snyder & Swann, 1976). However, what occurs in a new presentation forum, where norms are difficult to ascertain? Rampoldi-Hnilo (1998) found significant correlations between other-directedness (a subscale of the original self-monitoring scale) and of personal homepage content. Higher monitors were more likely to place more cartoons, product icons, animal images and art images on their webpages. In addition, they also put more contact elements (e.g. e-mail links), external and internal links, images, animations, typography elements, created more total pages and were rated as more professional. These findings indicate that the higher self-monitors considered "more was better," and included elements that are considered to be optimal presentation strategies (Argyle, 1988), such as being rated more professional, more colorful and appearance oriented. Although no specific context was given, this was a measure of an overall presentation of self to an unknown audience. What occurs then, if subjects are given three different contexts (interacting with friends, with strangers, and with a future employer) to virtually present themselves? The following hypotheses were derived from Snyder's original hypotheses in predicting behavioral consistency and variation (Snyder, 1979; Snyder & Swann 1976). The dependent measures will be based

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on a content analysis of the participant's avatars that reflect the key physical appearance

elements that carry nonverbal information.

H1: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create significantly different avatars among the context conditions than those who are low in those traits.

H1a: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create more avatar portrayal information (body forms, type of shots, and picture type) among the context conditions than individuals who are low in those traits.

H1b: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create avatars that are significantly different in (optimal self-presentation dimensions) colorfulness and status cues among the context conditions than individuals who are low in those traits.

H1c: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create avatars with significantly different demographic information among the context conditions than individuals who are low in those traits.

Given that high self-monitors are more in-tune with nonverbal behaviors (Snyder,

1979), it is expected that high self-monitors will try to express more nonverbal

information than low self-monitors, following a similar strategy as in homepages that

"more is better" (Rampoldi-Hnilo, 1998). Of the four subscales related to self-

monitoring, sensitivity to expression specifically measures one's awareness of nonverbal

expression. Hence, this concept will used in the second hypotheses. Hypothesis 2a

focuses on content variables and hypothesis 2b addresses self-report variables.

H2a: Individuals who are more sensitive to expression are more likely to use more color, have more status cues, and have more demographic information than those who are low on this dimension.

H2b: Individuals who are more sensitive to expression are more likely to report more physical attractiveness and formality than those who are low on this dimension.

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Research indicates individuals differentially monitor their self-presentations, with some relying more on external cues to inform their self-presentations and others using more of their own internal aspects in their self-presentations (Snyder, 1974, 1979). These individuals have been characterized as high and low self-monitors, respectively. Furthermore, it has been shown that high self-monitors exhibit high cross-situation variability in behavior, while low self-monitors show less variability (Snyder & Swann, 1976). Does this construct and its predictions also apply to individuals' on-line self-presentations? It is expected individuals also will place similar values in their on-line presentations. Thus, the next key question is: Are individuals who are higher in self-presentation, sensitivity, other-directedness, and social comparison more likely to report that they used more external cues, less internal cues, and have less cross-situation usability of their avatars than those who are lower on those traits?

Specifically, the following three hypotheses are specific predictions based on individual's self-reports of what they included in their on-line creations – their avatars.

H3. Individuals higher in self-presentation, sensitivity, other-directedness, and social comparison will report that their avatars have less internal representation across contexts than those who are lower on those traits.

H4: Individuals higher in self-presentation, sensitivity, other-directedness, and social comparison will report that their avatars have more external representation (normative) across contexts than those who are lower on those traits.

H5: Individuals higher in self-presentation, sensitivity, other-directedness, and social comparison will report that their avatars are less cross-situational across contexts than those who are lower on those traits.

The last hypothesis is a counterpart to H1b, it is based on the self-reported part of the optimal self-presentation dimensions, not the avatar content analysis.

H6: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will rate their avatars significantly different in physical attractiveness and formality than individuals low in those traits.

CHAPTER TWO

Method

Subjects and Design

Subjects were 232 students from an introductory telecommunication course at a large Midwestern university, who participated to fulfill a course requirement. Before the study began, students read a consent form either allowing or forbidding their responses on the assignments to be used for academic research. Ten students refused to allow their responses and avatars to be used for research purposes and were dropped from the study.

The project consisted of four sequential parts during March and April of 1999. First, students were given one week to complete a 25 minute on-line questionnaire in one sitting that measured their background information and self-monitoring dimensions. Second, one week after the first survey assignment, students were given seven days to participate in two graphical on-line chatrooms, Comic Chat and Palace, for a minimum of 30 minutes in each world. This was to familiarize and give students experience with looking and interacting in avatar-based worlds. Immediately after their participation, they were required to fill out a diary form based on their impressions of each world. Third, two days later, students were given the final assignment. They had ten days to participate in a repeated measures design, with each individual creating one avatar for each of three contexts (friends, future employer, and strangers). Lastly, students completed another 25 minute on-line survey regarding the avatars they had created. Students were debriefed the following class period and given a lecture about avatars and computer-mediated communications research, specifically on-line interactions.

Confidentiality was ensured and all identifying information was eliminated from the data set. After excluding individuals who did not participate in certain portions of the assignment (n = 51), did not complete the project in the correct sequence (n = 2) , and those who did not want to participate in academic research (n = 10), 169 participants remained in this sample.

Content Analysis

A content analysis was completed from the created avatars. There was a total of 507 avatars, which was made-up of 169 avatars created for each of the following conditions: friend, future employer and stranger contexts. The self-presentation unit of analysis was the avatar. The coding forms and manual were pretested on a group of 17 students and were refined based on their suggestions, as well as from practice sessions with the actual coders. Avatars were coded from color printouts using the web navigator programs Internet Explorer and Netscape. Training took approximately one month for two coders to become reliable. A random sample by avatar context was given to the two coders for reliability purposes which accounted for 12% of the avatar sample (N = 60). All avatars were coded within a two and a half week time frame after reliability was established.

Coding reliability was assessed in two ways. Cohen's kappa was used to assess coding reliability for categorical data and Pearson's internal consistency coefficient was used for continuous data. If items were reliable, scale analysis ensued.

Cohen's kappa is the proportion of intercoder agreement excluding agreement that occurs by chance (Becker, 1997). Kappas can range from -1.00 (smaller than chance) to +1.00 (total agreement) with a kappa equal to 0.00 indicating that coders agree at the

chance level (Cohen, 1960). Although kappa incorporates agreement by chance into the equation, it does have one limitation. Kappa cannot be computed for variables that are in perfect agreement in one cell (i.e. no chance to have marked another answer) or if the row values do not equal column values (i.e. the numerator of the equation becomes zero). For these instances, percent agreement will be reported.

Scale Analysis

Scale validation and construction was assessed by using confirmatory factor analysis (Hunter & Gerbing, 1982). This analytic technique was used to determine if items were measuring a given construct predictably. Self-monitoring items originated from Lennox and Wolfe's (1984) Revised Self-Monitoring Scale which includes the two subscales: ability to modify self-presentation and sensitivity to expressive behavior of others and their Concern for Appropriateness Scale which includes the subscales: other-directedness and attention to social comparison information. Avatar self-monitoring concepts originate from this study and were derived theoretically from Lennox and Wolfe (1984) and Snyder (1974) to measure individual's internal/true and external cue/normative representations of self in their avatars, and cross-situational variability.

All items were specified to the confirmatory factor analysis program for analysis. Factors were examined by (1) checking for face validity or item content homogeneity of the indicators (for all scales); (2) using the internal consistency theorem to determine the extent to which data from one item is similar to all other items measuring the same construct (for all scales); and (3) employing the parallelism test to determine if items measuring one construct correlate predictably and evenly across items of a different cluster. Items were removed if they did not meet these criteria. Standardized coefficient

alphas were computed for scales that were internally consistent and parallel. Factor loadings are presented for each scale.

Alpha scores are reported for original scales. Missing data were recoded to the mean for continuous variables and to the mode for dichotomous and categorical variables. Dependent measures were constructed for this study due to the newness of this area of avatar research. These measures were created as an outcome counterpart to the self-monitoring and self-presentation literatures. Appendix A has the consent questions and the baseline information questionnaire. Appendix B has the on-line instructions for chatroom participation and chatroom diary forms. Appendix C contains the avatar assignment instructions. Appendix D comprises the final on-line questionnaire based on the respondent's avatars by context and Appendix E has the avatar content coding form.

Variables and Scales

The first questionnaire measured respondents' baseline information: internet use, on-line chatroom use (both text-based and graphic-based), on-line chatroom expertise, previous avatar construction, the Revised Self-Monitoring Scale: ability to modify self-presentation and sensitivity to expressive behavior of others (Lennox & Wolfe, 1984; Snyder, 1974), the Concern for Appropriateness Scale: other-directedness and attention to social comparison information (Lennox & Wolfe, 1984), and demographic variables. Table 1 reports independent and dependent variables identified by their method collection technique.

Table 1

Variables Identified by Data Collection Technique

Method		
Background Questionnaire	Content Analysis of Avatars	Avatar Questionnaire
Independent Variables	Independent Variable	Independent Variable
Revised Self-Monitoring	Avatar Context: 3 avatars	Avatar Context: answered for
self-presentation	were coded	each context
sensitivity		
Concern for Appropriateness	Dependent Variables	Dependent Variables
other-directedness	Type of Portrayal	Internal Representation
social-comparison	form (e.g. human)	External Representation
Avatar Context	shot (e.g. face only)	Cross-situational
Friend	picture (e.g. cartoon)	Character Dimensions
Stranger	human personification	physically attractive
Employer	Avatar Demographics	formality
	gender	
Descriptive Variables	ethnicity	Control Variables
Sample Demographics	age	Order Created Avatars
Internet Use	SES	
Avatar Use	Optimal Presentation	
Computer Savvy	color (e.g. # of colors)	
	status cues	
	physical attractiveness	

Independent Variables

Table 1 lists the independent variables which consist of the four subscales that
were originally related to self-monitoring: self-presentation, sensitivity to expression,
other-directedness, social comparison and the three situational contexts: friends,
strangers, and future employer.

Ability to modify self presentation. This four item subscale measures the ability
to modify one's self-presentation, with higher scores indicating greater abilities to modify

presentation (Lennox & Wolfe, 1984). The response categories were: 5 = Very much like me; 4= Mostly; 3 = Somewhat; 2 = A little; and 1 = Not at all like me. Cronbach's coefficient alpha was .77.

Self-Presentation Scale	Factor Loadings
1. In social situations, I have the ability to alter my behavior if I feel that something else is called for.	.63
2. I have the ability to control the way I come across to people, depending on the impression I wish to give them.	.77
3. When I feel that the image I am portraying isn't working, I can readily change it to something that does.	.63
4. Once I know what the situation calls for, it's easy for me to regulate my actions accordingly.	.67

Originally, this was a seven item measure with six-point response scales. The achieved coefficient alpha was .77 (Lennox & Wolfe, 1984). The response categories for this scale and the next three were: 5 = certainly, always true; 4 = generally true; 3 = somewhat true, but with exception; 2 = somewhat false, but with exception; 1 = generally false; and 0 = certainly, always false (Lennox & Wolfe, 1984). The response categories were changed to eliminate wordiness and possible confusion.

Items dropped were:
- I have trouble changing my behavior to suit different people and different situations. (R)
- I have found that I can adjust my behavior to meet the requirements of any situation I find myself in.
- Even when it might be to my advantage, I have difficulty putting up a good front. (R)

Sensitivity to expressive behavior of others. This four item summated scale measures how perceptive individuals are to expressive behaviors of others. The higher the scale score, the more sensitive an individual is to other's expressive behaviors. The response categories were: 5 = Very much like me; 4= Mostly; 3 = Somewhat; 2 = A little; and 1 = Not at all like me. The alpha was .77.

Sensitivity Scale	Factor Loadings
1. I am often able to read people's true emotions correctly through their eyes.	.71
2. My powers of intuition are quite good when it comes to understanding others' emotions and motives.	.66
3. I can usually tell when others consider a joke to be in bad taste, even though they may laugh convincingly.	.57
4. I can usually tell when I've said something inappropriate by reading it in the listener's eyes.	.79

The original subscale was a six item measure with the same six-point response categories as for self-presentation. The achieved coefficient alpha was .70 (Lennox & Wolfe, 1984).

Dropped Items:

- In conversations, I am sensitive to even the slightest change in the facial expression of the person I'm conversing with.
- If someone is lying to me, I usually know it at once from that person's manner of expression.

Other-Directedness (Cross-situational variability). This scale measures how individuals outwardly direct themselves toward others in different situations. Lennox and Wolfe (1984) refer to this variable as cross-situational variability, but here it will be referred to as the Other-Directedness subscale (Dillard & Hunter, 1989), leaving cross-situational variability to describe behavioral measures. The higher the scale score, the more an individual reports varying their presentation across situations. The response categories were: 5 = Very much like me; 4= Mostly; 3 = Somewhat; 2 = A little; and 1 = Not at all like me. Cronbach's coefficient alpha was .80.

Other-Directedness Scale	Factor Loadings
1. I tend to show different sides of myself to different people.	.70
2. In different situations and with different people, I often act like very different persons.	.84
3. Different situations can make me behave like very different people.	.72

Lennox and Wolfe (1984) created this subscale to be a seven item, six-point ratings scale. The coefficient alpha was .82 (Lennox & Wolfe, 1984).

Dropped items:
- Although I know myself, I find that others do not know me.
- Different people tend to have different impressions about the type of person I am.
- I am not always the person I appear to be.
- I sometimes have the feeling that people don't know who I really am.

Attention to social comparison information. This subscale consists of 6 items that were summed to measure how much individuals pay attention to social comparison or normative information given by others. The higher the scale score, the more one pays attention to social comparison information. The response categories were: 5 = Very much like me; 4= Mostly; 3 = Somewhat; 2 = A little; and 1 = Not at all like me. The coefficient alpha was .80.

Social Comparison Scale	Factor Loadings
1. At parties, I usually try to behave in a manner that makes me fit in.	.65
2. I try to pay attention to the reactions of others to my behavior in order to avoid being out of place.	.65
3. It's important to me to fit in the group I'm with.	.60
4. My behavior often depends on how I feel others wish me to behave.	.62
5. If I am the least bit uncertain as to how to act in a social situation, I look to the behavior of others for cues.	.74
6. I usually keep up with clothing style changes by watching what others wear.	.54

This subscale originally was a thirteen item measure with six response categories and an alpha of .83 (Lennox & Wolfe, 1984).

Dropped items:
- It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave.
- I actively avoid wearing clothes that are not in style.
- When I am uncertain how to act in a social situation, I look to the behavior of others for cues.
- I find that I tend to pick up slang expressions from others and use them as part of my own vocabulary.
- I tend to pay attention to what others are wearing.
- The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach.
- When in a social situation, I tend not to follow the crowd, but instead behave in a manner that suits my particular mood at the time. (R)

Situational Context

Participants created one avatar to represent themselves in each of the following contexts: (1) to represent yourself in a chatroom with friends (one you will share with friends); (2) to represent yourself in a chatroom with a future employer from a large corporate firm (interactions that you would have on a day to day basis); and (3) to represent yourself in a chatroom with strangers (meeting new people). Students posted their avatar to the class web server along with a title that corresponded with the context: friends, strangers, or employer. This was to ensure that students were cognitively aware that the avatars they were submitting were their representations for the given contexts.

Dependent Variables

First, the dependent variables that originate from the follow-up questionnaire will be discussed. Three scales were constructed to measure key corollary dimensions of self-monitoring: internal dimensions (true representation of self), external cues (monitoring of

environment) and cross-situational variability. In addition, physical attractiveness and formality, two of Goffman's (1959) presentation characteristics, were assessed.

Each student filled out the same set of questions regarding each of their avatars. To eliminate order effects, the questionnaire sections were randomly presented to the students, so that one person received questions regarding their Employer Avatar first, then about the Friend Avatar, and lastly about the Stranger Avatar, and another person would get a different order: Friend, Employer, Stranger.

Confirmatory factor analyses (Hunter & Gerbing, 1982) showed that the measurement model for the scales varied as a function of context. For each dependent variable, factor loadings and alphas will be reported for each situational context where applicable.

Internal Representation of Self. This scale consisted of six items that were summed to measure how much the participant's true or internal self was reflected in the avatar. The responses were on a rating scale of 1 to 5 anchored by Not At All and A Lot. Higher scores refer to more internal representation reflected in the avatar. The coefficient alphas were: Friends = .92; Stranger = .92; Employer = .95.

Internal Representative Scale	Friends Factor Loadings	Stranger Factor Loadings	Employer Factor Loadings
1. Would others see some aspect of you in this representation?	.85	.82	.91
2. Would your friends think this represents you in some way?	.81	.84	.94
3. Would your family think this represents you in some way?	.73	.77	.92
4. In general, are there dimensions of you in this representation?	.89	.88	.90
5. How much does the design of your Friend* avatar reflect ...you?	.83	.84	.86
6. How much does the design of your Friend* avatar reflect...your true personality?	.75	.72	.68

Two items were dropped because they did not fit the measurement model. They were: How much does the design of your Friend* avatar reflect ...how you actually look? and How much does the design of your Friend* avatar reflect ...who you are in general? Asterisks note where the context changes to Stranger or Future Employer depending on the avatar in question.

External Cues Reflected. Three items were summed to create a scale that measures how much one tried to make their avatar similar to others. The responses were on a 1 to 5 rating scale, anchored with Not At All and A Lot. Higher scores indicate trying to fit in more with the environment. Cronbach's alphas were: Friends = .83; Stranger = .78; Employer = .78.

External Representative Scale	**Friends** Factor Loadings	**Stranger** Factor Loadings	**Employer** Factor Loadings
How much does the design of your Friend avatar try:			
1. ...to fit in with other avatars you've seen	.79	.76	.78
2. ...to be similar to other avatars in this type of situation	.84	.75	.70
3. ...what you think a normal avatar would look like	.72	.71	.73

Items dropped from this scale were based on the same format and read: ...to be admired by other on-line avatar users; and ...to stand out apart from the other avatars you've seen (R).

Cross-Situational Variability. Three items were summed to measure how easily one might take their avatar designed for one situation and use it in another. Responses were on a 1 to 5 rating scale with Not At All Likely and Very Likely marking the ends. Higher scores indicate greater cross-situation variability. The internal consistency coefficients for this scale were: Friends = .80; Stranger = .85; Employer = .83. The lead-in to the question set states: If you were going to interact on-line with this avatar:

Cross-Situation Scale	**Friends** Factor Loadings	**Stranger** Factor Loadings	**Employer** Factor Loadings
1. How likely would you use this avatar for an interaction in a different type of situation, not the one designed for a friend?	.81	.75	.62
2a. How likely are you to use this avatar in a chatroom with strangers?	.80	--	--
2b. How likely are you to use this avatar in a chatroom with friends?	--	.81	.87
3. How likely are you to use this avatar in a chatroom with family members?	.66	.86	.89

One item did not fit the measurement model and was dropped: How likely are you to use this avatar in a chatroom with a future employer? Note that items vary slightly among the three contexts, but each only consists of three items. Only one version of number 2 was used in each scale.

Order Effect. To determine if there was an order effect based on which avatar the students selected to create first, then second, and third, students answered the following set of questions.

1. Which avatar did you design/create/work on **first**: Friends   Employer Stranger
2. Which avatar did you design/create/work on **second**: Friends   Employer Stranger
3. Which avatar did you design/create/work on **third**: Friends   Employer Stranger

Presentation Dimensions. Participants responded to 23 semantic differential items, each with five-point response scales. The items measured a variety of characteristics (e.g. humor, sexuality, formality) that may have been incorporated in one's avatar. For purposes of this study, only items that addressed Goffman's (1959) presentation strategies were used. One item measured physical attractiveness and was anchored by the descriptors: Physically Unattractive/Physically Attractive. One item measured formality and was bound by the characteristics: Casual/Formal.

Avatar Content Elements

Each avatar was coded for type of portrayal (body form, type of shot, type of picture), demographic information (gender, age, ethnicity, SES), and Goffman (1959) presentation elements (color, status cues, and physical attractiveness). These dependent variables are the behavior measure of self-presentation. The elements were defined as:

Form: the avatar was coded for representational form. It was noted if it was a Human (a representation of a human form, face, body), an Animal (e.g. cat, dog.

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elephant), an Insect (e.g. butterfly, ant), an Inanimate Object (e.g. chair, flower, etc.), or an Alien (e.g. an alien or other species not human or animal). If the avatar did not fit any of these classifications, then the coder wrote in what it was under the "other" label. Cohen's Kappa was .97.

Human personification: coders noted if there was some sort of human trait or personification of the avatar; if the avatar was nonhuman in form. For example, personification would be Mickey Mouse, or a chair with a smily face. Kappa was .82.

Shot: the avatar was coded as being primarily a Face Shot only (shows the neck and up, a hint of the shoulder is okay), Face and Torso (shows head and main part of the torso, everything above the waist), the Whole Body (this must include the torso, arms, legs, and head), other Part of Body (another portion of the body that does not include the head), or No Body (this means it is not showing any part of a body, e.g. a chair). The calculated Kappa was .93.

Picture Type: the avatar was categorized as being either: a real photograph (e.g. looks like what you would take with a camera) or a drawn/cartoon form (e.g. sketch, cartoon like on TV). Kappa was .92.

Gender: coders noted if the avatar was primarily Male (masculine, e.g. male), Female (feminine, e.g. woman), or Neutral where there was no gender indication at all (e.g. androgynous alien). A Cohen's Kappa of .76 was obtained.

Age: coders indicated which age range the avatar fell within: Baby/child, Teens, 20s - 30s, 40s - 50s, 60s plus, and No Age if can not classify. Kappa was .80.

Ethnicity: the avatar was coded for representing one of the following: Black, White, Asian, or Latino/a. Circle None Given if you can not tell (e.g. stuffed cat). Percent agreement was 92%.

Socio-Economic Status: coders rated the avatar on a five point semantic differential with ending points of Very Low (poverty) to Very High (wealthy), or circled Can't Tell. This variable was collapsed to a dichotomy of SES present or SES absent. The Kappa was .93.

Status Cues: coders identified if there were icons or symbols that an avatar was wearing that may indicate the avatar's position or rank in relation to others (does not have to mean high prestige, it could be lower status, dangerous, pompous). Coders noted if the following four measures of status were present or absent. (1) clothes that indicate status, e.g. a purple robe for royalty or military uniform. Kappa was found to be .52. (2) eye or head decorations: sun glasses, hats, head bandanna, eye patch. Kappa was .83. (3) jewelry: earrings, necklaces, watches, nose ring. Kappa was 1.00. (4) other accessories: other props that give status, e.g., cane. There was 97% agreement. Only section 2 had enough variance to be used in the analyses.

Colors: the number of different colors present in the avatar were counted. Black and white count as 2 colors. Coders wrote all colors out to help with reliability. The correlation coefficient was .79.

Physical Attractiveness: was measured on a four point rating scale from Very Unattractive to Very Attractive If the avatar was extremely attractive or more attractive than average then circle Very Attractive. If about average in attractiveness then circle Attractive. Unattractive, on average but not ugly, code as Unattractive. If very

unattractive, more unattractive than normal, then circle Not At All Attractive. Percent

agreement was 75%. This measure was dropped due to lack of variance.

Difference Scores

To address hypotheses 1 through 1c and 6, difference scores were created for the

dependent content variables across the contexts. These scores allow one to assess if

individuals presented themselves more or less differently across the contexts. Those

higher in self-presentation, sensitivity to expression, other-directedness, and social

comparison information were predicted to have higher difference scores. Larger

difference scores indicate that individuals presented themselves more differently across

the contexts.

To assess degrees of difference for nominal variables, an absolute difference score

was created between each pair of contexts. The difference score equation was:

difference score = | friends - employer | + | friends - strangers | + | employer - strangers |.

All nominal variables are coded so that a difference score of 0 indicates that the same

form was used in all contexts, a score of 1 refers to one avatar being different from the

other two contexts, and a score of 2 meaning all avatars are different. The range for

difference scores was 0 to 2.

There was only one content analysis variable, number of colors, that was

continuous in nature. In this instance the difference score was constructed as before. The

absolute values of subtracted paired contexts were summed to create a color difference

score.

Summated Scores Across Contexts

Hypotheses 2 through 5 require an overall measure of magnitude across contexts. For continuous variables, such as color, internal avatar representation, external cues representation, cross-situational variability, formality and physical attractiveness (self-report), individual scores were summed across the contexts. Therefore, if a person scored a seven on the internal representation scale for the friend context, a 12 for the employer context, and an eight for the stranger condition, then their composite score would be 27.

Specific to Hypothesis 2a, two variables need further explication. Status cues were coded as either being present or absent. Summing across contexts yields a range of zero (absent across all contexts) to a three (present for all 3 contexts).

The next variable is a composite of four items each summed across contexts. The demographic variable represents a measure of overall demographic information that has been presented in an avatar. It subsumes gender, age, ethnicity, and SES. Gender was coded so that if male or female was marked it represented demographic information and neutral was counted as no gender information. Any age group that was coded represented demographic information. All ethnic groups were counted as one and none given was not counted. Socio-economic status was either present or absent. So a total score of four could be accrued for each context. These scores were summed across the contexts to yield a range of 0 to 12.

CHAPTER THREE

Results

Sample Descriptives

Of the 169 undergraduate participants, 63% were male. Students on average were 20 years of age and were primarily Caucasian 84%, with 10% African-American, 4% Asian, and 2% Latino. These students had fundamental computer skills with everyone reporting that they had used a computer. Eight percent rated their computer skills at the level of beginner, 54% said they were intermediate, 31% indicated advanced skills, and 8% said they were experts. Only six (3%) people reported having created an avatar, with the same group reporting that they had participated in a virtual world with their avatar. Seventeen percent have visited text-based chatrooms more than once during an average week and 7% reported having visited graphical on-line chatrooms more than once during an average week. All students had some web experience due to a prior assignment which required the creation of a homepage.

Context Induction

All participants created avatars for each of three contexts: friends, strangers, and future employers. In addition they answered questions regarding their avatar for each of the contexts. Students had to post each avatar with a label noting the context it was created for: friends, strangers, future employer. This was a check to make sure they were cognizant of the given contexts. In addition, identical scales were used to tap self-monitoring dimensions for each context. Confirmatory factor analyses yielded a

measurement model that indicated that participants varied their responses as a function of context. This provides support that the context induction was successful.

Avatar Content Elements

The following section provides descriptive information about the avatars broken out by context (see Table 2). In general, the trend across contexts for this sample of created avatars was: they were primarily in human form (51%), showed the head at a minimum (77%), were depicted in cartoon or drawing format (72%), and did not include status cues (75%). In addition, 48% of non human avatars were given human personification.

Table 2

Descriptive Statistics for Type of Portrayal Content Elements for Avatars by Context

Variable	Context		
	Friend	Stranger	Employer
Avatar Form:			
Human	49%	48%	55%
Animal	20	16	10
Insect	1	2	0
Inanimate Object	20	25	31
Alien	11	9	4
Shot:			
Face Shot	25	25	21
Face and Torso	29	23	29
Whole Body	29	30	19
Body Part	0	2	2
No Body	17	21	30

Table 2 (cont'd).

Variable	Context		
	Friend	Stranger	Employer
Picture Type:			
Photograph/Real	25	24	35
Cartoon/Drawing	75	76	65
Human Personification			
Present	58	48	37
Absent	43	52	63

Table 3 reports the avatar demographic information. Over half the time, participants indicated "no age" with the age range "20s to 30s" being the most represented age (27%). With respect to portraying ethnic information, "no ethnicity" (57%) was represented most, followed by Caucasian (36%) being portrayed. Lastly, gender was divided between neutral portrayal (46%) and masculine (41%), with feminine representation 13% of the time.

Table 3

Descriptive Statistics for the Avatar Demographic Information by Context

Variable	Context		
	Friend	Stranger	Employer
Age:			
Baby/Child	8%	7%	1%
Teens	4	7	4
20s - 30s	27	23	30
40s - 50s	9	7	11
60s plus	0	1	2
None Given	53	56	53
Ethnicity:			
Black	7%	2%	5%
White	36	36	37
Asian	1	2	1
Latino	0	1	1
Other	1	1	0
None Given	56	59	56
Gender:			
Masculine	43%	37%	43%
Neutral	46	48	43
Feminine	11	15	14
SES:			
Present	34%	37%	41%
Absent	66	63	59

On average, about 5 colors were used in creating each avatar (see Table 4).

Participants also rated their avatars average to a little above average in physical

appearance. For the friends and stranger contexts, individuals reported less than average

in incorporating formality into their avatar, with slightly higher reports of formality in the

employer context. Lastly, status cues were generally absent (75%) from presentation.

Table 4

Descriptive Statistics for Key Presentation Elements

| | Context | | | | | | | | |
| | Friend | | | Stranger | | | Employer | | |
Variable	range	M	SD	range	M	SD	range	M	SD
Color	1 - 12	4.9	1.6	2 - 10	5.0	1.8	1 - 10	4.6	1.6
Physical Attractiveness	1 - 5	3.3	1.1	1 - 5	3.5	1.0	1 - 5	3.6	1.0
Formality	1 - 5	2.0	1.0	1 - 5	2.3	1.0	1 - 5	3.2	1.2

Status Cues:	Friend	Stranger	Employer
Present	28%	29%	18%
Absent	72	71	82

Independent Variable Descriptives

All four subscales are described in two forms: as a continuous scale and as a

categorized variable of high and low. To assess the hypotheses in accordance with past

literature (Snyder, 1974), a median split was done. Those above the median were

classified as high on the trait and those below the median were coded as low on the trait.

For those who fell on the median, the mean and frequencies also were considered. If the

mean was higher than the median, then those on the median were coded as low, and the

reverse was true (coded as high) if the mean was lower than the median. Both the

continuous and categorized variables are used in the analyses.

In addition, a single sample t-test indicates a significant difference (two-tailed, no direction was predicted) between the observed and theoretical values. To identify the overall perspective of this sample, single sample t-tests are reported for each of the subscales.

The self-presentation scale has a range from 6 to 20, with a midpoint of 13. The mean was 14.6 and the standard deviation was 2.9. Individuals reported scores higher than the midpoint ($t(168) = 7.17$, $p < .005$). This scale was normally distributed ($Mdn = 15.0$, mode = 14.0) with a slight skew of -.19. Low self-presenters were defined as those below the median (n = 83) and high self-presenters (n = 86) were those on and above the median.

Sensitivity to expression ranged from 9 to 20, with a midpoint of 14.5. Central tendency scores and standard deviation were: $M = 15.4$, $SD = 2.8$, $Mdn = 15$, mode = 15. Participants were higher on the scale than the midpoint ($t(168) = 4.18$, $p < .005$). The data were normally distributed, with a minor skew of -.17. Those low in sensitivity to expression (n = 88) were on and below the median. Individuals coded high in sensitivity (n = 81) were above the median.

Other-directedness has a range of 3 to 15, with a midpoint of 9. The central tendency scores and standard deviation were: $M = 8.3$, $SD = 3.0$, $Mdn = 8$, mode = 8. Individuals scored lower than the midpoint ($t(168) = -3.03$, $p < .005$). There was a small positive skew of .38. Individuals were labeled as low in other-directedness (n = 100) if their scores fell on or below the median, and were classified as high (n = 69) if above the median.

The social comparison scale had a large range of 6 to 26, with a midpoint of 16. The summary statistics for this scale were: $\underline{M}$ = 14.2, $\underline{SD}$ = 4.5, $\underline{Mdn}$ = 14, mode = 15. Individuals scored lower on this scale than the midpoint ($\underline{t}$(168) = -5.20, $\underline{p}$ < .005). The skew was .37. Individuals who were on or below the median were coded as low in social comparison (n = 88) and those who were above the median were considered high (n = 81) on this dimension.

Corrected Correlations

Reliability coefficients indicate how consistent a scale or measure assesses other variables. Standardized coefficient alphas for internal consistency were produced from confirmatory factor analysis and are reported with each scale in Chapter 2. When reliability coefficients are not precise (equal to 1.00), correlation coefficients can be corrected due to error of measurement. Because error of measurement attenuates correlations, it is valuable to determine if relationships may actually be stronger than first shown. The corrected correlation coefficients will be presented for bivariate relationships that are close to being significant or are significant along with the uncorrected coefficients. Single item measures cannot be corrected for measurement error because internal consistency cannot be assessed. An r prime (r') denotes a corrected coefficient. See Appendix F, Endnote 1 for the corrected correlation coefficient equation.

Inter Scale Correlations

To assess if the subscales should have been combined to represent two overarching scales: revised self-monitoring and concern for appropriateness, correlations were evaluated. First, scales were correlated to see if they were large enough to suggest that they were measuring the same construct (seee Table 5). The upper triangle contains

the corrected correlation coefficients and the lower triangle reports the uncorrected coefficients. Subscales were not combined because they did not consistently respond to other variables similarly and correlations between them although high, did not suggest multicollinearlity. Therefore, the four subscales are used. See Appendix G for a correlation matrix of all scales used in the analyses.

Table 5

Independent Subscale Correlation Matrix

Scale	Self-Present	Sensitivity	Other-Directed	Social Comparison
Self-Present	1.00	.79**	.15*	.26**
Sensitivity	.61**	1.00	.04	.14
Other-Directed	.12	.03	1.00	.63**
Soc-Comparison	.20**	.11	.50**	1.00

$* \underline{p} < .05; ** \underline{p} < .01$

Hypotheses Testing

Each hypothesis is restated, the statistical analyses performed and results reported. Variances were equal between groups unless otherwise stated.

Hypothesis 1a: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create more avatar portrayal information (body forms, type of shots, and picture type) among the context conditions than individuals who are low in those traits.

Across contexts, the frequency of difference scores for body type were: 28% had the same form across all contexts, 54% had one avatar different, and 17% had all different. The chi-square analysis for self-presentation indicates that there was no relationship between those who were high or low on self-presentation with body type

presentation (X^2 (2, $\underline{N}$ = 169) = 1.5, $\underline{p}$ > .05). There was no relationship between sensitivity of expression with more body forms (X^2 (2, $\underline{N}$ = 169) = .82, $\underline{p}$ > .05). No relationship was found between other-directedness and number of different types of body form (X^2 (2, $\underline{N}$ = 169) = 2.26, $\underline{p}$ > .05). Lastly, the chi-square also was not significant for the relationship between social comparison and different body types (X^2 (2, $\underline{N}$ = 169) = 1.12, $\underline{p}$ > .05). Furthermore, the correlations between the continuous scales with the range of difference scores indicating no relationship, with no correlation coefficient being higher than .06.

The frequency distribution for type of shot difference scores were: 17% had the same type of shot (e.g. face shot) across all contexts, 56% had one different, and 27% had all different. The results of chi-square analyses for self-presentation (X^2 (2, $\underline{N}$ = 169) = .85 , $\underline{p}$ > .05); sensitivity to expression (X^2 (2, $\underline{N}$ = 169) = 1.09, $\underline{p}$ > .05); other-directedness (X^2 (2, $\underline{N}$ = 169) = 1.73, $\underline{p}$ > .05); and social comparison (X^2 (2, $\underline{N}$ = 169) = 3.47, $\underline{p}$ > .05) indicate that there were no associations between these traits and with presenting different types of shot across contexts. Correlational analyses corroborate these findings, with all coefficients less than .09.

There were two types of picture (real photograph or drawing/cartoon) that could be presented. Forty-seven percent had the same type of picture across contexts, therefore, 53% had different types of picture. There was no relationship between self-presentation (X^2 (1, $\underline{N}$ = 169) = .16, $\underline{p}$ > .05); sensitivity to expression (X^2 (1, $\underline{N}$ = 169) = .01, $\underline{p}$ > .05); other-directedness (X^2 (1, $\underline{N}$ = 169) = .70, $\underline{p}$ > .05); and social comparison (X^2 (1, $\underline{N}$ = 169) = .17, $\underline{p}$ > .05) and placing different picture types across contexts. No correlation coefficient exceeded .09.

These findings fail to reject the null. Hypothesis 1a was not supported.

Hypothesis 1b: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create avatars that are significantly different in (optimal self-presentation dimensions) colorfulness and status cues among the context conditions than individuals who are low in those traits.

The summary statistics for the difference scores for number of colors across contexts were: range = 0 - 16, M = 5.1, SD = 3.0, and mode = 4. Seventy-eight percent of the sample varied by 6 or less colors. People high on self-presentation (M = 5.09, SD = 3.14) did not significantly use a different numbers of colors across contexts than did low self-presenters (M = 5.04, SD = 2.80), $t(167)$ = -.12, p > .05. The high sensitivity to expression group (M = 5.19, SD = 3.06) did not use number of colors differently across contexts any more than those who were low on this trait (M = 4.96, SD = 2.89), $t(167)$ = -.50, p > .05. Individuals high on other-directedness (M = 5.13, SD = 3.13) did not use number of colors differently across contexts than did those who were low on other-directedness (M = 5.02, SD = 2.86), $t(167)$ = -.24, p > .05. Lastly, there was no difference between those high on social comparison (M = 5.06, SD = 2.97) and those low on this trait (M = 5.07 , SD = 2.99) and how much they varied on number of colors presented across contexts, $t(167)$ = .01, p > .05. There were no significant correlations between the continuous scales and the difference color variable (r < .04).

Status cues were the same in 48% of the cases across contexts and 52% used them differently. Chi-square results indicate that there was no relationship between: self-presentation (X^2 (1, N = 169) = .90, p > .05); sensitivity to expression (X^2 (1, N = 169) = .26, p > .05); other-directedness (X^2 (1, N = 169) = 2.13, p > .05); and social comparison (X^2 (1, N = 169) = 1.80, p > .05) with presenting status cues differently across contexts.

Results do not support H1b, therefore, failure to reject the null is concluded.

Hypothesis 1c: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create avatars with significantly different demographic information among the context conditions than individuals who are low in those traits.

The four demographic variables tested were: gender, ethnicity, age, and SES. Note that a variable could receive a different score if an individual gave an age, ethnicity, or gender to one avatar and then presented a form that had no age, no ethnicity, or neutral gender. For each, the following were reported: difference score frequencies, chi-square analyses, and correlation coefficients that use the continuous form of each of the independent subscales (except for SES which is dichotomous). Note that the dependent variable is restricted in range.

Gender was the same across contexts for 38% of the sample, one different for 58%, and all different for 4%. Those high on self-presentation (X^2 (1, $\underline{N}$ = 169) = 1.25, $\underline{p}$ > .05); sensitivity (X^2 (1, $\underline{N}$ = 169) = 1.10, $\underline{p}$ > .05); other-directedness (X^2 (1, $\underline{N}$ = 169) = 1.98, $\underline{p}$ > .05); and social comparison (X^2 (1, $\underline{N}$ = 169) = 4.19, $\underline{p}$ > .05) did not exhibit gender differently than those who were low on these traits. No correlation coefficient was greater than .07 for any of the bivariate relationships.

Individuals created avatars with the same ethnicity (36%) across contexts, one ethnicity different (59%), and all different ethnic representations (5%). No significant relationships emerged from analyses. People high on self-presentation (X^2 (2, $\underline{N}$ = 169) = .36, $\underline{p}$ > .05); sensitivity (X^2 (2, $\underline{N}$ = 169) = 4.9, $\underline{p}$ > .05); other-directedness (X^2 (2, $\underline{N}$ = 169) = .10, $\underline{p}$ > .05); and social comparison (X^2 (2, $\underline{N}$ = 169) = .25, $\underline{p}$ > .05) did not

present ethnicity differently across contexts than did those who were low on the subscales.

Across contexts, age was the same 31%, was different for one context 49% and were all different for 21% of the sample. There were no significant relationships between the trait subscales and presenting gender differently across contexts. Chi-square analyses indicate that individuals high on self-presentation (X^2 (2, $\underline{N}$ = 169) = .90, $\underline{p}$ > .05); sensitivity (X^2 (2, $\underline{N}$ = 169) = .26, $\underline{p}$ > .05); other-directedness (X^2 (2, $\underline{N}$ = 169) = 2.13, $\underline{p}$ > .05); and social comparison (X^2 (2, $\underline{N}$ = 169) = 1.80, $\underline{p}$ > .05) did not present age differently than those who were low on those dimensions. Correlational analyses yield similar results; no coefficient was greater than .06.

Socio-economic status (SES) was presented (or not presented) in the same way for 38% of the sample and 62% used SES differently across contexts. As with the previous demographic variables, no significant relationships emerged with those higher on self-presentation (X^2 (1, $\underline{N}$ = 169) = 1.98, $\underline{p}$ > .05); sensitivity (X^2 (1, $\underline{N}$ = 169) = .28, $\underline{p}$ > .05); other-directedness (X^2 (1, $\underline{N}$ = 169) = .08, $\underline{p}$ > .05); and social comparison (X^2 (1, $\underline{N}$ = 169) = .05, $\underline{p}$ > .05) than those low on those traits and presenting SES differently across contexts.

The findings were not consistent with Hypothesis 1c, therefore, fail to reject the null is reported.

Hypothesis 1: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will create significantly different avatars among the context conditions than those who are low in those traits.

Based on the findings reported above for hypotheses 1a through 1c, there is no evidence that individuals high in the four subscales: self-presentation, sensitivity, other-

directedness, and social comparison created significantly different avatars among the context conditions than those who were low on the scales. Therefore, a fail to reject the null is consistent with the data.

Hypothesis 2a: Individuals who are more sensitive to expression are more likely to use more color, have more status cues, and have more demographic information than those who are low on this dimension.

Combining the number of colors presented across contexts yields a range of 7 to 26 ($\underline{M}$ = 14.48, $\underline{SD}$ = 3.19, $\underline{Mdn}$ = 14, mode = 14). The high sensitivity to expression group ($\underline{M}$ = 14.54, $\underline{SD}$ = 3.33) did not use more colors across contexts than those who were low on this trait ($\underline{M}$ = 14.42, $\underline{SD}$ = 3.07), $\underline{t}$(167) = -.25, $\underline{p}$ >.05. Further, there was no significant correlation between the sensitivity to expression with total colors (r = .05).

Across contexts, status cues ranged from 0 to 3, with 43% of the sample placing no status cues in any of their avatars ($\underline{M}$ = .75, $\underline{SD}$ = .80, $\underline{Mdn}$ = 1, mode = 0). Individuals high on sensitivity to expression ($\underline{M}$ = .69, $\underline{SD}$ = .72) did not use more status cues than those who were low on this trait ($\underline{M}$ = .80, $\underline{SD}$ = .87), $\underline{t}$(167) = .84, $\underline{p}$ >.05. The correlation was -.06, $\underline{p}$ > .05.

The demographic index consisting of gender, age, ethnicity, and SES, yields the following summary statistics: range = 1 - 11, $\underline{M}$ = 5.68, $\underline{SD}$ = 3.25, $\underline{Mdn}$ = 6, mode = 1. Individuals who were higher on sensitivity to expression ($\underline{M}$ = 5.72, $\underline{SD}$ = 3.23) were no more likely to encode more demographic information in their avatars across contexts than were those low on the trait ($\underline{M}$ = 5.65, $\underline{SD}$ = 3.28), $\underline{t}$(167) = -.14, $\underline{p}$ > .05. The correlation coefficient was -.01, $\underline{p}$ > .05.

The data do not support the hypothesis, therefore fail to reject the null is reported.

Hypothesis 2b: Individuals who are more sensitive to expression are more likely to report more physical attractiveness and formality than those who are low on this dimension.

Physical attractiveness summed across contexts yields a range of 4 to 15 ($\underline{M}$ = 10.43, $\underline{SD}$ = 2.06, $\underline{Mdn}$ = 11, mode = 11). Those high on sensitivity to expressive behaviors ($\underline{M}$ = 10.72, $\underline{SD}$ = 1.94) reported significantly higher physical attractiveness scores than their low counterparts ($\underline{M}$ = 10.17, $\underline{SD}$ = 2.15), $\underline{t}$(167) = -1.72, $\underline{p}$ < .05. The correlation coefficient was .15, $\underline{p}$ > .05.

Formality was summed across contexts and has a range of 3 to 13, with a $\underline{M}$ = 7.53, $\underline{SD}$ = 1.95, $\underline{Mdn}$ = 7.32, mode = 9. Individuals who were higher on sensitivity to expressive behaviors ($\underline{M}$ = 7.66, $\underline{SD}$ = 2.06) reported no more formality than those who were lower on this trait ($\underline{M}$ = 7.41, $\underline{SD}$ = 1.83), $\underline{t}$(167) = -.82, $\underline{p}$ > .05. The correlation coefficient was .03, $\underline{p}$ > .05

With respect to sensitivity to expression, this evidence suggests that individuals higher on this dimension do not encode more nonverbal presentation information into their on-line representations. Given one finding supportive of the hypothesis, results should be interpreted cautiously with probability that the single significant finding may be due to chance. Therefore, failure to reject the null is concluded for hypotheses 2a and 2b.

Hypothesis 3. Individuals higher in self-presentation, sensitivity, other-directedness, and social comparison will report that their avatars have less internal representation across contexts than those who are lower on those traits.

Across contexts, the summed internal representation scale had the following summary statistics: range = 18 - 90, $\underline{M}$ = 59.88, $\underline{SD}$ = 13.30, $\underline{Mdn}$ = 61, mode = 62. Fifty percent of the sample had a total score of 61 or less, 76% reported less than or equal to

70, and 90% of the sample had a score equal to or less than 75. A single sample t-test revealed that participants reported significantly higher on the scale than the theoretic midpoint (midpoint = 54, $t(168)$ = 5.75, $p < .005$). Individuals who were high on self-presentation (M = 61.9, SD = 13.14) reported more internal representation than those who were low (M = 57.78, SD = 13.23), $t(167)$ = -2.03, $p < .05$. The correlation coefficient for self-presentation with physical attractiveness was .14, $p > .05$; r' = .26, $p < .01$. Those high on sensitivity to expressive behaviors (M = 61.67, SD = 13.40) reported significantly more internal representation in their avatars than their low counterparts (M = 58.23, SD = 13.08), $t(167)$ = -1.68, $p < .05$. The correlation coefficient was .12, $p > .05$; r' = .14, $p > .05$. Individuals high on other-directedness (M = 61.45, SD = 12.59) did not report significantly more internal representation across contexts than did those low on other-directedness (M = 58.79, SD = 13.73), $t(167)$ = -1.28, $p > .05$. There was no difference between those high on social comparison (M = 59.39, SD = 12.40) and those low on this trait (M = 60.33, SD = 14.14) and reporting more internal representation, $t(167)$ = .45, $p > .05$. Correlation coefficients were small for other-directedness (r = .10) and social comparison (r = .07). Although self-presentation and sensitivity to expression were significantly related to one's internal representation, it was opposite to the predicted direction. Those higher on these traits reported including more internal representation into their avatars than those who were low. Therefore, this hypothesis was not supported by self-presentation and sensitivity to expressive behaviors (both subscales of the Revised Self-Monitoring Scale) and fail to reject the null for other-directedness and social comparison.

Hypothesis 4: Individuals higher in self-presentation, sensitivity, other-directedness, and social comparison will report that their avatars have more external representation (normative) across contexts than those who are lower on those traits.

The summed external representation scale across contexts had the following summary statistics: range = 9 - 38, $\underline{M}$ = 22.62, $\underline{SD}$ = 6.75, $\underline{Mdn}$ = 23, mode = 24. Fifty percent of the sample had a total score of 23 or less and 91% of the sample had a score equal to or less than 31. Participants reported lower on the scale than the theoretic midpoint (midpoint = 27, $\underline{t}(168)$ = -8.44, $\underline{p}$ < .005). Individuals who were high on self-presentation ($\underline{M}$ = 22.46, $\underline{SD}$ = 6.95) did not claim more external representation than those who were low ($\underline{M}$ = 22.79, $\underline{SD}$ = 6.58), $\underline{t}(167)$ = .32, $\underline{p}$ > .05. Those high on sensitivity to expressive behaviors ($\underline{M}$ = 22.50, $\underline{SD}$ = 7.41) reported no more external representation in their avatars than their low counterparts ($\underline{M}$ = 22.73, $\underline{SD}$ = 6.13), $\underline{t}(167)$ = .22, $\underline{p}$ > .05. Note that the standard deviations are not equal (6.13 ≠ 7.41) and findings should be considered carefully. Individuals high on other-directedness ($\underline{M}$ = 23.19, $\underline{SD}$ = 6.97) accounted for no more external representation across contexts than did those low on other-directedness ($\underline{M}$ = 22.23, $\underline{SD}$ = 6.60), $\underline{t}(167)$ = -.90, $\underline{p}$ > .05. Participants high on social comparison ($\underline{M}$ = 23.53, $\underline{SD}$ = 6.32) reported significantly more external representation than those low on this trait ($\underline{M}$ = 21.79, $\underline{SD}$ = 7.06), $\underline{t}(167)$ = -1.68, $\underline{p}$ < .05. Correlation coefficients were small for self-presentation (r = -.06), sensitivity (r = -.07), other-directedness (r = .01) and was significant for social comparison (r = .18, $\underline{p}$ <.05, r' = .23, $\underline{p}$ <.01).

Scales related to the revised self-monitoring scale were in the opposite predicted direction and were not significant. Other-directedness and social comparison were in the

predicted direction, with social comparison being a significant predictor of external representation, therefore, this is partial support for the hypothesis. However, this one significant finding among the many statistical tests may be due to chance, thus this study reports failure to reject the null.

Hypothesis 5: Individuals higher in self-presentation, sensitivity, other-directedness, and social comparison will report that their avatars are less cross-situational across contexts than those who are lower on those traits.

Across contexts, the summed cross-situation variability scale had the following summary statistics: range = 9 - 45, $\underline{M}$ = 30.14, $\underline{SD}$ = 7.67, $\underline{Mdn}$ = 31, mode = 34. Fifty-three percent of the sample scored 31 or less and 91% of the sample had a score equal to or less than 39. Participants reported significantly higher on the scale than the theoretic midpoint (midpoint = 27, $\underline{t}(168)$ = 5.72, $\underline{p}$ < .005). Individuals who were high on self-presentation ($\underline{M}$ = 30.26, $\underline{SD}$ = 8.06) reported no more cross-situation variability than those who were low ($\underline{M}$ = 30.03, $\underline{SD}$ = 7.28), $\underline{t}(167)$ = -.19, $\underline{p}$ > .05. Those high on sensitivity to expressive behaviors ($\underline{M}$ = 31.39, $\underline{SD}$ = 7.72) reported significantly more cross-situation variability in their avatars than their low counterparts ($\underline{M}$ = 28.99, $\underline{SD}$ = 7.48), $\underline{t}(167)$ = -2.04, $\underline{p}$ < .05. However, the correlation coefficient was .09, $\underline{p}$ > .05. Individuals high on other-directedness ($\underline{M}$ = 30.30, $\underline{SD}$ = 7.88) did not report significantly more cross-situation variability across contexts than did those low on other-directedness ($\underline{M}$ = 30.04, $\underline{SD}$ = 7.55), $\underline{t}(167)$ = -.22, $\underline{p}$ > .05. Those high on social comparison ($\underline{M}$ = 31.04, $\underline{SD}$ = 8.05) did not claim significantly more than those low on this trait ($\underline{M}$ = 29.32, $\underline{SD}$ = 7.25), $\underline{t}(167)$ = -1.46, $\underline{p}$. > 05. Correlation coefficients were: self-presentation (r = .02), other-directedness (r = .01) and social comparison ($\underline{r}$ = .14, p > .05; r' = .17, $\underline{p}$ < .05).

Sensitivity to expressive behavior was a significant predictor of reporting cross-

situational variability, however it was not a consistent finding across analysis techniques.

All other subscales did not provide support for Hypothesis 5, the null is not rejected.

Hypothesis 6: Individuals who are high in self-presentation, sensitivity, other-directedness, and social comparison will rate their avatars significantly different in physical attractiveness and formality than individuals low in those traits.

The summary statistics for the difference scores for physical attractiveness across

contexts were: range = 0 - 8, M = 2.96, SD = 1.85, and mode = 4. Ninety-one percent of

the sample varied their physical attractiveness by no more than 4 rating points. People

high on self-presentation (M = 3.09, SD = 1.86) did not significantly use different levels

of physical attractiveness across contexts than did low self-presenters (M = 2.82, SD =

1.85), $t(167)$ = -.96, p > .05 The high sensitivity to expression group (M = 3.24, SD =

1.91) reported more difference across contexts on physical attractiveness than those who

were low on this trait (M = 2.71, SD = 1.77), $t(167)$ = -1.97, p < .05. The correlation

coefficient was .14, p > .05. Individuals high on other-directedness (M = 3.13, SD =

1.83) did not use physical attractiveness differently across contexts than did those low on

other-directedness (M = 2.84, SD = 1.87), $t(167)$ = -1.00, p > .05. There was no

difference between those high on social comparison (M = 2.96, SD = 1.87) and those low

on this trait (M = 2.96, SD = 1.84) and how much they varied physical attractiveness

across contexts, $t(167)$ = -.03, p >.05. No correlational relationship was found between

the continuous scales: self-presentation, other-directedness, and social comparison with

the physical attractiveness variable across contexts (r < .08).

The summary statistics for the difference scores for formality across contexts were: range = 0 - 8, $\underline{M}$ = 3.66, $\underline{SD}$ = 2.31, and mode = 4. Seventy-two percent of the sample varied by 4 or less difference integers. The high self-presentation group ($\underline{M}$ = 7.64, $\underline{SD}$ = 2.04) did not use formality differently across contexts than did the low self-presenters ($\underline{M}$ = 7.41, $\underline{SD}$ = 1.86), $\underline{t}$(167) = -.77, $\underline{p}$ >.05. Those high on sensitivity to expression ($\underline{M}$ = 7.66, $\underline{SD}$ = 2.06) also did not use formality differently across contexts any more than those who were low on this trait ($\underline{M}$ = 7.41, $\underline{SD}$ = 1.84), $\underline{t}$(167) = -.82, $\underline{p}$ > .05. Individuals high on other-directedness ($\underline{M}$ = 7.32, $\underline{SD}$ = 2.02) did not use formality differently across contexts than did those low on other-directedness ($\underline{M}$ = 7.67, $\underline{SD}$ = 1.89), $\underline{t}$(167) = 1.13, $\underline{p}$ >.05. There was no difference between those high on social comparison ($\underline{M}$ = 7.65, $\underline{SD}$ = 1.91) and those low on this trait ($\underline{M}$ = 7.41, $\underline{SD}$ = 1.99) and how much they varied formality across contexts, $\underline{t}$(167) = -.79, $\underline{p}$ > .05. There was no correlational relationship between the continuous scales and the difference formality variable. All correlations were less than .05, $\underline{p}$ > .05.

The data are inconsistent with hypothesis 6, except for those higher in sensitivity to expression did present physical attractiveness differently across contexts moreso than did those who were low on this trait. This significant finding is within chance levels, therefore, fail to reject the null is concluded.

<u>Control Variables</u>

Analyses were completed to determine if computer skill or gender of the participants were influencing findings.

<u>Computer Skills</u>. To determine if there were any significant relationships due to computer skills; two variables were examined with the independent and dependent

variables: computer expertise (e.g. expert or novice) and internet use (hours per day). These two single-item measures are related, but are not redundant measures ($r = .34$, $p < .05$), and correlated differently with certain variables. There were no significant relationships between computer expertise or use of the internet with self-presentation, sensitivity to expression, other-directedness, or social comparison. With respect to dependent variables, individuals who reported more internet use also used more overall demographics in their avatars ($r = .16$, $p < .05$), external cues across contexts ($r = .21$, $p < .01$), and more status cues across contexts ($r = .17$, $p < .05$). Individuals who reported higher levels of expertise, also provided different status cues across contexts ($r = .18$, $p < .05$) and provided less overall color across contexts ($r = -.18$, $p < .05$). These results are within chance levels.

Male Sample. The original sample consisted of males representing 63% of the total. To rule out that gender might be masking results, a single group was examined. Distributions were similar among the male sample ($n = 107$) and the total sample ($N = 169$). Summary statistics for the main independent scales were the same. None of the median splits needed to be changed for the male sample. Analyses parallel to the hypotheses were completed with this uni-gender sample. Three significant findings emerged. Once again, these could have emerged by chance alone.

Those high on other-directedness ($M = 5.57$, $SD = 3.02$) placed fewer total demographics across contexts than did those who were low on this trait ($M = 6.69$, $SD = 3.18$), $t(105) = 1.85$, $p < .05$. In addition, the high other-directedness group ($M = 10.91$, $SD = 1.93$) reported more overall physical attractiveness in their avatars across contexts than the low group ($M = 9.75$, $SD = 2.24$), $t(105) = -2.81$, $p < .05$. Those high on self-

presentation ($\underline{M}$ = 10.62, $\underline{SD}$ = 2.05) also reported more physical attractiveness across

contexts than those low on self-presentation ($\underline{M}$ = 9.89, $\underline{SD}$ = 2.26), $\underline{t}$(105) = -1.76, $\underline{p}$ <

.05.

CHAPTER FOUR

Summary and Discussion

This study examined the impact of self-presentation, sensitivity to expressive behaviors, other-directedness, and social comparison on individuals' created self-presentations for interaction in virtual environments. Participants constructed three avatars to represent themselves in the following contexts: friends, strangers, and future employer. This study predicted that individuals would present themselves differently (encode nonverbal information) depending on their self-monitoring style, with presentation being a function of the contexts. In other words, the situational context would engage a presentation function that would in turn be dependent, in part, on one's level of self-presentation, sensitivity to expressive behaviors, other-directedness, and social comparison. Specifically, those high on these traits would present avatars that were significantly different in types of portrayal, demographics, and presentation characteristics across situations than those who were low in these traits. The results were inconsistent with this prediction, hypothesis 1, and the null was not rejected.

Hypothesis 6 was the counterpart to the presentation content elements proposed in hypothesis 1b. Here, differences in self-reported physical attractiveness and formality were assessed across contexts by each subscale. One key finding emerged; those higher in sensitivity reported using physical attractiveness differently across contexts. This one significant finding among the 40 tests for hypotheses 1 and 6 could be due to chance, therefore, this hypothesis was not supported.

Because avatars are physical representation icons that consist of nonverbal information, such as demographics and color; this type of appearance data can be purposefully encoded into people's constructed presentations. Hypotheses 2a and 2b predicted that individuals who were more sensitive to expressive behaviors would encode more nonverbal information. The means were in the predicted direction of higher levels of sensitivity corresponding to more nonverbal cues, however, most of the results were not significant. Those higher in sensitivity did report significantly higher physical attractiveness scores for their avatars across situations than did those who were low. This corroborates the finding in Hypothesis 6, with sensitivity and higher physical attractiveness among contexts (i.e. difference scores). As mentioned previously, this finding could be due to chance. Nevertheless, there is a large body of research (see Argyle, 1988) that indicates that physical attractiveness is very important for obtaining goals, as well as for making judgments. Perhaps this presentation feature was easier for individuals to apply to a new presentation area. Individuals have years of experience interpreting physical attractiveness, as well as packaging one's own body for optimal public appearances. This may have been particularly salient and natural for those who are sensitive to expressive behaviors to focus on creating an attractive avatar. In addition, attractiveness may carry more intrinsic rewards or have more drawbacks if not conveyed, than how colorful or which demographics one chose. Therefore, this might be a dimension that individuals thought necessary to convey and important in reflecting who they are.

This study also assessed self-monitoring dimensions that individuals incorporated into their avatars: internal representation, external cues, and cross-situational variability.

It was expected that these representation variables would vary depending on one's level of monitoring self-presentation, sensitivity to expressive behaviors, other-directedness, and social comparison in the real life. Those who were higher on sensitivity reported more internal representation across contexts and more cross-situation variability for their avatars. In addition, those who were higher in self-presentation also reported more internal representation. The findings with respect to internal representation were opposite of the predictions based on past findings (Snyder, 1979). It was expected that those who monitor their environments more (change their self-presentations and are sensitive to people's expressions) would exhibit less internally reflected information (H3), more external cues (H4) and less cross-situation variability (H5) in their presentations. When examining these variables across contexts (i.e. total scores), this trend did not emerge across the four subscales.

Individuals who reported using more internal cues across situations, also reported that they would use their avatar more across situations ($r = .44$, $p < .01$). This suggests that individuals consider a presentation form that reflects themselves more (i.e. a truer representation of who they are) to be easier to use in a variety of situations. By not including contextual information, participants do not limit the usability of their avatars. This finding indicates that regardless of self-monitoring type, individuals were responding more like the originally defined low self-monitor. The single sample t-test scores indicate that students reported that their avatars consisted of: more internal representation, less external integration, and more cross-situation variability. Furthermore, individuals higher in self-presentation and sensitivity to expression, counter

to the prediction, were the individuals who were adopting this strategy significantly more than those who were lower on the revised self-monitoring dimensions.

Although there was no relationship between the revised self-monitoring subscales with external representations, one might expect a relationship with the concern for appropriateness subscales. It would be plausible that individuals concerned with being appropriate would look toward the environment for information regarding how to behave accordingly. Not surprising, individuals who reported higher scores on social comparison were more likely to encode more external cues (e.g. try to fit in with other avatars) across situations. Those who are more outwardly seeking information for various reasons - to fit in, not be out of place, not sure how to act - were more concerned with other's perceptions and therefore reported trying to create avatars that would fit into their respective environments. This finding suggests some transcendence of the social comparison monitoring style from real life to virtual environments.

Individuals reported scale means above the midpoints for the two self-monitoring subscales: self-presentation and sensitivity to expressive behaviors, and reported means below the midpoints for the concern for appropriateness subscales: other-directed and social comparison. One reason individuals may have used more internal representation information than external was due to the newness of this type of presentation. From a methodological standpoint, perhaps, students could easily include elements about themselves (e.g. the manipulation worked too well - create a representation of yourself), because there really wasn't any competing information to include. In other words, the one hour on-line assignment did not give participants a need to monitor the environment or gain a perspective of what might be a normative on-line presentation. A few students

commented that virtual environments were a waste of time and that only strange people would need to interact socially on-line. These students most likely had a different monitoring strategy.

The avatar provides individuals with a new mechanism for presenting oneself to the on-line community. Given that these graphical virtual worlds were designed, in part, to allow people enhanced representations, it was interesting to discover the lack of cues presented. Instead of conveying a great deal of nonverbal information, many chose to be vague. In general, there were few status cues, half gave no age or ethnic identity, and slightly less than half were gender free. For two-thirds of the sample, no SES information was given. Although, considering the sample was primarily young, Caucasian, men; those who presented demographic information reflected these majority characteristics. Participants did explore different body forms with inanimate objects being the next largest group after humans. Cartoons and drawings were the favorite presentation format. Therefore, the presentation function in on-line environments reflects not only the opportunity to convey information, but also the ability to purposefully not to include information.

Theoretical Implications

Do individuals who vary in self-presentation, sensitivity to expressive behavior, other-directedness, and social comparison differentially influence their self-presentations? According to Snyder (1974, 1979), individuals differ in their monitoring styles, with some people relying on situational/environmental cues (high self-monitor) and others focusing and incorporating their own internal aspects and attitudes (low self-monitors) into their presentation manifestations. Furthermore, those who present more internal cues

into their presentations show less situation variability in their behaviors (Snyder &

Swann, 1976). The findings in this study indicate that individuals reported more internal

representation, less environmental information, and were more likely to use their avatars

across situations. Furthermore, individuals who were high on the revised self-monitoring

subscales claimed to use more internal representations and those who were sensitive to

expression also reported more cross-situation variability. These findings suggest that all

individuals were treating their on-line representations as low self-monitors. In addition,

those who would be predicted not to incorporate very much internal representation (high-

self-monitors) also engaged in this behavior: even moreso than low self-monitors. Is this

due to the newness of the presentation environment or will individuals adopt new

strategies of presentation in virtual environments? These types of questions will need to

be assessed in future studies.

For the most part the results did not support the predictions regarding nonverbal

expressive manifestations. There were no relationships between any of the four subscales

with the behavioral measure, the avatars. Individuals were not more likely to create

different avatars - body portrayals, demographics, presentation elements - across contexts

based on their level of self-presentation, sensitivity to expressive behavior, other-

directedness, or social comparison. This suggests that the predictive validity of these

scales, particularly the revised self-monitoring subscales, need to be reevaluated. One

may argue that real-life environments should not be directly compared with virtual

environments - that the environmental cues vary between the two environments. Perhaps

most individuals have yet to develop the skills and gain the knowledge necessary to know

what needs to be paid attention to in cyberspace interactions, therefore, manipulating

one's self-presentation based on the environment is moot. However, self-monitoring has been considered to be more like a individual trait that should influence our self-presentations in a consistent manner. If this individual variable is not able to be predictive in new presentation environments, then there is a problem in its conceptualization. Before concluding that self-monitoring is not a valid construct, it is important to take a step backward and reconsider the construction of the self-monitoring concept.

Self-monitoring originally consisted of five dimensions (Snyder, 1979) that factored into four components once the extraversion items were dropped: cross-situation variability, acting ability, ability to modify self-presentation, and concern for appropriateness (Lennox & Wolfe, 1984). Lennox and Wolfe (1984) suggested that the items represented two scales: the Revised Self-Monitoring Scale and the Concern for Appropriateness Scale. However, the factor "acting" was dropped from the self-monitoring scale based on face validity arguments. It was thought that theatrical presentations are not as relevant to people's day to day presentation, so these items were dropped. Trends in this study's data suggest that the two scales do correlate differently across variables, so this is a good indication that they should remain separate. However, the revised self-monitoring scale (Lennox & Wolfe, 1984), which is not entirely based on Snyder conceptions, may have lost some of its robustness by eliminating the acting factor.

There has always been a very theatrical presence in on-line interactions and communities. Early on, individuals have used computers for role-playing and engaging in self-presentation of different characters (Turkle, 1995). Many still use it for this, and

avatars, to some extent, can be considered a mask (a constructed image that represents one in the computer) and an extension of character acting. Therefore, the "acting" dimension should be reconsidered as a predictor of on-line behavior and a measure of self-monitoring.

The most predictive subscale was sensitivity to expressive behaviors. These results should be considered cautiously due to the small number of significant findings. From a theoretical standpoint, it is useful to identify concepts that are consistently predictive, as well as allowing conceptualization to become more parsimonious. In this study, sensitivity to expressive behavior was the most discriminating of nonverbal expressions, whether a deliberate manifestation, such as more physical attractiveness, or one's self-report of incorporating internal representation cues. This subscale measured more of an overall feeling or sense of an individual's emotion (e.g. by reading someone's eyes or through intuition). It is these very nuances of communication expression that many would argue are missing from on-line interactions. Thus, it was intriguing that the trait most finely tuned to nonverbal information varied with individuals' on-line reported behaviors. Additional dimensions of this particular construct should be considered for future on-line presentation and interaction studies; for example, detail orientation, nuances in interactions, awareness of gestures, touching, and emotive expressions.

From a sender-receiver model, sensitivity to expressive behavior can be considered a receiver variable. This variable was consistently most predictive of differences in avatars across contexts for physical attractiveness, which could be classified as a sender variable. This finding provides support that individuals who have certain monitoring traits do incorporate nonverbal information into their presentations

based on their monitoring perspective. Future studies should look at receiver dimensions and how individuals may take their outward surveillance of their environment and encode their own presentations with these elements in mind.

Findings that were significant were based on individual self-reports and not the behavioral measures. Why did the self-reports reflect more differences between monitoring styles than the actual behavioral measures (i.e. the avatars)? Participants may have had difficulty incorporating differences in their presentations due to artistic ability, but found it easier to report the differences. However, perhaps it is just easier to say one would do something than to actually do it. Future work should include putting the same measures in both formats to determine if individuals are truly saying and doing something differently.

Limitations

A number of reasons should be considered concerning the lack of variance in avatar presentation elements across contexts. They include: inadequate difference among contexts, lack of involvement by the participants, not enough prior knowledge in this environment, and face validity issues. However, first and foremost, all significant results related to the hypotheses need to be cautiously interpreted due to the possibility that they occurred by chance.

Although there were many types of presentations, there were no great differences in presentation across contexts. This does not mean that the manipulation was ineffective, for instance, the employer context provided some deviations in avatar appearance. In addition, individuals appeared cognizant as to which avatars would represent them in different contexts and responses varied across the contexts in such a

way as to be verified as separate factors in confirmatory factor analyses. Two issues should be considered regarding individual's lack of difference in their presentations across situations. First, the nature of the presentation was public, not private or anonymous. Individuals posted their avatars to a public space that identified their name along with the avatar that all classmates could view. Baumeister and Jones (1978) found that individuals engage in compensatory self-enhancement when receiving a self-evaluation on a presentation that will be evaluated in public. Although individuals were not being judged by their classmates, nor their professor, public self-presentations often create a face-saving situation. In other words, individuals may have engaged in similar self-presentation strategies, regardless of context, due to the public nature of the presentation.

Another issue to consider is the contexts themselves. Did the given contexts allow for maximal differences in self-presentation? Brown and Garland (1971) found that for those who had been told they were incompetent singers, face-saving strategies were greatest before close friends and strangers who would be met after their performance than for strangers or acquaintances who would not be met. In their first experiment, the audience that individuals sang to were their classmates. It was suggested that this group may correspond to a moderate acquaintanceship level, which is why Brown & Garland (1971) made the friendship continuum more rigorous in their second experiment (e.g. close friends, strangers who one never met). Perhaps, some of the findings in this study were muted because all presentations were presented to classmates. Therefore, this public forum may have interacted with participant's primary goals of presenting to the hypothetical contexts.

In this research individuals were creating avatars for friends, strangers, and future employers. The contexts should have engaged individuals into unique presentations, particularly the future employer situation. Individuals have been shown to try to make a good impression when job interviewing (Buss & Briggs, 1984; Jones & Wortman, 1973) and wearing what they think their future boss may want to see (Von Beyer, 1981). There were few significant differences between the contexts. Aside from their presentations being public in nature, why did the contexts not manifest themselves in individual's on-line presentations? The manipulations may not have been strong enough. As with the Brown and Garland study (1971), the friends context should be changed to 'close friends' and strangers should be defined as "individuals whom you have never met before." Furthermore, most employer studies deal with job interviews, therefore, the future employer context should be changed to an interview situation to be more consistent with past literature. By stregthening the manipulation, one will be able to determine if individuals truly don't change their on-line presentations according to context.In addition, motivation to self-present oneself in a given context may have been lacking.

Individuals did not actually have to interact in the given situations with their avatars. Participants were told they would have to interact with their avatars in one of the situations if time permitted. But this was said primarily for motivation purposes and only stated at the beginning of the project. Therefore, there may not have been enough motivation to really monitor the on-line environment and then incorporate it into one's avatars. In addition, the only graphical chatrooms they interacted with were with strangers. Students had no on-line experience with the other two contexts. Thus, task

realism may not have been as strong as necessary to maximize different presentation functions.

One should also consider that the design of the study may have minimized differences. An independent groups design may prove a better design to see differences in individual's presentations. Because students created three avatars, they may not have been starting from scratch or discriminating between the contexts as much as they would if they were only creating one avatar. An independent groups design would also eliminate order effects. Most participants created their friend avatar first, which may have influenced their following presentations. This may be a reason for the small differences found in presentation among the contexts. On the positive side, it does allow determination of which avatar was created first by self-monitoring type.

Along with design issues, the self-monitoring dimensions may not be distinct enough between those who were high and those who were low. A median split may not categorize individuals in such a way that differences could emerge; for example those who were barely above the median may not be very different from those barely below. It is suggested that only those in the top 33% be compared to those who are in the lower 33% to maximize differences among individuals. Due to the sample size, this analysis would eliminate 56 subjects, leaving 113 participants. At present this analysis will not be performed due to the issue of statistical power.

As mentioned before, prior knowledge of these environments was limited and individuals may not have been certain what was important or what should be monitored. What is the best face to put forth? Is there one? Participants may not have seen any criterion necessary for presentation from the environment, so they just created what they

thought was cool or liked. Even though aware of the context, there were no ramifications based on their presentation (in fact, they were told to present themselves however they wanted, they weren't being graded on their artwork). Thus this may be the reason for lack of environmental integration into their avatars and the lack of variation across contexts. Incorporating contextual information was only reported by those who were oriented toward making social comparisons. In the future, directions would need to be more explicit and motivating. Individuals need to actually participate in the situations for which they designed their avatars. This may encourage individuals to be more serious and conscious of the decisions they make about their self-presentations.

If we treat computers like humans (Reeves & Nass, 1996), then one might reason that we would also monitor our on-line environments similar to real life situations. This study did not have any monitoring or surveying measure for on-line interactions or virtual self-presentations. Determining how much individuals monitor their on-line situations could be compared with their real life self-monitoring and concern for appropriateness subscales. This would yield further insights into the adaptability of the self-presentation, sensitivity to expressive behavior, other-directedness and social comparison subscales.

Undergraduate samples have their limitations. They are not generalizable to the overall population. Although the sample was young, Internet participants between the ages of 21-30 still have the most on-line experience (Graphic, Visualization, & Usability Center, 1998). This sample provides an important look at self-presentation on-line, particularly for younger and college-oriented populations.

This project was a class assignment, therefore, one should considered forced compliance. Most students were cooperative and many enjoyed the activity. Some were

concerned about being graded on their artistic abilities. However, this was alleviated, by knowledge that their avatars were not being graded based on artistic talent.

Students had to place their avatars in a public space. There are pros and cons to this component. First, it may have deterred some students from being rude in their presentations. It also increased the likelihood that students would attempt to do the project well. Second, because avatars are publicly used in chatrooms, it gave credibility to have them create avatars for public display. On the flip side, it may have caused some students to not represent themselves as they truly would have in a more anonymous environment. Therefore the question of face validity is raised. Were students actually presenting an avatar that they would use in the given contexts. There really is no way to gauge this question, post-hoc, especially given the newness of this research. However, results should be considered carefully, acknowledging that students were not presenting avatars that they truly would use in graphical on-line chatrooms.

Future Research

This research has looked primarily at individual on-line self-presentations, but what about the environment itself? What do people monitor while on-line? This question is interesting and may need to be addressed from a more qualitative approach to gather a rich dataset of possibilities. What things are important referents for a user to survive in an on-line environment? Do individuals prefer to have self-presentations that are more chameleon-like? Being able to use one's creations across many contexts could be useful. Perhaps our first creations are presentation forms that can be used in a multitude of situations, so that we are not quickly judged as to our purpose or who we are. A longitudinal study or one that varies level of on-line chatroom expertise would

allow for greater inspection of presentation style changing overtime or with expertise. Future research also should examine: why we encode the information we do and what elements do we monitor while on-line and the rationale behind it.

Turkle (1995) suggests that we can explore multiple facets of ourselves and gain a sense of understanding about other types of individuals by role-playing in computer environments. Concern has been expressed that individuals act irresponsibly on-line and that people are more likely to practice deceit. However, the self-report findings in this study indicate individuals incorporate their own identities into their presentations, and do so across contexts. Are on-line self-presentations less variable than originally thought? This work advances that while studying the number of roles or personalities individuals may adopt, one should not ignore that individuals may be incorporating a great deal of their own identity into these roles and presentations. In other words, different presentations do not necessarily equate to putting up a false front.

Implications of Research

This study provides baseline information regarding what individuals encode into their avatars across three different contexts: friends, strangers, and future employers. In addition, it takes an initial look at the validity of the self-monitoring construct in a new self-presentation environment - cyberspace. Contrary to expectation, individuals did not vary their self-presentations differently across contexts by monitoring levels and with respect to scale midpoints, included more internal information in their presentations than external cues. Findings suggest that individuals, at least initially, create avatars that reflect more of themselves, less about the environment, which corresponded to their reports that they would use their avatars across different contexts. Those who reported

more incorporation of environmental cues were more concerned about social comparison information. However, for the most part, there were few findings related specifically to the monitoring dimensions: self-presentation, sensitivity to expressive behaviors, other-directedness, and social comparison.

Due to the lack of prediction with these subscales in this new environment, it is necessary to consider the validity of the self-monitoring construct. This author suggests greater explication of the sensitivity to expressive behavior measure and reintegration of the acting dimension. Consideration also should be given to the newness of this environment and lack of experience and knowledge by the participants. This study has provided a foundation and guidelines for future work in the on-line self-presentation area.

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TC 100 On-line Survey

On-line Assignment from the Instructor

The following assignment has three parts that need to be completed for full credit for this assignment which is worth 10% of your grade.

As part of your telecommunications course, you need to complete:

> 1) An on-line survey which should take approximately 25 minutes. The purpose is to give you a feel for what a web survey is like. Do you think this is a good way to collect information from people? Was it easy to do? Was the format appropriate for web use? This survey was created for an academic research project to enhance our understanding about individuals' behaviors and the Internet. We are interested in what the students of today think about these new ways to interact on the Internet and different communication styles.

> There are questions regarding the Internet, computer use, and communication and presentation styles, such as, your feeling about giving public speeches and how you may present yourself to your friends and other people. If there is some question you do not wish to answer, you may skip it.

> 2) You will need to spend at least 1/2 hour in two different graphical on-line chat worlds (a total of 1 hour). You will be given a list of URLs that you can visit or find your own. You will need to write up a summary of your experience in the world based on a set of questions that will be given to you. For example, what was your first impression? Do you think this is a good interface for communication?

> 3) You will be asked to create three avatars based on **specific criteria** given to you later and to also fill out questions pertaining to your creations. Avatars are virtual representations of people. You will be given the specific dimensions and instructions after Part 1 and 2 are completed.

This assignment will allow you to gain a new knowledge of how things may be presented on the web, in terms of questionnaires and interpersonal interactions. You will become aware of new ways to present yourself on-line and of other social interaction mechanisms that the web provides. There will be a lecture given after the assignment is completed to discuss the positive and negative aspects of these virtual environments. Being telecommunication students, it is important that you are aware of the newest evolution on the Internet.

Researcher's Request for Consent

Your class is one of the first to be learning and actually working in graphical on-line worlds. Do you mind if your responses and avatars are looked at for a research project? We are curious about how people make avatars. For example, what do you think is the best avatar to represent yourself? These answers will be

interesting for future research and you are one of the first groups to ever be asked how people actually create these images. Would you please share this information with us? No identifying information will be used, we are interested not in specific people's responses but as a group, what do students think?

Your responses are confidential and your personal ID # will be removed from the analysis. There are no right or wrong answers or good or bad avatars. By clicking the "yes" button, you are indicating your voluntary agreement to be part of this study. May your responses and avatars be looked at by a graduate student who is interested in the features and characteristics that students include in their on-line creations?

O YES
O NO

Part 1 Assignment

Please enter your PID # to receive credit for the on-line questionnaire (Part 1). Your instructor will not see your survey, only the researcher will see your responses. This is needed for you to receive Homework credit for TC 100.
PID: [_____]

The First Part of your assignment is the on-line questionnaire which follows below. Read the instructions for each section carefully. Remember to press the "submit" button at the end so that we know you completed the survey.

Please answer the following questions by typing in your response.

1. On an average day, how many e-mail messages do your send? (type 0 for none)

[_____]

2. On an average day, how many e-mail messages do you receive? (type 0 for none)

[_____]

3. On an average day, how many hours do you spend browsing the Internet? (type 0 for none)

[_____]

4. Approximately what is the total number of different websites you visit every week? (type 0 for none)

[_____]

5. During an average week (7 days), how many newsgroup postings do you read? (type 0 for none)

[_____]

6. During an average week, how many replies do you post to a newsgroup? (type 0 for none)

[   ]

7. In an average week, how many times do you visit text-based on-line chatrooms like (Multiple User Domains (MUDs) or Multiple Object Oriented MUDs (MOOs))? (type 0 for none)

[   ]

8. In an average week, how many times do you visit graphical-based virtual worlds (e.g. Palace)? (type 0 for none)

[   ]

9. Have you ever seen an avatar (a graphical representation or icon of an on-line person)?

O YES

O NO

10. Have you ever created an avatar?

O YES

O NO

11. If yes, have you ever used your avatar in an virtual world?

O YES

O NO

12. How would you rate your computer skills? (Select One)

O Never used a computer

O Beginner

O Intermediate

O Advanced

O Expert

13. How old were you when you first started using a computer?

[   ]

14. Have you created a web homepage?

O YES

O NO

15. Did you create a web homepage before it was a class assignment?

O YES

O NO

Please read each statement and indicate the degree to which each statement would describe you.

1. In social situations, I have the ability to alter my behavior if I feel that something else is called for.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

2. I am often able to read people's true emotions correctly through their eyes.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

3. I have the ability to control the way I come across to people, depending on the impression I wish to give them.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

4. In conversations, I am sensitive to even the slightest change in the facial expression of the person I'm conversing with.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

5. My powers of intuition are quite good when it comes to understanding others' emotions and motives.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

6. I can usually tell when others consider a joke to be in bad taste, even though they may laugh convincingly.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

7. When I feel that the image I am portraying isn't working, I can readily change it to something that does.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

8. I can usually tell when I've said something inappropriate by reading it in the listener's eyes

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

9. I have trouble changing my behavior to suit different people and different situations.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

10. I have found that I can adjust my behavior to meet the requirements of any situation I find myself in.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

11. If someone is lying to me, I usually know it at once from that person's manner of expression.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

12. Even when it might be to my advantage, I have difficulty putting up a good front.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

13. Once I know what the situation calls for, it's easy for me to regulate my actions accordingly.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

More about you!!! Please read each statement and indicate the degree to which each statement would describe you.

1. I tend to show different sides of myself to different people.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

2. It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

3. I actively avoid wearing clothes that are not in style.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

4. In different situations and with different people, I often act like very different persons.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

5. At parties, I usually try to behave in a manner that makes me fit in.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

6. When I am uncertain how to act in a social situation, I look to the behavior of others for cues.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

7. Although I know myself, I find that others do not know me.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

8. I try to pay attention to the reactions of others to my behavior in order to avoid being out of place.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

9. I find that I tend to pick up slang expressions from others and use them as part of my own vocabulary.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

10. Different situations can make me behave like very different people.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

11. I tend to pay attention to what others are wearing.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

12. The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

13. Different people tend to have different impressions about the type of person I am.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

14. It's important to me to fit in the group I'm with.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

15. My behavior often depends on how I feel others wish me to behave.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

16. I am not always the person I appear to be.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

17. If I am the least bit uncertain as to how to act in a social situation, I look to the behavior of others for cues.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

18. I usually keep up with clothing style changes by watching what others wear.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

19. I sometimes have the feeling that people don't know who I really am.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

20. When in a social situation, I tend not to follow the crowd, but instead behave in a manner that suits my particular mood at the time.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

About You! Please answer the following questions about yourself. These are to help us see if this class is representative of MSU's demographic statistics.

1. Are You:

O Male

O Female

2. What year were you born?

[   ]

3. Are You:

O African American

O Hispanic/Latino(a)

O Caucasian

O Asian American

O Other

The following statements concern your perceptions about yourself in a variety of situations. Your task is to indicate the strength of your agreement with each statement, utilizing a scale in which 1 denotes strong agreement, 5 denotes strong agreement, and 2, 3, and 4 represent intermediate judgments.

1. When I am in a group of strangers, I am not reluctant to express my opinion publicly.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

2. I find that criticism affects my self-esteem.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

3. I sometimes hesitate to use my own ideas for fear they might be impractical.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

4. I think society should let reason lead it to new customs and throw aside old habits or mere traditions.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

5. People frequently succeed in changing my mind.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

6. I find it sometimes amusing to upset the dignity of teachers, judges, and "cultured" people.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

7. I like wearing a uniform because it makes me proud to be a member of the organization it represents.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

8. People have sometimes called me "stuck-up."

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

9. Others' disagreements make me uncomfortable.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

10. I do not always need to live by the rules and standards of society.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

11. I am unable to express my feelings if they result in undesirable consequences.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

12. Being a success in one's career means making a contribution that no one else has made.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

13. It bothers me if people think I am being too unconventional.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

14. I always try to follow rules.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

15. If I disagree with a superior on his or her views, I usually do not keep it to myself.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

16. I speak up in meetings in order to oppose those whom I feel are wrong.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

17. Feeling "different" in a crowd of people makes me feel uncomfortable.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

18. If I must die, let it be an unusual death rather than an ordinary death in bed.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

19. I would rather be just like everyone else than be called a "freak."

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

20. I must admit I find it hard to world under strict rules and regulations.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

21. I would rather be known for always trying new ideas than for employing well-trusted methods.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

22. It is better always to agree with the opinions of others than to be considered a disagreeable person.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

23. I do not like to say unusual things to people.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

24. I tend to express my opinions publicly, regardless of what others say.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

25. As a rule, I strongly defend my own opinions.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

26. I do <u>not</u> like to go my own way.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

27. When I am with a group of people, I agree with their ideas so that no arguments will arise.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

28. I tend to keep quiet in the presence of persons of higher rank, experience, etc.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

29. I have been quite independent and free from family rule.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

30. Whenever I take part in group activities, I am somewhat of a nonconformist.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

31. In most things in life, I believe in playing it safe rather than taking a gamble.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

32. It is better to break rules than always to conform with an impersonal society.

Strongest Disagreement ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Strongest Agreement

YOU ARE ALMOST DONE!!!

For the following questions, you will find listed a number of personaility characteristics. We would like you to use those characteristics to describe yourself, that is, we would like you to indicate, on a scale from 1 to 7, how true of you each of these characteristics is. Please do not leave any characteristic unmarked. Please indicate how true of you the following characteristic is:

1. ....defend my own beliefs

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

2. ....affectionate

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

3. ....conscientious

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

4. ....independent

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

5. ....sympathetic

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

6. ....moody

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

7. ....assertive

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

8. ....sensitive to needs of others

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

9. ....reliable

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

10. ....strong personality

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

11. ....understanding

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

12. ....jealous

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

13. ....forceful

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

How true of you is the following characteristics:

14. ....compassionate

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

15. ....truthful

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

16. ....have leadership abilities

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

17. ....eager to soothe hurt feelings

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

18. ....secretive

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

19. ....willing to take risks

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

20. ....warm

never or almost never true ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 always or almost always true

21. ....adaptable

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

22. ....dominant

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

23. ....tender

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

24. ....conceited

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

25. ....willing to take a stand

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

26. ....love children

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

27. ....tactful

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

28. ....aggressive

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

29. ....gentle

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

30. ....conventional

never or almost never true ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 ◯ 7 always or almost always true

This is the last set of questions!!! Please read each statement and indicate the degree to which each statement would describe you.

1. I find it hard to imitate the behavior of other people.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

2. My behavior is usually an expression of my true inner feelings, attitudes, and beliefs.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

3. At parties and social gatherings, I do not attempt to do or say things that others will like.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

4. I can only argue for ideas which I already believe.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

5. I can make impromptu speeches even on topics about which I have almost no information.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

6. I guess I put on a show to impress or entertain people.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

7. I would probably make a good actor.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

8. I rarely need the advice of my friends to choose movies, books, or music.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

9. I sometimes appear to others to be experiencing deeper emotions than I actually am.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

10. I laugh more when I watch a comedy with others than when alone.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

11. In a group of people I am rarely the center of attention.

O Very much like me O Mostly O Somewhat O A little O Not at all like me

12. I am not particularly good at making other people like me.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

13. Even if I am not enjoying myself, I often pretend to be having a good time.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

14. I would not change my opinions (or the way I do things) in order to please someone else or win their favor.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

15. I have considered being an entertainer.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

16. In order to get along and be liked, I tend to be what people expect me to be rather than anything else.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

17. I have never been good at games like charades or improvisational acting.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

18. At a party I let others keep the jokes and stories going.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

19. I feel a bit awkward in company and do not show up quite as well as I should.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

20. I can look anyone in the eye and tell a lie with a straight face (if for a right end).

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

21. I may deceive people by being friendly when I really dislike them.

○ Very much like me ○ Mostly ○ Somewhat ○ A little ○ Not at all like me

THANK-YOU FOR PARTICIPATING IN THIS STUDY!
IF YOU HAVE ANY QUESTIONS, PLEASE E-MAIL LYNN
RAMPOLDI-HNILO: rampoldi@pilot.msu.edu

| Submit Information |

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APPENDIX B

On-Line Chatroom Instructions and Diary Form

Instructions

Part 2
Due April 13, 1999

This assignment is to give you experience in graphical on-line chatrooms.

1. Downloading Software. First you will need to download the two on-line chatroom applications called Comic Chat and Palace. These both will be in the avatar folder on the TC100 website. So download the entire folder by copying the "avatar" folder to your hard drive on the computer you are working. These worlds work best on PCs, so you will need to use a Windows 95 PC or better for this assignment.

2. Starting Application. Start your navigation browser (e.g. Netscape or Internet Explorer). After it is open, double-click on the first chatroom you want to go to. Palace and Comic Chat are considered beginner level chatrooms. You will explore both chat sites, you may choose which site you want to explore first. Here is a list of other places you can try after completing the assignment. Note that these are not part of the assignment.

    Other Places to visit:

- Virtual Places: http://www.vplaces.com/vpnet/index.html

- Brave New Worlds: http://vs.spiw.com/vs/

- OnLine Traveler: http://www.onlive.com

3. On-line Participation. You will need to spend a minimum of 30 minutes in each of the graphical on-line chat worlds (a total of 1 hour). Once the program is downloaded and you've begun the application, you may start your time. Of course, you may spend as much time as you wish, the 30 minutes is just a minimum. You should spend the time learning how to navigate, selecting avatars, and talking to people. Play around! This assignment is to engage you in exploratory learning. See what the navigator bar has in it. Explore your surroundings, chat with people, and switch to other avatars. I have included some helpful hints for the chatrooms to help you get started. These are listed under the "helpful hints".

4. Diary Form. After you participate in each chatroom, we would like you to think about and evaluate your on-line experience. For example, what was your first impression? Do you think this is a good interface for communication? The diary questions are listed on-line for your convenience in this section (click here). You must type your responses. So, either copy and paste the on-line questions to your word processing program or re-type them. You will hand these in on April 13th. Remember, this is part of your grade.

Helpful Hints

Comic Chat

After you have started the application, you should have a "Chat Connection Box" appear. There are many layers in this box, such as Personal Info, Character, Background, etc. You should go through each layer and fill out the information. These layers represent the choices of who you want to be and what you want to see. Don't worry about the server information, leave those boxes alone.

- Connect Layer: this shows you all the available chatrooms. Select the one that looks fun to you. You can always change rooms later.
- Personal Info Layer: type in a nickname at a minimum. This will be the name that everyone else in the chatroom sees and will call you. You can also make-up "real name" and comments about yourself if you don't want to use your own.
- Character Layer: choose the character you want to represent you. Notice that you can also change the expressions of your character. Have fun and check out all of the characters.
- Background Layer: click on the background that you would like your interactions to be set around.

Make sure that you clicked on a room to start an interaction. To get involved, you type in the textbox and the bottom of the screen.

You can chat to someone privately by clicking on someone's face in the upper right hand box. This means you are whispering to them and only that person can see what you wrote.

Change your expressions while you chat by clicking on the expression faces in the lower right hand corner.

Play around: click on different buttons, chat with people, change chatrooms and characters if you want.

Palace

After you have started the application in Netscape, you will see "Welcome to the Palace". Click on the "Stay as a Guest for Now" option.

Enter the name you want to be called under the sections that asks you what your "handle" name is (this will be your name while chatting and exploring the rooms).

To select a chatroom to investigate, look at the icons at the top of the webpage. These are little graphics of the rooms you can go to. Double click on the icon to go to that room. Note, you will be unable to go to certain rooms because you are only a guest. You can change rooms by also going to the navigator bar and clicking on Options, and then look at the "room list".

Check out what everything does on the side and top menu bars, by running your mouse over it to see the pop-up description or click on it and see what it does.

On the vertical menu bar (the one on the left side of your page), notice that you can hide or show doors. I would suggest you click so that you can see the outline of the doors to make it easier for you to go in and out of the rooms.

The arrow keys will help you exit a room if you are having difficulty leaving.

Have fun chatting and exploring the different rooms!

Diary Form

Chatroom #1

1. Name the first Chatroom you explored:
2. What was the URL for the chatroom:
3. Approximately how long did it take you to get connected to the chatroom?
4. Approximately how long did it take you to setup your guest avatar?
5. What nickname (or handle) did you use in the world?
6. Which avatar did you choose (or put together out of the options you had) to represent yourself? (describe it, give its generic name if it had one)
7. Why did you select that avatar? What factors went into your selection process?
8. What was your first impression when you entered this chatroom?
9. Did your impression change over time? If it did, how did it change? If it didn't, then why?
10. Describe the surroundings or chatroom environment(s) that you participated in? What did you see? How did you feel?
11. What types of avatars did you see?
12. Describe your first interaction(s)? How did you feel? What type of person/people do you think you communication with?
13. How easy was it to communicate with people?
14. Was the chatroom easy to figure out in terms of navigation/moving around/exploring? Why or Why not?
15. What did you like about the experience in the chatroom?

16. What did you dislike about the experience in the chatroom?

Chatroom #2

1. Name the second Chatroom you explored:
2. What was the URL for the chatroom:
3. Approximately how long did it take you to get connected to the chatroom?
4. Approximately how long did it take you to setup your guest avatar?
5. What nickname (or handle) did you use in the world?
6. Which avatar did you choose (or put together out of the options you had) to represent yourself? (describe it, give its generic name if it had one)
7. Why did you select that avatar? What factors went into your selection process?
8. What was your first impression when you entered this chatroom?
9. Did your impression change over time? If it did, how did it change? If it didn't, then why?
10. Describe the surroundings or chatroom environment(s) that you participated in? What did you see? How did you feel?
11. What types of avatars did you see?
12. Describe your first interaction(s)? How did you feel? What type of person/people do you think you communication with?
13. How easy was it to communicate with people?
14. Was the chatroom easy to figure out in terms of navigation/moving around/exploring? Why or Why not?
15. What did you like about the experience in the chatroom?
16. What did you dislike about the experience in the chatroom?

Overall,

17. Which chatroom did you like best? Why?
18. Can you see yourself engaging in this type of communication in the future?

APPENDIX C

TC 100 On-line Assignment
PART 3: Avatar Creation
Due: April 22, 1999

This is the final component to the on-line assignment. This assignment requires that you create three avatars.

You will need to create one avatar for each of the following situations:

1) to represent yourself in a chatroom with friends (one you will share with friends)

2) to represent yourself in a chatroom with a future employer from a large corporate firm (for interactions that you would have on a day to day basis)

3) to represent yourself in a chatroom with strangers (meeting new people)

Introduction: What's an avatar?

Avatars are virtual representations of people. Your avatar is your body's representation on-line and it represents you. Your avatars can be anything you want them to be. You an use your own picture or scan in some other picture, draw them, or modify already existing ones. Here are example places where you can look at pre-designed avatars. Note that you need to modify any avatar you copy from some other site because you will be in copyright violation if you do not. Remember, you are designing each avatar to participate in a specific virtual world (like some of the ones you explored) to interact with people.

You have been given three situations to consider participating in on-line and you need to have an avatar in each situation. Think carefully about how you want to present yourself in the different situations. After you create the avatar that represents you best for the first situation, think about the avatar you want for the second situation. It can be as similar to or as different from the first one you created as you wish. And then you can decide again what you want as an avatar for the third situation. You can create the avatars in any order that you want, create them all at the same time, and/or continue to modify them until you post them. We will not critique the design of the avatars you create. However, you are graded on completing the assignment and following the instructions.

After this assignment is completed, you will be asked to interact in a chatroom with one of your avatars. You will be randomly assigned to interact in:
    (a) an on-line chatroom that consist of strangers, other people who happen to be on-line

(b) a group of your friends (we will ask you to list three of your friends who would be willing to participate in a chatroom and will give them avatars to use)

(c) with an MSU career center employee.

We will tell you which of these you will need to do, if time permits.

You have 10 days to create each avatar--they must be posted in Web Talk by April 22. You need to keep track of how and why you created each of the avatars, using the specific questions listed below. Answers to these questions will also be posted in Web Talk.

<u>Making an Avatar</u>

1. Surf around the WWW and check out avatar galleries to get ideas. You should spend a minimum of 1 hour looking at avatar designs and creations. You can copy these avatars to your desktop and modify them later. To do this, hold your mouse button down (the right one if using a PC) until a box appears, then click on "copy this image" or "save this image".

2. Your avatars should be original works, but can start from a template of a different pre-created avatar if you find one that you really like and want to represent you. You can also scan in your picture or any picture/photo/drawing and then edit it in a design tool program. All of your avatars must be in the ".gif" format and be in the image size of 48 x 64 pixels.

Design tips when making an avatar:

- Keep in mind the situation that you are creating the avatar for

- Try not to make the image too complex (it will be lost at this size)

- Create big images, then size them down to 48 X 64 pixels (width = 48, height = 64)

- Use PhotoShop 4.0 or MS paint to create and change your avatars (campus labs have these programs. PhotoShop can be found by looking in the J:/service-ml on Mlabafs).

- Save your avatar in a ".gif" format.
    the friend avatar must be called friend.gif
    the employer avatar must be called employer.gif
    the stranger avatar must be called stranger.gif

3. Once you have your avatar in the appropriate image size and format, you will post it in Web Talk. You will have three posts, one for each avatar. Make sure you title each post according to which avatar you're uploading (Friends or Strangers or Employers) and include the answers to the questions above in the body of your message. Specific

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directions are listed at the top of the Web Talk Conversation for this assignment, including an example.

4. The final component to the avatar part of the assignment will be completed in class. You need to be physically present in the classroom on April 22, 1999 to get some of the points for this section of the assignment.

Avatar Galleries and Links to Galleries:

Look around these sites. Sometimes you have to click further into the site to find the avatars or other links to avatar pages. Many of them have links to other avatar designers' works. These sites will help you get ideas and see what can be done.

http://www.geocities.com/SouthBeach/Palms/5456/avatars.html

http://www.pinkyb.com/help/avatars_help.htm

http://www.pinkyb.com/links.htm

http://www.theavatarfactory.com

http://www.geocities.com/SouthBeach/Lights/5737

http://www.avnet.co.uk/devalin/guild/index.html

http://www.geocities.com/SiliconValley/Park/9234/chatn.html

http://www.vregion.com/vpchat/avatars/avatars.htm

http://www.digifriends.com/apps/cnf-3dcn.shtml#4

http://www.geocities.com/SouthBeach/1301/pages

http://www.flinthills.com/~mdn7779/avatar.htm

http://members.aol.com/danazsweet/index.htm

http://members.aol.com/cowtowning/AVLinks.htm

http://www.geocities.com/SouthBeach/Palms/8614

http://www.uandi.com/demo/index.html

http://www.csnsys.com/lundberg/download.htm

Questions to answer while making the Avatars

For each avatar situation, please answer the following two questions. Remember, you will be posting these answers when posting your avatars in Web Talk.

1. What software(s) was used to create or modify the avatar? (indicate if you used a scanner)

2. If you borrowed a pre-designed avatar, where did you get it? (include the URL)

TC 100 AVATAR ON-LINE QUESTIONNAIRE

You need to complete the survey for a homework assignment for TC 100. It is important that you fill out the questions for each avatar situation. Please read questions carefully! Your responses to the questions will not be evaluated by your instructor or teaching assistants. This survey was created to enhance our understanding about what people put into their avatars. The survey will take approximately 25 minutes to complete. Your responses are confidential. There are no right or wrong answers. If there is some question you do not wish to answer, you may skip it.

Please answer all the questions before pressing the <u>SUBMIT</u> button at the bottom of this page.

Please enter your PID if you would like your professor to know that you participated in this survey. This is needed for you to receive Homework credit for TC 100.

PID : [   ]

1. Please think about the order that you created/designed or worked on your avatars. Which avatar did you design first, then second, and then third? Type a 1 in the box by the one your created first, a 2 next to the one you created second, and a 3 by the avatar you created last.
  [   ] Employer Avatar
  [   ] Friends Avatar
  [   ] Stranger Avatar

2. Did you design/create/work on the avatars all at the same time?
  ○ YES
  ○ NO

3. After you created a version of all of the avatars, how much did you go back and modify them?
  ○ Not At All
  ○ A Little
  ○ Some
  ○ A Lot

Avatar for Friends

Respond to the following sets of questions about your Avatar for Friends . Please take a moment to think about the avatar you designed for Friends. Once you have it in mind, then continue:

1. Was your avatar designed to be more:

Masculine O 1 O 2 O 3 O 4 O 5 Feminine

2. Do you think your avatar will appeal to:

- O Primarily Males
- O Mostly Males
- O Both Males & Females Equally
- O Mostly Females
- O Primarily Females

For the following set of characteristics, was your Friend avatar designed to be:

1.

Frowning O 1 O 2 O 3 O 4 O 5 Smiling

2.

Not Humorous O 1 O 2 O 3 O 4 O 5 Humorous

3.

Dumb Looking O 1 O 2 O 3 O 4 O 5 Intelligent Looking

4.

Physically Unattractive O 1 O 2 O 3 O 4 O 5 Physically Attractive

5.

Calm O 1 O 2 O 3 O 4 O 5 Excited

6.

Not Original O 1 O 2 O 3 O 4 O 5 Original

7.

Not Professional O 1 O 2 O 3 O 4 O 5 Professional

8.

Not Sexy O 1 O 2 O 3 O 4 O 5 Sexy

9.

Not Funny O 1 O 2 O 3 O 4 O 5 Funny

10.

Sad O 1 O 2 O 3 O 4 O 5 Happy

11.

Laid Back O 1 O 2 O 3 O 4 O 5 Wild

12.

Casual ○1 ○2 ○3 ○4 ○5 Formal

13.

Not Provocative ○1 ○2 ○3 ○4 ○5 Provocative

14.

Unfriendly ○1 ○2 ○3 ○4 ○5 Friendly

15.

Ordinary ○1 ○2 ○3 ○4 ○5 Unique

16.

Shy ○1 ○2 ○3 ○4 ○5 Outgoing

17.

Negative ○1 ○2 ○3 ○4 ○5 Positive

18.

Not Serious ○1 ○2 ○3 ○4 ○5 Serious

19.

Does Not Attract Attention ○1 ○2 ○3 ○4 ○5 Attracts Attention

20.

Unpleasant ○1 ○2 ○3 ○4 ○5 Pleasant

21.

Not Bizarre/Strange ○1 ○2 ○3 ○4 ○5 Bizarre/Strange

22.

Not Flirty ○1 ○2 ○3 ○4 ○5 Flirty

23.

Not Dressed Up ○1 ○2 ○3 ○4 ○5 Dressed Up

Please carefully read the following questions and answer keeping in mind your <u>Friend Avatar.</u>

1. Would others see some aspect of you in this representation?

Not At All ○1 ○2 ○3 ○4 ○5 A Lot

2. Would your friends think this represents you in some way?

Not At All ○1 ○2 ○3 ○4 ○5 A Lot

3. Would your family think this represents you in some way?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

4. In general, are there dimensions of you in this representation?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

How much does the design of your Friend avatar reflect:

1. ...you
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

2. ...who you want to be?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

3. ...how you actually look?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

4. ...how you want others to think you look?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

5. ...your true personality?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

6. ... who you are in general?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

7. ... who you wish you could be?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

How much does the design of your Friend avatar try:

1. ...to fit in with other avatars you've seen
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

2. ...to be admired by other on-line avatar users
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

3. ...to stand out apart from the other avatars you've seen
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

4. ...to be similar to other avatars in this type of situation
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

5. ...what you think a normal avatar would look like
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

If you were going to interact on-line with your Friend avatar:

1. How likely would you use this avatar for an interaction in a different type of situation, not the one designed for a friend?
      Not At All Likely ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Likely

2. How likely are you to use this avatar in a chat room with strangers?
      Not At All Likely ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Likely

3. How likely are you to use this avatar in a chat room with family members?
      Not At All Likely ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Likely

4. How likely are you to use this avatar in a chat room with a future employer?
      Not At All Likely ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Likely

5. How well do you think this avatar represents you for this Friends' situation?
      Not Well ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Well

6. How much do you like this avatar?
      Do Not Like At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Like A Lot

7. What would be your on-line name (handle or nickname) for this avatar?
      [   ]

Avatar for Strangers
Respond to the following sets of questions about your Avatar for Strangers. Please take a moment to think about the avatar you designed for Strangers. Once you have it in mind, then continue:

1. Was your avatar designed to be more:
      Masculine ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Feminine

2. Do you think your avatar will appeal to:
      ○ Primarily Males
      ○ Mostly Males
      ○ Both Males & Females Equally
      ○ Mostly Females
      ○ Primarily Females

For the following set of characteristics, was your Stranger avatar designed to be:

1.
   Frowning ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Smiling

2.
   Not Humorous ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Humorous

3.
   Dumb Looking ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Intelligent Looking

4.
   Physically Unattractive ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Physically Attractive

5.
   Calm ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Excited

6.
   Not Original ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Original

7.
   Not Professional ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Professional

8.
   Not Sexy ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Sexy

9.
   Not Funny ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Funny

10.
   Sad ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Happy

11.
   Laid Back ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Wild

12.
   Casual ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Formal

13.
   Not Provocative ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Provocative

14.
   Unfriendly ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Friendly

15.

Ordinary ○1 ○2 ○3 ○4 ○5 Unique

16.

Shy ○1 ○2 ○3 ○4 ○5 **Outgoing**

17.

Negative ○1 ○2 ○3 ○4 ○5 Positive

18.

Not Serious ○1 ○2 ○3 ○4 ○5 Serious

19.

Does Not Attract Attention ○1 ○2 ○3 ○4 ○5 Attracts Attention

20.

Unpleasant ○1 ○2 ○3 ○4 ○5 Pleasant

21.

Not Bizarre/Strange ○1 ○2 ○3 ○4 ○5 Bizarre/Strange

22.

Not Flirty ○1 ○2 ○3 ○4 ○5 Flirty

23.

Not Dressed Up ○1 ○2 ○3 ○4 ○5 Dressed Up

Please carefully read the following questions and answer keeping in mind your <u>Stranger Avatar</u>.

1. Would others see some aspect of you in this representation?
Not At All ○1 ○2 ○3 ○4 ○5 A Lot

2. Would your friends think this represents you in some way?
Not At All ○1 ○2 ○3 ○4 ○5 A Lot

3. Would your family think this represents you in some way?
Not At All ○1 ○2 ○3 ○4 ○5 A Lot

4. In general, are there dimensions of you in this representation?
Not At All ○1 ○2 ○3 ○4 ○5 A Lot

How much does the design of your Stranger avatar reflect:

1. ...you
Not At All ○1 ○2 ○3 ○4 ○5 A Lot

2. ...who you want to be?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

3. ...how you actually look?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

4. ...how you want others to think you look?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

5. ...your true personality?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

6. ... who you are in general?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

7. ... who you wish you could be?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

How much does the design of your Stranger avatar try:

1. ...to fit in with other avatars you've seen
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

2. ...to be admired by other on-line avatar users
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

3. ...to stand out apart from the other avatars you've seen
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

4. ...to be similar to other avatars in this type of situation
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

5. ...what you think a normal avatar would look like
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

If you were going to interact on-line with your Stranger avatar:

1. How likely would you use this avatar for an interaction in a different type of situation, not the one designed for a stranger?
Not At All Likely ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Likely

2. How likely are you to use this avatar in a chat room with friends?
Not At All Likely ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Likely

3. How likely are you to use this avatar in a chat room with family members?
Not At All Likely ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Likely

4. How likely are you to use this avatar in a chat room with a future employer?

Not At All Likely ○1 ○2 ○3 ○4 ○5 Very Likely

5. How well do you think this avatar represents you for this Strangers' situation?

Not Well ○1 ○2 ○3 ○4 ○5 Very Well

6. How much do you like this avatar?

Do Not Like At All ○1 ○2 ○3 ○4 ○5 Like A Lot

7. What would be your on-line name (handle or nickname) for this avatar?

[   ]

Avatar for a Future Employer

Respond to the following sets of questions about your Avatar for a Future Employer. Please take a moment to think about the avatar you designed for an Employer. Once you have it in mind, then continue:

1. Was your avatar designed to be more:

Masculine ○1 ○2 ○3 ○4 ○5 Feminine

2. Do you think your avatar will appeal to:
○ Primarily Males
○ Mostly Males
○ Both Males & Females Equally
○ Mostly Females
○ Primarily Females

For the following set of characteristics, was your Employer avatar designed to be:

1.

Frowning ○1 ○2 ○3 ○4 ○5 Smiling

2.

Not Humorous ○1 ○2 ○3 ○4 ○5 Humorous

3.

Dumb Looking ○1 ○2 ○3 ○4 ○5 Intelligent Looking

4.

Physically Unattractive ○1 ○2 ○3 ○4 ○5 Physically Attractive

5.

Calm ◯1 ◯2 ◯3 ◯4 ◯5 **Excited**

6.

Not Original ◯1 ◯2 ◯3 ◯4 ◯5 **Original**

7.

Not Professional ◯1 ◯2 ◯3 ◯4 ◯5 **Professional**

8.

Not Sexy ◯1 ◯2 ◯3 ◯4 ◯5 **Sexy**

9.

Not Funny ◯1 ◯2 ◯3 ◯4 ◯5 **Funny**

10.

Sad ◯1 ◯2 ◯3 ◯4 ◯5 **Happy**

11.

Laid Back ◯1 ◯2 ◯3 ◯4 ◯5 **Wild**

12.

Casual ◯1 ◯2 ◯3 ◯4 ◯5 **Formal**

13.

Not Provocative ◯1 ◯2 ◯3 ◯4 ◯5 **Provocative**

14.

Unfriendly ◯1 ◯2 ◯3 ◯4 ◯5 **Friendly**

15.

Ordinary ◯1 ◯2 ◯3 ◯4 ◯5 **Unique**

16.

Shy ◯1 ◯2 ◯3 ◯4 ◯5 **Outgoing**

17.

Negative ◯1 ◯2 ◯3 ◯4 ◯5 **Positive**

18.

Not Serious ◯1 ◯2 ◯3 ◯4 ◯5 **Serious**

19.

Does Not Attract Attention ◯1 ◯2 ◯3 ◯4 ◯5 **Attracts Attention**

20.

Unpleasant ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Pleasant

21.

Not Bizarre/Strange ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Bizarre/Strange

22.

Not Flirty ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Flirty

23.

Not Dressed Up ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Dressed Up

Please carefully read the following questions and answer keeping in mind your Employer Avatar.

1. Would others see some aspect of you in this representation?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

2. Would your friends think this represents you in some way?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

3. Would your family think this represents you in some way?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

4. In general, are there dimensions of you in this representation?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

How much does the design of your Employer avatar reflect:

1. ...you
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

2. ...who you want to be?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

3. ...how you actually look?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

4. ...how you want others to think you look?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

5. ...your true personality?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

6. ... who you are in general?
Not At All ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 A Lot

7. ... who you wish you could be?
Not At All ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 A Lot

How much does the design of your Employer avatar try:

1. ...to fit in with other avatars you've seen
Not At All ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 A Lot

2. ...to be admired by other on-line avatar users
Not At All ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 A Lot

3. ...to stand out apart from the other avatars you've seen
Not At All ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 A Lot

4. ...to be similar to other avatars in this type of situation
Not At All ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 A Lot

5. ...what you think a normal avatar would look like
Not At All ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 A Lot

If you were going to interact on-line with your Employer avatar:

1. How likely would you use this avatar for an interaction in a different type of situation, not the one designed for an employer?
Not At All Likely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely

2. How likely are you to use this avatar in a chat room with strangers?
Not At All Likely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely

3. How likely are you to use this avatar in a chat room with family members?
Not At All Likely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely

4. How likely are you to use this avatar in a chat room with friends?
Not At All Likely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely

5. How well do you think this avatar represents you for this Employer situation?
Not Well ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Well

6. How much do you like this avatar?
Do Not Like At All ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Like A Lot

7. What would be your on-line name (handle or nickname) for this avatar?

[_____]

[Submit Information]

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Content Coding Form

Coder Name: _____   Avatar Number: _____

Type of Portrayal: (Circle or Mark)

1. Human   Animal   Insect   Inanimate Object   Alien   Other:_____

(For: Animal or Insect or Inanimate Object or Alien or Other) answer both!

2. Does it have human personification? Yes   No
3. Name what it is: _____

4. Face Shot   Face & Torso   Whole Body   Other Part of Body   No Body

5. Photograph/real   Cartoon/drawing

6. Was the avatar: Smiling ___ | ___ | ___ | ___ | ___ Frowning   No mouth

7. Gender: Masculine   Neutral   Feminine

8. Age: Baby/child   Teens   20ies-30ies   40ies-50ies   60ies plus   No Age

9. Ethnicity: Black   White   Asian   Latino/a   None Given

10. What SES would you rate the avatar:

very low (poverty) ___ | ___ | ___ | ___ | ___ very high (wealthy)   Can't Tell

11. Status Cues:
a) clothes (e.g. style, color):   YES   NO
    b) eye or head decorations   YES   NO
    c) jewelry: YES   NO
    d) other accessories (e.g. cane, bandanna):   YES   NO

12. Props (e.g. gun): _____

13. Group Membership/Affiliation Identified: Yes   No

14. Personalized: Name   Initials   Greeting   Info   Symbol   None

15. How many colors are present? _____

16. How Physically Attractive is the avatar:

Very Unattractive   Unattractive   Attractive   Very Attractive

17. Would the avatar appeal more to:

Primarily Males	Mostly Males	Both Males & Females equally	Mostly Females	Primarily Females

18. <u>Avatar:</u>

Vulgar	Not Vulgar
Scary/grotesque	Not Scary
Strange/Bizarre	Normal (not strange or bizarre)
Hard to know what it is	Easy to know

Body and Clothes Form Use this form if there is a body. Need a major part of the body showing. (Do not code head only shots). If an alien or inanimate object or animal or insect has "human personification" and a major part of their body is showing, then use this form. If it isn't human and doesn't have human personification, then do not use this form!

Body Revealment:
(if the body part is not visible, then you must mark "not available")

a. chest:	Yes	No	Not Available
b. stomach	Yes	No	Not Available
c. waist	Yes	No	Not Available
d. buttocks	Yes	No	Not Available
e. legs	Yes	No	Not Available
f. arms	Yes	No	Not Available
g. neck	Yes	No	Not Available
h. head	Yes	No	Not Available

APPENDIX F

Endnote 1: The corrected correlation equation (Hunter, Schmidt, & Jackson, 1982) used in the study was:

$$r(xy)' = \frac{r(xy)}{\sqrt{r(xx)} \; \sqrt{r(yy)}}$$

r(xy)' = corrected correlation coefficient

r(xy) = uncorrected correlation coefficient

r(xx) = reliability coefficient for variable x

r(yy) = reliability coefficient for variable y

APPENDIX G

Correlation Matrix of Independent and Dependent Measures

Variables	Correlations											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Self-Presentation	1.00	.79**	.15*	.26**	.17*	--	--					
2. Sensitivity	.61**	1.00	.04	.14	.14	--	--					
3. Other-Directedness	.20**	.11	1.00	.63**	--	--	--					
4. Social Comparison	.12	.03	.50**	1.00	--	.23**	.17*					
Avatar Self-Report												
5. Internal Representation	.14	.12	.10	.07	1.00	--	.50**					
6. External Cues	-.06	-.07	.01	.18*	.07	1.00	.16*					
7. Cross-Situational	.02	.09	.01	.14	.44**	.13	1.00					
8. Physical Attractiveness	.18*	.15	.05	.09	.35**	.07	.21**	1.00				
9. Formality	.08	.03	.02	-.02	-.09	.12	-.06	.14	1.00			
Avatar Content Analysis												
10. status cues	-.07	-.06	.02	-.05	-.01	.10	-.03	.05	.09	1.00		
11. color	-.02	.05	-.00	-.04	-.00	.05	.04	.07	-.01	.19*	1.00	
12. demographics	.01	-.01	-.08	-.08	-.10	.11	.02	.07	.15	.39**	.09	1.00

*p < .05; **p < .01
uncorrected correlations = lower triangle
corrected correlations = upper triangle